



Prepared for

Georgia Power Company
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2022 SEMIANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLANT BRANCH ASH PONDS B, C, & D

Prepared by

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CERTIFICATION STATEMENT

This 2022 *Semiannual Groundwater Monitoring and Corrective Action Report, Plant Branch Ash Ponds B, C, and D (AP-BCD)* has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically § 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, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).



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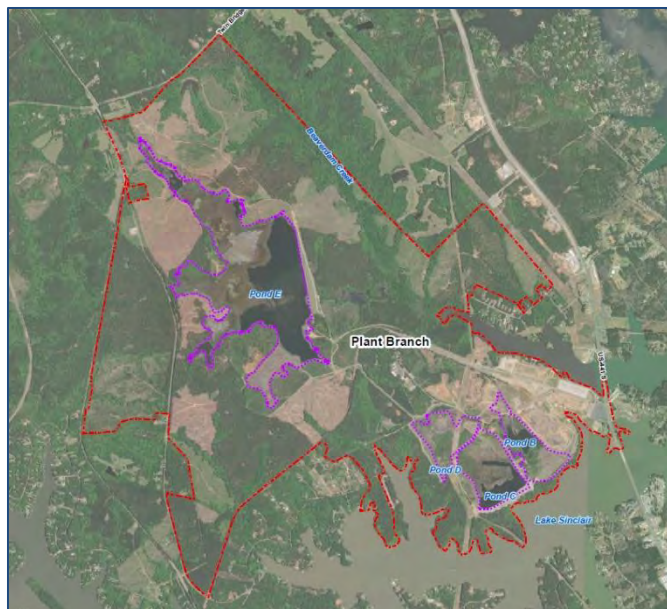
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SUMMARY

This summary of the *2022 Semiannual Groundwater Monitoring and Corrective Action Report* provides the status of the groundwater monitoring and corrective action program for the reporting period of July 2022 through December 2022 (referred herein as the reporting period) at the Georgia Power Company (Georgia Power) Plant Branch Ash Ponds B, C, and D (AP-BCD) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, and by reference, Part A, Section 6¹ of the U.S. Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Branch is located at 1100 Milledgeville Road, approximately 8 miles north of Milledgeville in Putnam County, Georgia. Plant Branch formerly operated as a coal-fired electric generating facility, until its decommissioning in July 2015, at which point it ceased producing electricity. CCR materials resulting from power generation were historically transferred and stored at the five ash ponds (i.e., A, B, C, D, and E). Ash Pond A was taken out of service in the late 1960s and was closed in April 2016. Ash Ponds B, C, D, and E are inactive, and will be closed by removal and



Plant Branch and the Site

relocation of its stored CCR to a proposed fully lined landfill located on the plant property. As required in the CCR Rule, this Semiannual Report describes the status of the groundwater monitoring program, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and presents projected key activities for the upcoming year for AP-BCD. The other CCR unit (AP-E) at Plant Branch is reported separately.

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

Groundwater at the Site is monitored using a comprehensive well network that meets federal and state monitoring requirements. Routine sampling and reporting began after the background groundwater conditions were established between 2016 and 2018. Based on groundwater conditions at the Site, an assessment monitoring program was established on November 13, 2019, and the Site entered into an assessment of corrective measures on July 9, 2020. During the 2022 semiannual reporting period, the Site remained in assessment monitoring as corrective measures are being evaluated.

Site groundwater elevation measurements were recorded at monitoring wells and piezometers prior to each sampling event. The elevation data were used to confirm the groundwater flow direction, and to confirm that the groundwater monitoring well network for the CCR units remains sufficient to monitor groundwater downgradient of the unit.

Groundwater monitoring sampling events for AP-BCD were conducted by Atlantic Coast Consulting (ACC) in August and October 2022 (referred herein as August 2022 or Fall 2022) for this semiannual reporting period. In order to meet the requirements of GA EPD Rule 391-3-4-.10(6) and 40 CFR 257.95 (b) and (d)(1), this semiannual event included sampling and analysis of all Appendix III and Appendix IV constituents. Surface water samples were also collected in August 2022 by Arcadis in support of the assessment of corrective measures and for continued evaluation of the nature and extent of impacts in the vicinity of AP-BCD. Groundwater samples were collected and submitted to GEL Laboratories, LLC, for analysis. Surface water samples were collected and submitted to Pace Analytical Services, LLC for analysis. Per the CCR Rule, groundwater results from these sampling events were evaluated in accordance with the certified statistical methods. That evaluation showed statistically significant values of Appendix III² and Appendix IV³ parameters in wells listed in the tables below.

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

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

Appendix III Parameter	August 2022
Boron	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I
Calcium	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
Chloride	BRGWC-29I, BRGWC-45, BRGWC-50, BRGWC-52I
Fluoride	BRGWC-50
pH (lower limit)	BRGWC-29I, BRGWC-50
Sulfate	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
Total Dissolved Solids (TDS)	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50
Appendix IV Parameter	August 2022
Cadmium	BRGWC-50
Cobalt	BRGWC-50, PZ-51I
Selenium	BRGWC-32S

Based on a review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program from July 2022 through December 2022, 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

ACC	Atlantic Coast Consulting
ACM	Assessment of Corrective Measures
AP	ash pond
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CSM	conceptual site model
DO	dissolved oxygen
EDR	Environmental Data Resources
ft/day	feet per day
GA EPD	Georgia Environmental Protection Division
GEL Laboratories	GEL Laboratories, LLC.
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GSC	Groundwater Stats Consulting
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
K_h	horizontal hydraulic conductivity
MCL	Maximum Contaminant Level
mg/L	milligram per liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric turbidity units
ORP	oxidation-reduction potential
Pace Analytical	Pace Analytical Services, LLC.
PL	prediction limit
PWR	partially weathered rock
QA/QC	Quality Assurance/Quality Control
RPD	relative percent difference
SSI	statistically significant increase
SSL	statistically significant level
s.u.	standard unit
TDS	total dissolved solids
TWR	transitionally weathered rock
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 (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 *2022 Semiannual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Branch (Site) Ash Ponds B, C, and D (AP-BCD) for the reporting period of July 2022 through December 2022 (referred to herein as the reporting period).

Groundwater monitoring and reporting for AP-BCD are performed in accordance with the monitoring requirements of the GA EPD Rules for Solid Waste Management 391-3-4-.10(6), but also in accordance with the CCR Rule, specifically § 257.90 through § 257.95. This report documents the activities completed to establish the groundwater monitoring program in accordance with GA EPD Rule 391-3-4-.10(6)(a). To specify groundwater monitoring requirements, GA EPD Rule 391-3-4-.10(6)(a) incorporates by reference the CCR Rule. For ease of reference, the CCR Rule regulations are cited within this report, in lieu of citing both sets of regulations.

Plant Branch ceased producing electricity prior to April 2015, and therefore, Ash Ponds B, C, and D are not subject to the CCR Rule. A CCR Unit Solid Waste Handling Permit application for AP-BCD was submitted to GA EPD in November 2018 and is under review.

Due to statistically significant increases (SSIs) of Appendix III parameters identified in the *2019 Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2019), Georgia Power initiated an assessment monitoring program for AP-BCD on November 13, 2019. Statistically significant levels (SSLs) of Appendix IV parameters cadmium (Cd) and cobalt (Co) were identified during the initial assessment monitoring event. Georgia Power then initiated an assessment of corrective measures (ACM) program on July 9, 2020. Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-BCD in accordance with the assessment monitoring program established for the unit in 2019, including semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the CCR Rule.

SSLs of cadmium and cobalt have been observed in all subsequent assessment monitoring events and documented in subsequent groundwater monitoring and corrective action reports. During this semiannual reporting period, an SSL of selenium (Se) was identified

in BRGWC-32S. The SSL will be incorporated into the annual groundwater monitoring and corrective action reports along with the semiannual remedy selection and design progress reports beginning in July 2023.

1.1 Site Description and Background

Plant Branch is located in Putnam County, Georgia, approximately 8 miles north of Milledgeville. The property occupies approximately 3,200 acres and is bordered on the south and east by Lake Sinclair and by sparsely populated, forested, rural land on the north and west. Lake Sinclair is an approximately 15,330-acre hydroelectric reservoir that was created in 1953 by the impoundment of the Oconee River. Ash ponds B, C, and D are located on the southeast corner of the Plant surrounded by Lake Sinclair on the south, rural land on the north and west, and the former coal pile and Ash Pond A on the east (**Figure 1**). The physical address of the Site is 1100 Milledgeville Road, Milledgeville, Georgia, 31024.

The Site formerly operated as a coal-fired power plant that commenced power generation in 1965. Over the course of power generation at the facility, five CCR surface impoundments (ash ponds), identified as Ash Ponds A, B, C, D, and E, were utilized. The location of the ash ponds is shown on **Figure 1**. The former Ash Pond A, the first ash pond constructed at the facility, was taken out of service in the late 1960s and was closed in April 2016 by the removal and relocation of its stored CCR to Ash Pond E. Ash Ponds B, C, D, and E are currently not active and will be closed by removal, specifically, by relocation of the CCR stored in those ash ponds to a new, permitted, on-site CCR landfill.

This report documents the groundwater monitoring program at the multi-unit AP-BCD. As previously noted, groundwater monitoring activities completed at Plant Branch's AP-E are reported separately.

1.2 Regional Geology and Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at AP-BCD as described in the *Hydrogeologic Assessment Report Revision 01 – AP-BCD* (HAR Rev 01) submitted to GA EPD in November 2020 to provide information regarding the hydrogeologic conditions and the groundwater monitoring well network at the Site (Geosyntec, 2020).

1.2.1 Regional and Site Geology

The Site is located within the Piedmont Physiographic Province of central Georgia, which is characterized by gently rolling hills and narrow valleys, with locally pronounced linear ridges. Generally, the property slopes gently east and south toward Beaverdam Creek and Lake Sinclair. The metamorphic and igneous rocks that underlie the area have been subjected to physical and chemical weathering which has created a landscape dissected by creeks and streams. Bedrock is typically overlain by a variably thick blanket of residual soils and saprolite. The overall depth of weathering in the Piedmont/Blue Ridge is generally about 20 to 60 feet; however, the depth of weathering along discontinuities and/or very mafic rock units may extend to depths greater than 100 feet. Because of such variations in rock types and structure, the depth of weathering can vary significantly over short horizontal distances. The bedrock underlying the saprolite is fine- to medium-grained, poorly jointed biotite-quartz-feldspar gneiss.

Based on our review of available data, micaceous, locally saprolitic soils, consisting primarily of clay, silty clay, silt, and sandy clay occur as a variably thick blanket of residuum overlying bedrock across most of the Site. The thickness of the residual soil encountered in AP-BCD borings is variable, ranging from approximately 10 feet to as much as 75 feet. Between the residual soil/saprolite zone and the underlying bedrock there is a zone of transitionally weathered rock (TWR) or partially weathered rock (PWR), as defined by standard penetration test data, where available. Material overlying the top of rock surface, including residual soil/saprolite and TWR/PWR, is collectively referred to as overburden.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at the Site is an unconfined regional groundwater aquifer that occurs primarily in the saprolite, PWR, and fractured bedrock. While the aquifer characteristics of each unit may vary, the groundwater is interpreted to be interconnected between these units, and they effectively act as one unconfined aquifer. Generally, the water table surface at the Site is a subdued reflection of topography, with groundwater generally flowing east, west, and south. Downward hydraulic gradients dominate in the topographically high areas, while upward gradients are observed in topographic lows. Recharge to the fractured bedrock aquifer system comes primarily from precipitation that is stored in the overburden and slowly infiltrates to the bedrock through areas of enhanced permeability. Interconnected fractures are the primary conduit for groundwater flow through bedrock since the rock lacks primary porosity.

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-BCD 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 unit (i.e., background conditions) and passing the waste boundary of the unit. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

Based on the Site hydrogeology, the monitoring system is designed to monitor groundwater flow in the overburden, the transition-zone, and the upper bedrock as a single interconnected aquifer system. Wells suffixed with an “S” are installed in overburden (saprolitic soil), an “I” indicates TWR/PWR and the upper fractured mantle of bedrock (transition zone), and “D” indicates a screened zone in the deeper bedrock. Well construction details for the monitoring network are listed in **Table 1**. The locations of the groundwater monitoring wells and piezometers are shown on **Figure 2**. Pursuant to § 257.195(g)(1)(iv), the wells classified as “assessment monitoring wells” (formerly known as “delineation wells”) will continue to be sampled concurrently with the detection monitoring well network (formerly known as “compliance monitoring wells”) as part of the ongoing assessment groundwater monitoring program.

Groundwater elevation measurements are collected across the entire Site (including AP-E and the area of the proposed new CCR landfill). These measurements are used to define groundwater flow direction and gradients and to understand potential changes related to seasonal fluctuations or site activities. The potentiometric surface map for the August 2022 water level gauging event is provided in **Figure 3**.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes monitoring-related activities performed during this 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

Three (3) assessment monitoring wells (PZ-64I, PZ-65I, and PZ-66I) and three (3) piezometers (PZ-67, PZ-68D, and PZ-69I) were installed in August and September 2022 to provide additional data to characterize groundwater quality and flow conditions downgradient of AP-BCD. The well installation report that includes detailed boring and well construction logs for the installation of these wells is provided in **Appendix A** and was submitted to GA EPD under separate cover.

The well and piezometer networks are inspected semiannually to evaluate 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 Fall 2022, the networks were inspected, necessary corrective actions were identified and subsequently completed, as documented in **Appendix B**. This documentation and was performed under the direction of a professional geologist or engineer registered in the State of Georgia.

2.2 Assessment Monitoring

Pursuant to § 257.94(e)(3), an assessment monitoring program was initiated for AP-BCD based on SSIs of Appendix III constituents documented in the *2019 Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2019). A notice of assessment monitoring was placed in the operating record on November 13, 2019. An ACM program was initiated on July 9, 2020. Georgia Power completed an ACM (Golder, 2020) for AP-BCD at Plant Branch on December 4, 2020. In accordance with § 257.96(b), groundwater continues to be monitored at AP-BCD under the assessment monitoring program while the ACM phase is implemented.

One groundwater monitoring event was conducted for this reporting period in August and October 2022 in accordance with § 257.93. The wells in the certified monitoring system for AP-BCD are tabulated in **Table 1**, and their locations are shown on **Figure 2**. A summary of groundwater wells sampled at AP-BCD during this reporting period is presented in **Table 2**. The analytical results are included in **Appendix C**.

During the August 2022 semiannual assessment monitoring event, groundwater samples from each monitoring well were collected and analyzed for the complete list of Appendix III and Appendix IV constituents. Field data, field calibration forms, well inspection logs, laboratory analytical results, and data validation reports associated with these sampling events are provided in **Appendix C**.

2.3 Additional Sampling and Surface Water Sampling

Supplemental sampling was conducted during the reporting period in support of the assessment of corrective measures and in continuing to evaluate the nature and extent of impacts resulting from AP-BCD. Supplemental groundwater samples were collected from the monitoring well network during the Fall 2022 assessment monitoring event and were analyzed for major cations (calcium [Ca], magnesium [Mg], potassium [K], and sodium [Na]) and major anions (chloride [Cl], sulfate [SO₄], and alkalinity [i.e., bicarbonate, carbonate, total] [HCO₃]) as well as iron (Fe) and manganese (Mn). The data were collected in support of evaluating the geochemical composition of the groundwater and will be discussed as part of the ACM program. The laboratory reports associated with the data are provided in **Appendix C**.

Due to the presence of surface water features downgradient of BRGWC-50, Georgia Power proactively collected surface water samples from discrete (surface, middle, and bottom) depths at six locations in Lake Sinclair on August 24, 2022. The sample locations closest to BRGWC-50 are shown on **Figure 2**. The six locations are sampled for Appendix III and targeted Appendix IV constituents (cobalt), in addition to cations and anions (sodium, magnesium, potassium, and alkalinity). One of these locations, LR-9a, is used to delineate cobalt concentrations downgradient of well BRGWC-50. Surface water samples are collected in accordance with USEPA Region 4 Science and Ecosystem Support Division Operating Procedures for Surface Water Sampling SESDPROC 201-R4 (USEPA, 2016). The laboratory reports associated with the August 24, 2022; surface water sampling event are provided in **Appendix C**. Georgia Power will continue collecting the surface water samples semiannually.

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 semiannual assessment monitoring program conducted at AP-BCD during this reporting period.

3.1 Groundwater Elevation Measurement

Prior to each sampling event, a round of depth to groundwater level measurements were recorded from all the wells and piezometers and used to calculate the corresponding groundwater elevations. The calculated groundwater elevations obtained in August 2022 for the semiannual assessment monitoring event in this reporting period at AP-BCD and AP-E are presented in **Table 3**.

The groundwater elevation data were used to prepare a potentiometric surface map for the August 2022 event, which is presented on **Figure 3**. The general direction of groundwater flow across AP-BCD is towards Lake Sinclair (south-southeast). This groundwater flow pattern is consistent with previous observations.

3.2 Groundwater Gradient and Flow Velocity

Groundwater flow rates at the Site were calculated based on hydraulic gradients, hydraulic conductivity from previous slug test results, and an estimated effective porosity of the screened horizon.

Horizontal hydraulic conductivity (K_h) values used in flow calculations range from 2.7 to 5.5 feet per day (ft/day) and were based on slug test data presented in the 2020 *Hydrogeologic Assessment Report Revision 01* (Geosyntec, 2020). The highest observed K_h estimates from each well set were used, resulting in a conservatively high estimate of groundwater flow velocity. An estimated effective porosity of 0.20 is used to represent average conditions at AP-BCD which was derived based on the default values for effective porosity recommended by USEPA for a silty sand-type soil (USEPA, 1996). With these variables determined, and accounting for the averaged hydraulic gradient calculated between well pairs for the August 2022 event, horizontal flow velocities were calculated as below.

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

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

where:

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

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

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

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

The supporting calculations for the August 2022 semiannual event are presented in **Table 4**. The table also presents the average hydraulic gradients calculated from the measurement event. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figure 3**. As presented on **Table 4**, average groundwater flow velocity at the site is approximately 0.38 ft/day across AP-BCD. The observed groundwater flow velocities calculated for this reporting period are also generally consistent with expected velocities is consistent with historical observations and confirm the groundwater monitoring system as properly located to monitor the uppermost aquifer for AP-BCD at Plant Branch.

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 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 AquaTROLL[®] (In-Situ field instrument) 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. Sample bottles were placed in ice-packed coolers and submitted to GEL Laboratories, LLC (GEL Laboratories) in Charleston, South Carolina following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the Fall 2022 semiannual assessment monitoring events are provided in **Appendix C**.

3.4 Laboratory Analyses

Groundwater laboratory analyses were performed by GEL Laboratories, and surface water analyses were performed by Pace Analytical Services, LLC, both of which are accredited by the National Environmental Laboratory Accreditation Program (NELAP). GEL Laboratories and Pace Analytical Services maintain a NELAP certification for the Appendix III and Appendix IV constituents and the geochemical parameters analyzed for this project. Analytical methods used for sample analysis are listed in the analytical laboratory reports included in **Appendix C**.

The analytical results from the Fall 2022 monitoring event are summarized in **Tables 5** and **6**.

3.5 Quality Assurance and Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during each sampling event at the minimum rate of one QA/QC sample per 10 groundwater samples and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in appropriately preserved laboratory-provided sample

containers and submitted under the same chain of custody as the primary samples for analysis of the same constituents by GEL Laboratories.

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 C** 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 Fall 2022 assessment monitoring event. The data were analyzed by Groundwater Stats Consulting (GSC); the reports generated from the analyses are provided in **Appendix D**.

4.1 Statistical Methods

The selected statistical method for AP-BCD was developed in accordance with § 257.93(f) using methodology presented in Statistical Analysis of Groundwater Data at USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009). 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 Unified Guidance.

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 7**. On February 2022, GA EPD updated the Rules for Solid Waste Management 391-3-4.10(6) to incorporate updated federal GWPS where a maximum contaminant level (MCL) has not been established. These levels were specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L) and molybdenum (0.100 mg/L), except when site specific background concentrations of these constituents are higher. Therefore, the statistical reports and **Table 7** do not differentiate between two sets of GWPS as previously required.

4.1.1 Appendix III Statistical Methods

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 parameters. Upgradient well data were pooled to establish a background limit for an individual constituent, and the most recent sample from each downgradient

well was compared to the statistical limit for each parameter to determine if concentrations exceeded background levels. The most recent sample from each downgradient well is compared to the background limit to assess whether there are SSIs and/or questionable results. An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient detection monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared. The Sen's Slope/Mann Kendall trend test was used to statistically evaluate concentration levels over time and determine if concentrations are increasing, decreasing, or stabilizing.

4.1.2 Appendix IV Statistical Methods

For the Appendix IV constituents, parametric tolerance limits were used to calculate site specific background limits from pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. The background limits were then used when determining the GWPS under GA EPD Rule 391-3-4-.10(6)(a).

USEPA revised the 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.

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

4.2 Statistical Analyses Results

Based on review of the Appendix III statistical analysis of August 2022 data presented in **Appendix D**, groundwater conditions have not returned to background and assessment monitoring should continue pursuant to § 257.95(f). A detailed list of the noted exceedances is provided in **Appendix D**.

Based on the statistical analysis of Appendix IV constituents, the following constituents exceeded the corresponding GWPS for the Fall 2022 assessment monitoring event:

4.2.1 Fall 2022 Data

- Cadmium: BRGWC-50
- Cobalt: BRGWC-50 and PZ51I
- Selenium: BRGWC-32S

Wells with SSLs were further evaluated using the Sen's Slope/Mann Kendall trend test (**Appendix D**). A statistically significant decreasing trend of cadmium was identified during this reporting period in BRGWC-50. No statistically significant trends were identified for cobalt in BRGWC-50 or PZ-51I. A statistically significant increasing trend of selenium was identified during this reporting period in BRGWC-32S.

5.0 NATURE AND EXTENT

Specific details regarding the delineation status at AP-BCD is discussed in the Semi-Annual Remedy Selection and Design Progress Report (**Appendix E**). As part of the nature and extent study, the following piezometers were installed and sampled:

- To delineate the horizontal and vertical extent of cadmium and cobalt at BRGWC-50, two horizontal assessment monitoring wells (i.e., PZ-51S and PZ-51I) and two vertical assessment monitoring wells (i.e., PZ-50D and PZ-51D) were installed at locations downgradient of the monitoring well BRGWC-50.
- The delineation of cadmium downgradient was accomplished in assessment wells PZ-51I and PZ-51D.
- Vertical delineation of cobalt is accomplished in assessment well PZ-51D (which is screened at the same elevation as PZ-50D and slightly downgradient from it). Due to the proximity of Lake Sinclair in the downgradient direction of the wells exhibiting SSLs of cobalt (i.e., BRGWC-50 and PZ-51I), installation of additional conventional wells to horizontally characterize this area is infeasible. As such, surface water samples were collected from Lake Sinclair downgradient of AP-BCD to supplement horizontal delineation on August 24, 2022. Horizontal delineation is accomplished at surface water location LR+9A. The results from surface water samples collected indicate that cobalt is not detected in the samples from Lake Sinclair as represented in **Table 6**.
- Ten (10) additional assessment monitoring wells (i.e., PZ-57I, PZ-58I, PZ-59I, PZ-60I, PZ-61I, PZ-62I, PZ-63I, PZ-64I, PZ-65I, and PZ-66I) were installed between March 2021 and September 2022 to further delineate the lateral extent of cobalt observed in BRGWC-50 and PZ-51I for corrective measures evaluation purposes.

Results from the delineation activities performed during the current reporting period indicate that vertical delineation of cadmium and cobalt have been completed at AP-BCD (**Appendix E**). In addition, downgradient horizontal delineation has been completed for cadmium and cobalt at AP-BCD. Evaluation of the upgradient and side-gradient (to the north) extent of cadmium and cobalt is ongoing to support the assessment of corrective measures. Evaluation of the vertical and horizontal delineation of selenium downgradient

of AP-BCD will begin in the second semiannual sampling event completed in January 2023.

Detection and assessment wells will be monitored in future monitoring events. In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), statistical analysis will be performed to construct confidence intervals required to assess SSLs for Appendix IV constituents once sufficient data is available for new assessment wells.

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-BCD in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts are implemented to address SSL concentrations of cadmium and cobalt in monitoring well BRGWC-50, cobalt in PZ-51I, and selenium in BRGWC-32S. Pursuant to § 257.195(g)(1)(iv), the additional assessment wells will continue to be sampled as part of the ongoing assessment groundwater monitoring program.

6.2 Assessment of Corrective Measures

Georgia Power completed an *Assessment of Corrective Measures* (ACM) (Golder, 2020b) for AP-BCD at Plant Branch. Notification of this action was placed in the CCR operating record on July 9, 2020.

In accordance with § 257.97(a), a remedy selection progress report will be prepared and submitted concurrent with semiannual groundwater monitoring reports to document results associated with additional data collection, and present progress toward selection and design of a groundwater remedy. The ACM efforts completed during the reporting period covered by this groundwater monitoring and corrective action report are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix E** and summarized as follows:

- i) The current conceptual site model (CSM).
- ii) Summary of work completed to date to achieve delineation of constituents exceeding GWPS and a summary of data collected to date to support remedy selection.
- iii) The status of evaluating applicable corrective measures at the site, planned activities, and anticipated schedule for the following semi-annual reporting period.

7.0 CONCLUSIONS AND FUTURE ACTIONS

This *2022 Semiannual Groundwater Monitoring and Corrective Action Report* for Plant Branch AP-BCD was prepared to fulfill the requirements of the CCR Rule and GA EPD Rules of Solid Waste Management 391-3-4-.10. The groundwater flow direction and rates interpreted during the August 2022 monitoring event is generally consistent with historical evaluations. Statistical evaluations of the groundwater monitoring data for the AP-BCD well network confirmed the continued presence of SSLs of cadmium and cobalt in well BRGWC-50 and cobalt in PZ-51I above corresponding GWPSs. The statistics also identified a new SSL of selenium in BRGWC-32S. Based on the most current data from this reporting period, as described in Section 4.3, the SSLs of cadmium and cobalt are vertically and horizontally delineated downgradient to below the GWPS while delineation of selenium is ongoing. In accordance with GA EPD Rule 391-3-4-.10(6) and § 257.96, the Site is in an assessment of corrective measures program for the identified SSLs.

Georgia Power will continue to monitor AP-BCD groundwater under the assessment monitoring program and proceed with the evaluation of remedies presented in the ACM Report (Golder, 2020b). The next routine semiannual assessment monitoring event for AP-BCD is scheduled for January 2023.

8.0 REFERENCES

- Geosyntec Consultants, 2020. *Hydrogeologic Assessment Report Revision 01, Georgia Power - Plant Branch, Putnam County, Georgia*. Submitted to Southern Company Services in November 2020.
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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 Branch AP-BCD, Putnam County, Georgia

Well ID	Hydraulic Location	Installation Date	Easting ⁽¹⁾	Northing ⁽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 BGS)	Screen Interval Length (ft)
<i>AP-BCD Detection Monitoring Well Network</i>										
BRGWA-2S	Upgradient BCD & E	4/2/2014	2549952.59	1167139.69	440.4	443.20	406.2	396.2	44.6	10
BRGWA-2I	Upgradient BCD & E	3/14/2014	2549957.26	1167129.90	440.5	443.14	386.6	376.6	64.3	10
BRGWA-5S	Upgradient BCD & E	4/3/2014	2549415.60	1170177.42	440.8	443.86	411.2	401.2	40.0	10
BRGWA-5I	Upgradient BCD & E	4/3/2014	2549407.91	1170183.54	441.1	443.79	390.3	380.3	61.2	10
BRGWA-6S	Upgradient BCD & E	4/1/2014	2551540.90	1170732.82	455.8	458.96	416.5	406.5	49.7	10
BRGWA-12S	Upgradient BCD	3/4/2014	2557142.89	1164286.80	431.6	434.64	383.7	373.7	58.3	10
BRGWA-12I	Upgradient BCD	2/20/2014	2557138.79	1164301.32	431.5	434.39	364.3	354.3	77.6	10
BRGWA-23S	Upgradient BCD	7/26/2016	2557868.25	1162971.84	425.5	428.24	394.7	384.7	40.8	10
BRGWC-25I	Downgradient B	7/25/2016	2561315.08	1160583.67	355.0	357.37	344.5	334.5	20.5	10
BRGWC-27I	Downgradient C	7/22/2016	2559712.12	1159695.33	364.0	366.86	350.0	340.0	24.0	10
BRGWC-29I	Downgradient C	7/23/2016	2561050.03	1160297.65	350.6	353.23	340.6	330.6	20.0	10
BRGWC-30I	Downgradient D	7/18/2016	2557691.84	1161607.69	350.0	352.61	340.0	330.0	20.3	10
BRGWC-32S	Downgradient D	7/20/2016	2558497.97	1160677.67	403.6	406.39	368.6	358.6	45.0	10
BRGWC-45	Downgradient B	2/3/2018	2561075.38	1162229.68	381.6	384.58	335.0	325.0	57.0	10
BRGWC-47	Downgradient D	1/25/2018	2559456.75	1162700.66	408.8	411.20	327.2	317.2	92.0	10
BRGWC-50	Downgradient B	1/31/2018	2562372.96	1161593.45	378.8	381.35	324.2	314.2	65.0	10
BRGWC-52I	Downgradient B	8/6/2018	2562145.22	1161274.99	381.2	383.87	317.3	307.3	73.9	10
<i>AP-E Detection Monitoring Well Network</i>										
BRGWA-2S	Upgradient BCD & E	4/2/2014	2549952.59	1167139.69	440.4	443.20	406.2	396.2	44.6	10
BRGWA-2I	Upgradient BCD & E	3/14/2014	2549957.26	1167129.90	440.5	443.14	386.6	376.6	64.3	10
BRGWA-5S	Upgradient BCD & E	4/3/2014	2549415.60	1170177.42	440.8	443.86	411.2	401.2	40.0	10
BRGWA-5I	Upgradient BCD & E	4/3/2014	2549407.91	1170183.54	441.1	443.79	390.3	380.3	61.2	10
BRGWA-6S	Upgradient BCD & E	4/1/2014	2551540.90	1170732.82	455.8	458.96	416.5	406.5	49.7	10
BRGWC-17S	Downgradient E	3/13/2014	2554687.84	1166301.32	362.2	365.32	360.5	355.5	7.1	5
BRGWC-33S	Downgradient E	7/26/2016	2554064.97	1168057.09	414.2	416.68	398.2	388.2	26.4	10
BRGWC-34S	Downgradient E	7/25/2016	2554231.28	1167384.17	389.2	391.96	376.2	366.2	23.0	10
BRGWC-35S	Downgradient E	7/23/2016	2554476.13	1166646.02	363.7	366.31	346.7	336.7	27.4	10
BRGWC-36S	Downgradient E	7/26/2016	2554693.26	1165742.82	383.1	389.84	364.4	354.4	28.7	10
BRGWC-37S	Downgradient E	7/24/2016	2554979.63	1165093.07	444.4	447.05	390.8	380.8	63.6	10
BRGWC-38S	Downgradient E	7/22/2016	2555016.50	1164391.82	429.8	432.24	402.0	392.0	38.2	10

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AP-BCD Assessment Monitoring Well Network										
PZ-44	Downgradient B	2/2/2018	2561587.42	1161724.48	380.5	383.04	333.9	323.9	57.0	10
PZ-50D	Downgradient	10/8/2020	2562380.34	1161589.51	378.3	380.86	282.3	272.3	106.0	10
PZ-51S	Downgradient B	8/1/2018	2562433.07	1161613.24	377.9	380.27	337.9	332.9	45.4	5
PZ-51I	Downgradient	8/1/2018	2562439.35	1161631.12	378.0	380.52	323.1	313.1	65.0	10
PZ-51D	Downgradient B	10/9/2020	2562433.15	1161640.16	378.1	380.75	282.1	272.1	106.0	10
PZ-57I	Downgradient B	3/24/2021	2562170.21	1161582.31	379.4	382.50	313.8	303.8	75.9	10
PZ-58I	Downgradient B	3/27/2021	2562297.82	1161579.00	379.3	382.27	325.7	315.7	63.9	10
PZ-59I	Downgradient B	3/31/2021	2562329.80	1161654.90	379.9	383.49	323.5	313.5	66.0	10
PZ-60I	Downgradient B	3/29/2021	2562330.79	1161588.01	379.5	382.61	329.0	319.0	60.8	10
PZ-61I	Downgradient B	3/30/2021	2562429.63	1161621.94	377.7	380.64	312.0	302.0	76.0	10
PZ-62I	Downgradient B	1/6/2022	2562336.00	1161478.90	378.1	380.95	318.1	308.1	70.0	10
PZ-63I	Downgradient B	1/5/2022	2562233.10	1161371.20	378.6	381.31	332.1	322.1	56.5	10
PZ-64I	Downgradient B	9/10/2022	2562404.29	1161787.72	379.4	381.94	320.6	310.6	69.3	10
PZ-65I	Downgradient B	9/09/2022	2562240.57	1161692.72	379.6	382.06	320.9	310.9	69.3	10
PZ-66I	Downgradient B	9/08/2022	2562134.65	1161747.91	380.9	383.52	323.1	313.1	68.3	10
AP-E Assessment Monitoring Well Network										
PZ-13S	Downgradient	3/19/2014	2555276.64	1168011.19	406.5	409.97	382.2	372.2	34.7	10
PZ-52D	Downgradient E	5/14/2020	2554051.53	1168053.71	414.3	417.03	364.8	354.8	59.5	10
PZ-53D	Downgradient E	5/17/2020	2554984.36	1164393.74	431.6	434.68	302.2	292.2	139.4	10
PZ-70I	Downgradient E	8/16/2022	2555374.08	1164326.66	422.9	425.70	363.4	373.4	52.9	10
Piezometers										
PZ-1D	Upgradient	4/4/2014	2551598.09	1171999.19	462.9	463.41	397.4	302.9	160.0	94.5
PZ-1I	Upgradient	3/10/2014	2551577.63	1171995.75	461.9	464.71	392.8	382.8	79.5	10
PZ-1S	Upgradient	3/20/2014	2551588.02	1171996.20	462.4	465.07	407.8	397.8	65.0	10
PZ-3D	Upgradient	3/27/2014	2550275.05	1165474.25	486.7	487.50	438.7	358.6	130.0	82
PZ-3I	Upgradient	3/11/2014	2550273.05	1165494.61	486.5	489.49	442.3	432.3	54.6	10
PZ-3S	Upgradient	3/11/2014	2550274.66	1165484.43	487.0	490.53	457.5	447.5	39.9	10
PZ-4I	Upgradient	3/11/2014	2551282.08	1163246.61	479.9	482.98	443.5	433.5	46.8	10
PZ-4S	Upgradient	3/10/2014	2551270.14	1163247.97	479.9	482.87	460.3	450.3	30.0	10
PZ-7S	Downgradient	4/1/2014	2553055.64	1169419.33	449.0	451.57	414.9	404.9	44.5	10
PZ-8S	Upgradient	4/1/2014	2551188.94	1167801.20	450.5	453.08	411.4	401.4	49.5	10
PZ-9S	Upgradient	3/5/2014	2553089.53	1162633.36	466.1	469.28	428.5	418.5	48.0	10
PZ-10S	Downgradient	3/5/2014	2554990.43	1164021.55	431.0	433.85	402.4	392.4	39.0	10
PZ-11S	Downgradient	2/20/2014	2557002.59	1162467.37	390.9	393.99	376.8	366.8	24.5	10
PZ-12D	Downgradient	4/14/2014	2557136.26	1164311.85	431.4	434.09	350.1	290.1	141.7	60
PZ-14I	Downgradient	3/20/2014	2554365.65	1168398.28	419.9	422.71	376.5	366.5	53.8	10
PZ-14S	Downgradient	3/20/2014	2554359.23	1168398.59	420.2	423.31	393.0	383.0	37.6	10
PZ-15I	Downgradient	3/25/2014	2554399.25	1167721.02	400.2	403.06	321.9	311.9	88.7	10
PZ-15S	Downgradient	3/27/2014	2554394.06	1167720.25	400.1	402.90	370.2	360.2	39.9	10
PZ-16I	Downgradient	3/14/2014	2554587.53	1166980.59	379.5	382.45	351.3	341.3	38.6	10
PZ-16S	Downgradient	3/18/2014	2554581.44	1166977.63	379.3	382.52	370.6	360.6	19.1	10
PZ-17I	Downgradient	3/17/2014	2554702.42	1166313.81	362.3	365.33	329.2	319.2	43.5	10
PZ-18I	Downgradient	2/26/2014	2557745.51	1160766.13	359.6	362.55	331.3	321.3	38.4	10
PZ-18S	Downgradient	3/26/2014	2557747.42	1160757.41	359.7	362.82	345.0	335.0	24.2	10
PZ-19I	Downgradient	3/4/2014	2558899.87	1159797.10	368.9	371.74	335.6	325.6	43.7	10
PZ-19S	Downgradient	3/4/2014	2558894.60	1159805.43	368.4	371.42	350.8	340.8	28.0	10

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PZ-20I	Downgradient	3/5/2014	2560160.17	1159495.25	362.2	365.34	343.1	333.1	29.5	10
PZ-20S	Downgradient	3/5/2014	2560157.16	1159490.13	362.2	365.41	357.3	347.3	15.3	10
PZ-21I	Downgradient	3/10/2014	2561328.17	1160591.42	355.8	358.92	341.8	331.8	24.4	10
PZ-21S	Downgradient	3/11/2014	2561321.43	1160592.45	355.5	358.52	351.1	346.1	9.8	5
PZ-23I	Downgradient	7/29/2016	2557877.71	1162975.56	425.1	427.74	368.6	358.6	66.5	10
BRGWC-24S	Downgradient A	7/27/2016	2562862.19	1162400.95	351.4	354.10	319.9	309.9	42.0	10
PZ-26I	Downgradient	7/26/2016	2561626.45	1160669.20	368.0	370.63	347.5	337.5	30.5	10
PZ-28I	Downgradient	7/24/2016	2560151.53	1159505.00	362.5	364.81	348.5	338.5	24.0	10
PZ-31S	Downgradient	7/26/2016	2557971.75	1160936.81	374.3	376.77	344.8	334.8	39.5	10
PZ-39	Downgradient	7/30/2016	2557460.52	1163675.53	432.0	434.78	397.3	387.3	44.7	10
PZ-40S	Downgradient A	2/14/2017	2562807.61	1162415.06	353.2	355.96	324.4	314.4	40.2	10
PZ-41S	Downgradient A	2/14/2017	2562759.44	1162431.76	354.3	357.17	320.5	310.5	44.2	10
PZ-42S	Downgradient A	2/9/2017	2562734.89	1162845.64	359.0	361.66	337.2	327.2	32.2	10
PZ-43	Downgradient A	2/7/2018	2562031.42	1162159.72	381.0	383.71	351.0	341.0	40.4	10
PZ-46	Downgradient B	2/5/2018	2560558.89	1162756.31	382.1	384.64	346.5	336.5	45.6	10
PZ-48	Downgradient D	1/24/2018	2558444.63	1163046.78	418.3	420.90	361.7	351.7	67.0	10
PZ-49	Downgradient B	1/30/2018	2561125.71	1163321.35	382.2	384.99	375.6	365.6	17.0	10
PZ-54	Downgradient E	5/15/2020	2555458.38	1164828.76	440.8	443.86	398.8	388.8	52.0	10
PZ-55	Downgradient E	5/19/2020	2554783.76	1163208.08	450.2	453.07	410.9	400.9	49.3	10
PZ-56	Downgradient B	5/20/2020	2554086.36	1162965.21	416.2	418.84	396.9	386.9	29.3	10
PZ-67	Downgradient B	9/07/2022	2561919.76	1161831.98	378.8	381.48	351.0	341.0	38.3	10
PZ-68D	Downgradient D	9/06/2022	2558512.90	1160690.48	402.5	405.25	328.8	318.8	84.3	10
PZ-69I	Downgradient D	8/31/2022	2558447.46	1160311.39	377.0	379.36	348.2	338.2	39.3	10
PB-1S	Downgradient	1/22/2019	2556355.89	1164910.63	400.4	403.16	372.4	362.4	38.0	10
PB-2D	Downgradient	12/4/2018	2556914.34	1164853.67	414.9	416.71	367.9	357.9	57.0	10
PB-4S	Downgradient	1/16/2019	2556069.32	1164335.20	409.3	411.15	371.3	361.3	48.0	10
PB-4D	Downgradient	1/16/2019	2556060.72	1164339.50	409.0	412.12	304.5	294.5	114.5	10
PB-7S	Downgradient	1/14/2019	2556186.30	1163831.09	399.7	402.88	376.7	366.7	33.0	10
PB-8S	Downgradient	1/8/2018	2556792.21	1163018.39	398.6	401.82	373.6	363.6	35.0	10
PB-8D	Downgradient	1/8/2018	2556786.65	1163024.53	398.2	401.74	304.2	294.2	106.0	10
PB-10S	Downgradient	1/16/2019	2558551.25	1163589.10	397.6	400.91	374.6	364.6	33.0	10
PB-10D	Downgradient	1/16/2019	2558546.62	1163593.43	397.5	400.31	322.5	312.5	85.0	10
PB-13S	Downgradient	12/10/2018	2556626.03	1162084.43	370.8	373.31	330.8	320.8	50.0	10
PB-13D	Downgradient	12/10/2018	2556638.88	1162084.53	371.1	373.77	284.1	274.1	97.0	10

Notes:

ft = feet

ft BGS = feet below ground surface

-- = not applicable

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.

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

Table 2
Groundwater Sampling Event Summary
Plant Branch AP-BCD, Putnam County, Georgia

Well ID	Hydraulic Location	August 23-25, 2022	October 06-12, 2022	November 07, 2022	Status of Monitoring Well
Purpose of Sampling Event:		Assessment	Assessment	Resample	
<i>AP-BCD</i>					
BRGWA-2S	Upgradient	X	--		Assessment
BRGWA-2I	Upgradient	X	--		Assessment
BRGWA-5S	Upgradient	X	--		Assessment
BRGWA-5I	Upgradient	X	--		Assessment
BRGWA-6S	Upgradient	X	--		Assessment
BRGWA-12S	Upgradient	X	--		Assessment
BRGWA-12I	Upgradient	X	--		Assessment
BRGWA-23S	Upgradient	X	--		Assessment
BRGWC-25I	Downgradient	X	--		Assessment
BRGWC-27I	Downgradient	X	--		Assessment
BRGWC-29I	Downgradient	X	--		Assessment
BRGWC-30I	Downgradient	X	--		Assessment
BRGWC-32S	Downgradient	X	--		Assessment
BRGWC-45	Downgradient	X	--		Assessment
BRGWC-47	Downgradient	X	--		Assessment
BRGWC-50	Downgradient	X	--		Assessment
BRGWC-52I	Downgradient	X	--		Assessment
PZ-44	Downgradient	X	--		Assessment
PZ-50D	Downgradient	X	--		Assessment
PZ-51S	Downgradient	X	--		Assessment
PZ-51I	Downgradient	X	--		Assessment
PZ-51D	Downgradient	X	--		Assessment
PZ-57I	Downgradient	X	--		Assessment
PZ-58I	Downgradient	X	--		Assessment
PZ-59I	Downgradient	X	--		Assessment
PZ-60I	Downgradient	X	--		Assessment
PZ-61I	Downgradient	X	--		Assessment
PZ-62I	Downgradient	X	--		Assessment
PZ-63I	Downgradient	X	--		Assessment
PZ-64I	Downgradient	not installed	X	X	Assessment
PZ-65I	Downgradient	not installed	X		Assessment
PZ-66I	Downgradient	not installed	X		Assessment

Table 3
 Summary of Groundwater Elevations
 Plant Branch AP-BCD, Putnam County, Georgia

Well ID	Top of Casing Elevation ⁽¹⁾ (ft)	August 22, 2022	
		Depth to Water (ft BTOC)	Groundwater Elevation ⁽¹⁾ (ft)
<i>AP-BCD Detection Monitoring Well Network</i>			
BRGWA-2S	443.20	12.71	430.49
BRGWA-2I	443.14	12.56	430.58
BRGWA-5S	443.86	12.17	431.69
BRGWA-5I	443.79	12.08	431.71
BRGWA-6S	458.96	26.92	432.04
BRGWA-12S	434.64	49.04	385.60
BRGWA-12I	434.39	48.72	385.67
BRGWA-23S	428.24	39.10	389.14
BRGWC-25I	357.37	11.12	346.25
BRGWC-27I	366.86	10.52	356.34
BRGWC-29I	353.23	10.65	342.58
BRGWC-30I	352.61	4.78	347.83
BRGWC-32S	406.39	40.76	365.63
BRGWC-45	384.58	15.13	369.45
BRGWC-47	411.20	27.78	383.42
BRGWC-50	381.35	38.22	343.13
BRGWC-52I	383.87	39.00	344.87
<i>AP-E Detection Monitoring Well Network</i>			
BRGWA-2S	443.20	12.71	430.49
BRGWA-2I	443.14	12.56	430.58
BRGWA-5S	443.86	12.17	431.69
BRGWA-5I	443.79	12.08	431.71
BRGWA-6S	458.96	26.92	432.04
BRGWC-17S	365.32	5.92	359.40
BRGWC-33S	416.68	8.96	407.72
BRGWC-34S	391.96	2.68	389.28
BRGWC-35S	366.31	2.03	364.28
BRGWC-36S	389.84	3.95	385.89
BRGWC-37S	447.05	52.64	394.41
BRGWC-38S	432.24	22.95	409.29
<i>AP-BCD Assessment Monitoring Well Network</i>			
PZ-44	383.04	28.06	354.98
PZ-50D	380.86	38.46	342.40
PZ-51S	380.27	38.35	341.92
PZ-51I	380.52	38.40	342.12
PZ-51D	380.75	38.08	342.67
PZ-57I	382.50	36.38	346.12
PZ-58I	382.27	38.41	343.86
PZ-59I	383.49	39.78	343.71
PZ-60I	382.61	38.41	344.20
PZ-61I	380.64	47.91	332.73

Table 3
 Summary of Groundwater Elevations
 Plant Branch AP-BCD, Putnam County, Georgia

Well ID	Top of Casing Elevation ⁽¹⁾ (ft)	August 22, 2022	
		Depth to Water (ft BTOC)	Groundwater Elevation ⁽¹⁾ (ft)
PZ-62I	380.95	39.18	341.77
PZ-63I	381.31	39.48	341.83
PZ-64I	381.94	N/A	N/A
PZ-65I	382.06	N/A	N/A
PZ-66I	383.52	N/A	N/A
<i>AP-E Assessment Monitoring Well Network</i>			
PZ-13S	409.97	28.20	381.77
PZ-52D	417.03	10.28	406.75
PZ-53D	434.68	23.39	411.29
PZ-70I	425.70	28.55	397.15
<i>Piezometers</i>			
PZ-1D	463.41	38.82	424.59
PZ-1I	464.71	39.70	425.01
PZ-1S	465.07	38.65	426.42
PZ-3D	487.50	49.37	438.13
PZ-3I	489.49	51.09	438.40
PZ-3S	490.53	Dry	--
PZ-4I	482.98	31.03	451.95
PZ-4S	482.87	Dry	--
PZ-7S	451.57	27.75	423.82
PZ-8S	453.08	25.26	427.82
PZ-9S	469.28	38.08	431.20
PZ-10S	433.85	27.52	406.33
PZ-11S	393.99	19.92	374.07
PZ-12D	434.09	78.19	355.90
PZ-14I	422.71	19.55	403.16
PZ-14S	423.31	21.58	401.73
PZ-15I	403.06	9.91	393.15
PZ-15S	402.90	10.22	392.68
PZ-16I	382.45	12.15	370.30
PZ-16S	382.52	12.30	370.22
PZ-17I	365.33	3.07	362.26
PZ-18I	362.55	21.70	340.85
PZ-18S	362.82	21.88	340.94
PZ-19I	371.74	19.25	352.49
PZ-19S	371.42	18.71	352.71
PZ-20I	365.34	17.04	348.30
PZ-20S	365.41	17.17	348.24
PZ-21I	358.92	12.65	346.27
PZ-21S	358.52	12.14	346.38
PZ-23I	427.74	38.54	389.20

Table 3
Summary of Groundwater Elevations
Plant Branch AP-BCD, Putnam County, Georgia

Well ID	Top of Casing Elevation ⁽¹⁾ (ft)	August 22, 2022	
		Depth to Water (ft BTOC)	Groundwater Elevation ⁽¹⁾ (ft)
BRGWC-24S	354.10	14.37	339.73
PZ-26I	370.63	23.45	347.18
PZ-28I	364.81	16.52	348.29
PZ-31S	376.77	28.96	347.81
PZ-39	434.78	48.95	385.83
PZ-40S	355.96	16.00	339.96
PZ-41S	357.17	17.19	339.98
PZ-42S	361.66	20.72	340.94
PZ-43	383.71	29.62	354.09
PZ-46	384.64	10.73	373.91
PZ-48	420.90	32.87	388.03
PZ-49	384.99	11.84	373.15
PZ-54	443.86	49.14	394.72
PZ-55	453.07	45.37	407.70
PZ-56	418.84	7.45	411.39
PZ-67	381.48	N/A	N/A
PZ-68D	405.25	N/A	N/A
PZ-69I	379.36	N/A	N/A
PB-1S	403.16	NM	NM
PB-2D	416.71	37.56	379.15
PB-4S	411.15	24.43	386.72
PB-4D	412.12	25.74	386.38
PB-7S	402.88	27.43	375.45
PB-8S	401.82	19.62	382.20
PB-8D	401.74	20.45	381.29
PB-10S	400.91	15.60	385.31
PB-10D	400.31	15.08	385.23
PB-13S	373.31	9.15	364.16
PB-13D	373.77	9.88	363.89

Notes:

-- = Ground water depth was not measured due to low groundwater levels

N/A = Not applicable

NM = Not measured

ft = feet

ft BTOC = feet below top of casing

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

Table 4
 Horizontal Gradient and Flow Velocity Calculations
 Plant Branch AP-BCD, Putnam County, Georgia

Flow Path Direction ⁽¹⁾	August 22, 2022			
	h ₁ (ft)	h ₂ (ft)	L (ft)	i (ft/ft)
BRGWA-23S/BRGWC-30I	389.14	347.83	1374	0.030
BRGWC-47/BRGWC-50	383.42	343.13	3130	0.013

Flow Path Direction ⁽¹⁾	K _h (ft/day)	n _e	i (ft/ft)	V (ft/day) ⁽²⁾	Average V (ft/day) ⁽³⁾
BRGWA-23S/BRGWC-30I	2.70	0.20	0.030	0.41	0.38
BRGWC-47/BRGWC-50	5.50	0.20	0.013	0.35	

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-BCD and illustrated on Figures 3 and 4 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 Branch AP-BCD, Putnam County, Georgia

Well ID:	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I		
Sample Date:	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/25/2022	8/24/2022	8/24/2022	8/25/2022	8/25/2022	8/23/2022	8/24/2022	8/25/2022		
Parameter ^(1,2,3)																			
APPENDIX III	Boron	0.00532 J	0.00592 J	0.00538 J	< 0.0052	< 0.0052	< 0.0052	0.00653 J	0.0498	1.38	1.03	1.13	2.15	1.07	0.0458	0.547	0.406	1.56	
	Calcium	4.65	13.9	18.2	14.3	3.97	6.09	15.8	8.09	51.5	64	61	316	48.5	33.5	323	215	38.3	
	Chloride	2.18	2.02	3.59	3.64	2.39	5.46	2.50	3.16	5.38	4.65	5.84	4.91	3.96	14.9	4.49	15.8	6.27	
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.129	0.151	0.157	0.186	0.234	0.103	0.318	0.138	0.166	< 0.033	0.497	0.157	
	Sulfate	0.452	5.66	0.521	2.21	0.479	0.636	1.84	24.4	158	176	298	935	254	114	1,410	1,400	142	
	TDS	45	117	101	107	52	55	104	103	315	311	383	1,540	437	248	2,060	1,990	296	
APPENDIX IV	Antimony	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0241	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
	Arsenic	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.00283 J	< 0.002	< 0.002	0.00228 J	0.00250 J	< 0.002	
	Barium	0.012	0.00954	0.0379	0.0241	0.014	0.0607	0.0602	0.0573	0.0259	0.0161	0.0175	0.0389	0.0231	0.0574	0.0285	0.0166	0.0179	
	Beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.000845	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00831	< 0.0002
	Cadmium	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.00818	< 0.0003
	Chromium	0.00908 J	< 0.003	0.00435 J	0.00647 J	0.0143	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
	Cobalt	0.000844 J	0.000767 J	< 0.0003	0.000553 J	< 0.0003	< 0.0003	< 0.0003	0.000308 J	0.00342	0.0079	0.0066	0.00163	< 0.0003	0.00357	< 0.0003	1.42	< 0.0003	
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.129	0.151	0.157	0.186	0.234	0.103	0.318	0.138	0.166	< 0.033	0.497	0.157	
	Lead	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	Lithium	< 0.003	0.0262	< 0.003	< 0.003	0.00314 J	< 0.003	0.00451 J	0.00792 J	< 0.003	< 0.003	0.00304 J	0.0238	0.00430 J	< 0.003	0.0474	0.0428	0.0162	
	Mercury	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067
	Molybdenum	< 0.0002	0.0024	< 0.0002	0.00151	< 0.0002	< 0.0002	0.000413 J	< 0.0002	0.00105	< 0.0002	< 0.0002	0.00141	< 0.0002	0.000424 J	0.000296 J	< 0.0002	0.000471 J	
	Comb. Radium 226/228	0.531 U	1.70 U	0.735 U	2.3	0.203 U	1.69 U	0.558 U	1.59 U	1.90 U	1.79 U	1.97	3.26	1.32 U	2.44	3.74	1.87 U	4.97	
	Selenium	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.218	< 0.0015	< 0.0015	0.00176 J	< 0.0015
Thallium	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	
GEOCHEM	Alkalinity (Bicarbonate as CaCO3)	32.6	62.4	73.8	72.8	58.2	32	65.8	30.4	75.6	33.4	< 1.45	132	30.2	43.4	28.4	9.4	57.2	
	Alkalinity (Carbonate as CaCO3)	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	
	Alkalinity (total) as CaCO3	32.6	62.4	73.8	72.8	58.2	32	65.8	30.4	75.6	33.4	< 1.45	132	30.2	43.4	28.4	9.4	57.2	
	Iron	0.0763 J	0.183	0.151	< 0.033	0.0701 J	< 0.033	< 0.033	0.114	0.193	0.0361 J	24.8	1.41	< 0.033	0.166	0.101	0.2	1.16	
	Magnesium	4.86	8.82	8.51	10.4	4.06	3.53	4	4.69	21.4	5.73	7.83	57.3	30.9	17.9	125	151	18.3	
	Manganese	0.0391	0.0134	0.014	< 0.001	0.00329 J	0.00103 J	0.00506	0.036	1.68	0.674	1.2	1.15	0.0107	0.302	0.0103	83.4	0.601	
	Potassium	0.439	5.88	0.635	0.909	0.685	2.55	3.37	2.52	4.2	5.03	10.2	6.13	2.25	3.19	11.8	11.4	4.96	
	Sodium	3.36	5.73	4.03	4.93	2.44	5.41	10.3	9.81	16.7	14.6	17.5	30.5	26.6	14.5	42.5	51.7	19.2	

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).

B = Indicates that analytes was detected in associated method blank.

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 Branch AP-BCD, Putnam County, Georgia

Well ID:	PZ-44	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-64I	PZ-64I	PZ-65I	PZ-66I	
Sample Date:	8/25/2022	8/25/2022	8/24/2022	8/24/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/24/2022	8/25/2022	8/25/2022	10/12/2022	11/7/2022	10/11/2022	10/11/2022	
Parameter ^(1,2,3)																	
APPENDIX III	Boron	1.59	0.278	0.00563 J	0.459	0.036	0.496	0.464	0.055	0.293	0.277	0.473	0.672	0.0152	--	0.0299	0.115
	Calcium	27.2	210	7.94	197	118	53	146	267	281	214	104	45.1	320	--	230	200
	Chloride	6.28	26.2	4.58	9.64	17.5	8.41	10.7	53	26.7	19.2	9.97	6.15	55.3	--	48.7	10.8
	Fluoride	0.184	0.106	0.131	0.148	0.318	0.235	1.09	1.8	1.32	0.103	< 0.033	0.235	0.0781 J	--	1.51	0.0601 J
	Sulfate	47	1,060	0.872	1,240	377	294	840	2,900	1,770	1,800	571	234	2,440	--	2,520	1,770
	TDS	167	1,750	90	1,740	715	554	1,380	4,370	2,830	2,400	918	419	3,780	--	3,790	2,800
APPENDIX IV	Antimony	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001	< 0.001
	Arsenic	< 0.002	0.00235 J	< 0.002	0.00222 J	0.00308 J	< 0.002	0.00245 J	0.0221	0.00358 J	0.00295 J	< 0.002	< 0.002	0.00896	--	0.0201	0.00489 J
	Barium	0.056	0.0257	0.0223	0.0154	0.0584	0.0219	0.0181	0.0121 J	0.0226	0.0133	0.0259	0.023	0.0543	--	0.026	0.0597
	Beryllium	< 0.0002	0.000269 J	< 0.0002	< 0.0002	< 0.0002	0.000393 J	0.0335	0.1	0.0703	0.00198	0.000219 J	< 0.0002	0.0006	--	0.0159	< 0.0002
	Cadmium	< 0.0003	< 0.0003	< 0.0003	0.00478	< 0.0003	< 0.0003	0.0046	0.00536	0.017	0.000859 J	0.000618 J	< 0.0003	< 0.0003	--	0.000606 J	< 0.0003
	Chromium	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.00324 J	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	--	0.00405 J	< 0.003
	Cobalt	< 0.0003	0.506	0.00193	0.0239	0.000306 J	0.0194	0.503	1.46	3.57	0.562	0.37	0.0232	9.05	8.97	0.481	0.364
	Fluoride	0.184	0.106	0.131	0.148	0.318	0.235	1.09	1.8	1.32	0.103	< 0.033	0.235	0.0781 J	--	1.51	0.0601 J
	Lead	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000894 J	< 0.0025	< 0.0005	0.00113 J	< 0.0005	< 0.0005	< 0.0005	--	0.00132 J	< 0.0005
	Lithium	0.00652 J	0.0255	< 0.003	0.0222	0.00420 J	0.0231	0.0488	0.164	0.101	0.00913 J	0.00617 J	0.00509 J	0.0181	--	0.102	0.0193
	Mercury	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	--	0.000088 J	< 0.000067
	Molybdenum	< 0.0002	0.00109	< 0.0002	0.000313 J	0.00171	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.000286 J	0.000741 J	0.000432 J	--	< 0.0002	0.000918 J
	Comb. Radium 226/228	1.60 U	2.26	1.20 U	0.625 U	3.33	0.773 U	1.16 U	1.02 U	3.50	2.91	1.88 U	1.52 U	2.14	--	0.451 U	1.36 U
	Selenium	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.00348 J	0.113	0.00417 J	0.0051	< 0.0015	< 0.0015	0.0171	--	0.0377	0.00393 J
Thallium	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.003	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	--	0.00139 J	< 0.0006	
GEOCHEM	Alkalinity (Bicarbonate as CaCO3)	78	57	64.2	64.6	22	27	< 1.45	< 1.45	2 J	16.8	19.2	32.8	48	--	< 1.45	68
	Alkalinity (Carbonate as CaCO3)	78	57	64.6	22	129	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	--	< 1.45	68
	Alkalinity (total) as CaCO3	78	57	64.2	22	129	27	< 1.45	< 1.45	2 J	16.8	19.2	32.8	48	--	< 1.45	68
	Iron	0.0537 J	3.62	< 0.033	0.093 J	2.89	1.35	48.9	448	0.533	0.532	1.03	2.04	1.98	--	445	25
	Magnesium	11.5	95.7	8.58	134	28.1	31.1	80	180	187	165	54.2	30.1	254	--	185	285
	Manganese	0.447	36.1	0.805	47.4	1.11	14.2	29.8	74.7	179	108	26.9	5.46	399	--	37.1	107
	Potassium	2.67	13.5	2.47	11.8	9.82	5.52	8.25	16.4	14.7	6.34	9.67	7.94	14.6	--	14.1	11
Sodium	12.7	53.6	11.3	47.2	39.8	19	34.3	92	62.7	58.8	25.6	16.4	61.7	--	81.3	55.6	

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).

B = Indicates that analytes was detected in associated method blank.

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 6
Summary of Surface Water Analytical Results
Plant Branch AP-BCD, Putnam County, Georgia

	Loc ID:	LR-1 (bottom)	LR-1 (mid)	LR-1 (surface)	LR+8A	LR+8 (bottom)	LR+8 (mid)	LR+8 (surface)	LR+9A	LR+9 (bottom)	LR+9 (mid)	LR+9 (surface)	LR+10 (bottom)	LR+10 (mid)	LR+10 (surface)
	Sample Date:	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022	8/24/2022
	Parameter ^(1,2,3)														
APP. III	Boron	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
	Calcium	5.6	5.6	5.6	5.1	5.2	5.4	5.3	5.2	5.2	5.1	5.0	4.8	4.9	5.1
	Chloride	3.6	3.6	3.6	3.6	3.6 M1	3.7	3.7	3.6	3.7	3.7	3.7	4.0	3.8	3.8
	Fluoride	0.10	0.10	0.10	< 0.1 U	0.10	0.10	0.10	< 0.1 U	< 0.1 U	0.10	0.10	0.10	< 0.1 U	< 0.1 U
	pH	7.12	7.1	6.99	7.11	7.15	7.18	7.1	7.11	7.14	7.17	7.08	7.16	7.15	7.05
	Sulfate	1.7	1.8	1.8	2.3	2.1 M1	2.2	2.2	2.4	2.2	2.2	2.2	2.4	2.3	2.3
	TDS	65.0	56.0	58.0	63.0	51.0	63.0	58.0	51.0	58.0	52.0	68.0	45.0	48.0	64.0
APP. IV	Cobalt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	Fluoride	0.10	0.10	0.10	< 0.10	0.10	0.10	0.10	< 0.10	< 0.10	0.10	0.10	0.10	< 0.10	< 0.10
GEOCHEM	Bicarbonate Alkalinity	33.4	33.5	33.6	30.8	31.9	31.4	31.4	30.8	31	31.1	30.8	29.7	29.2	29.2
	Total Alkalinity	33.4	33.5	33.6	30.8	31.9	31.4	31.4	30.8	31	31.1	30.8	29.7	29.2	29.2
	Magnesium	2.7	2.8	2.8	2.5	2.6	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.5
	Potassium	2.8	2.8	2.8	2.7	2.6	2.8	2.7	2.7	2.8	2.7	2.7	2.6	2.7	2.8
	Sodium	5.0	5.1	5.1	4.9	4.8	5.1	5.0	5.0	5.1	5.0	4.8	4.8	4.9	5.0

Notes:

-- = Parameter was not analyzed

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

TDS = total dissolved solids

(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 7
Summary of Background Concentrations and Groundwater Protection Standards
Plant Branch AP-BCD, Putnam County, Georgia

Analyte	Units	MCL	CCR-Rule Specified	Background ⁽¹⁾	GWPS ⁽²⁾⁽³⁾
				Fall 2022	
Antimony	mg/L	0.006		0.024	0.006
Arsenic	mg/L	0.01		0.005	0.01
Barium	mg/L	2		0.13	2
Beryllium	mg/L	0.004		0.0005	0.004
Cadmium	mg/L	0.005		0.001	0.005
Chromium	mg/L	0.1		0.016	0.1
Cobalt	mg/L	n/a	0.006	0.014	0.014
Fluoride	mg/L	4		0.42	4
Lead	mg/L	n/a	0.015	0.002	0.015
Lithium	mg/L	n/a	0.040	0.089	0.089
Mercury	mg/L	0.002		0.00021	0.002
Molybdenum	mg/L	n/a	0.10	0.01	0.1
Selenium	mg/L	0.05		0.006	0.05
Thallium	mg/L	0.002		0.002	0.002
Combined Radium-226/228	pCi/L	5		1.70	5

Notes:

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

MCL = Maximum Contaminant Level

mg/L = milligrams per liter

n/a = not applicable

pCi/L = picocuries per liter

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

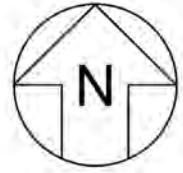
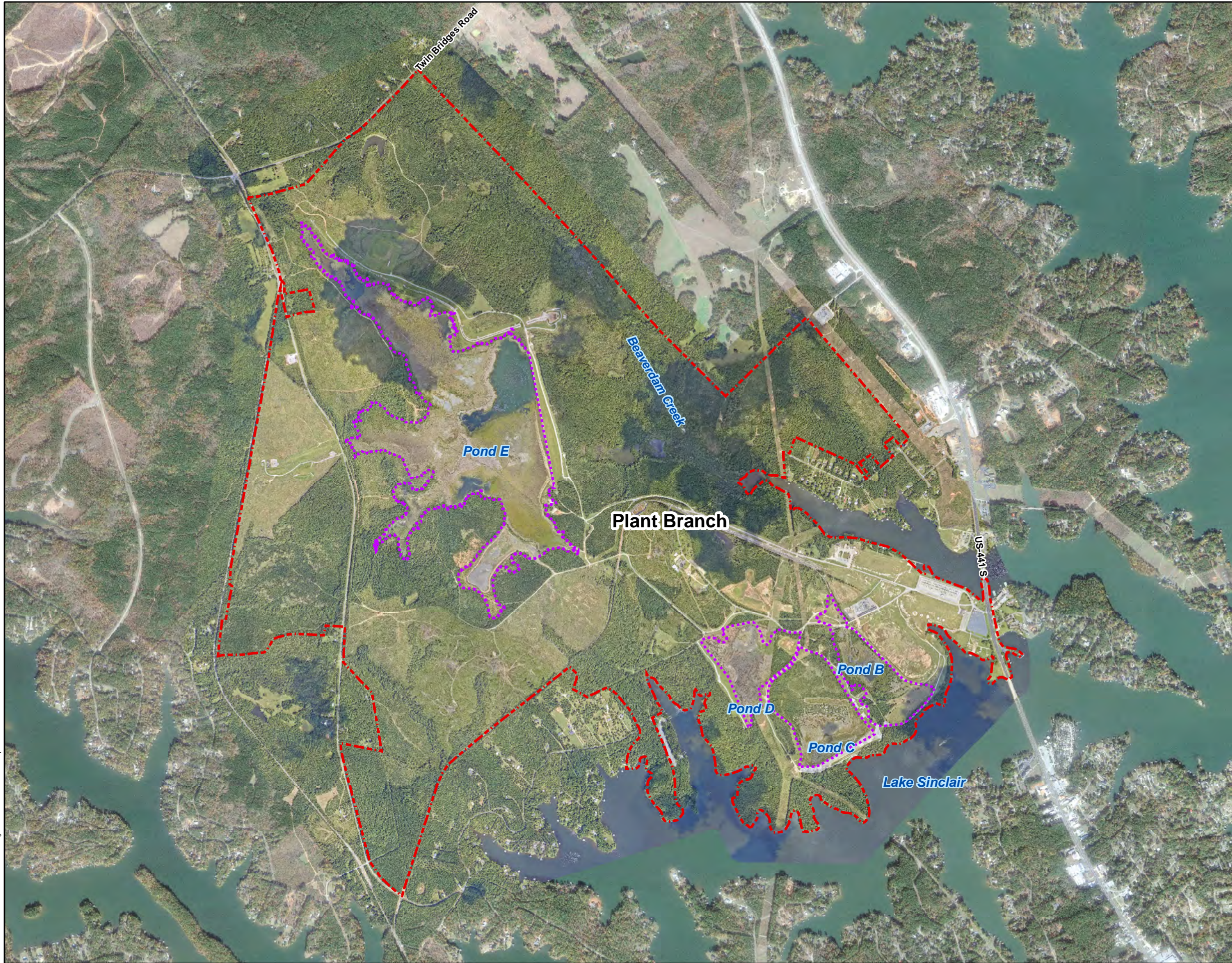
Background limits and groundwater protection standards (GWPS) are applicable to the Fall 2022 event.

(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).

(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-specific GWPS.

(3) On February 22, 2022, GA EPD updated the Rules for Solid Waste Management 391-3-4-.10(6) to incorporate updated Federal GWPSs where an MCL has not been established, except when site-specific background concentrations of constituents is higher.

FIGURES



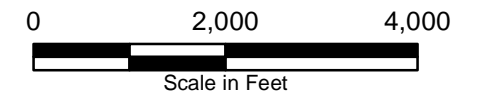
LEGEND

- - - Plant Branch Property Boundary
- - - Approximate Ash Pond Boundary



Notes:

1. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
2. Property Boundary Provided by Southern Company Services.
3. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



SITE LOCATION MAP

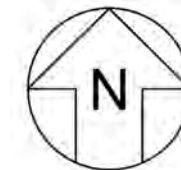
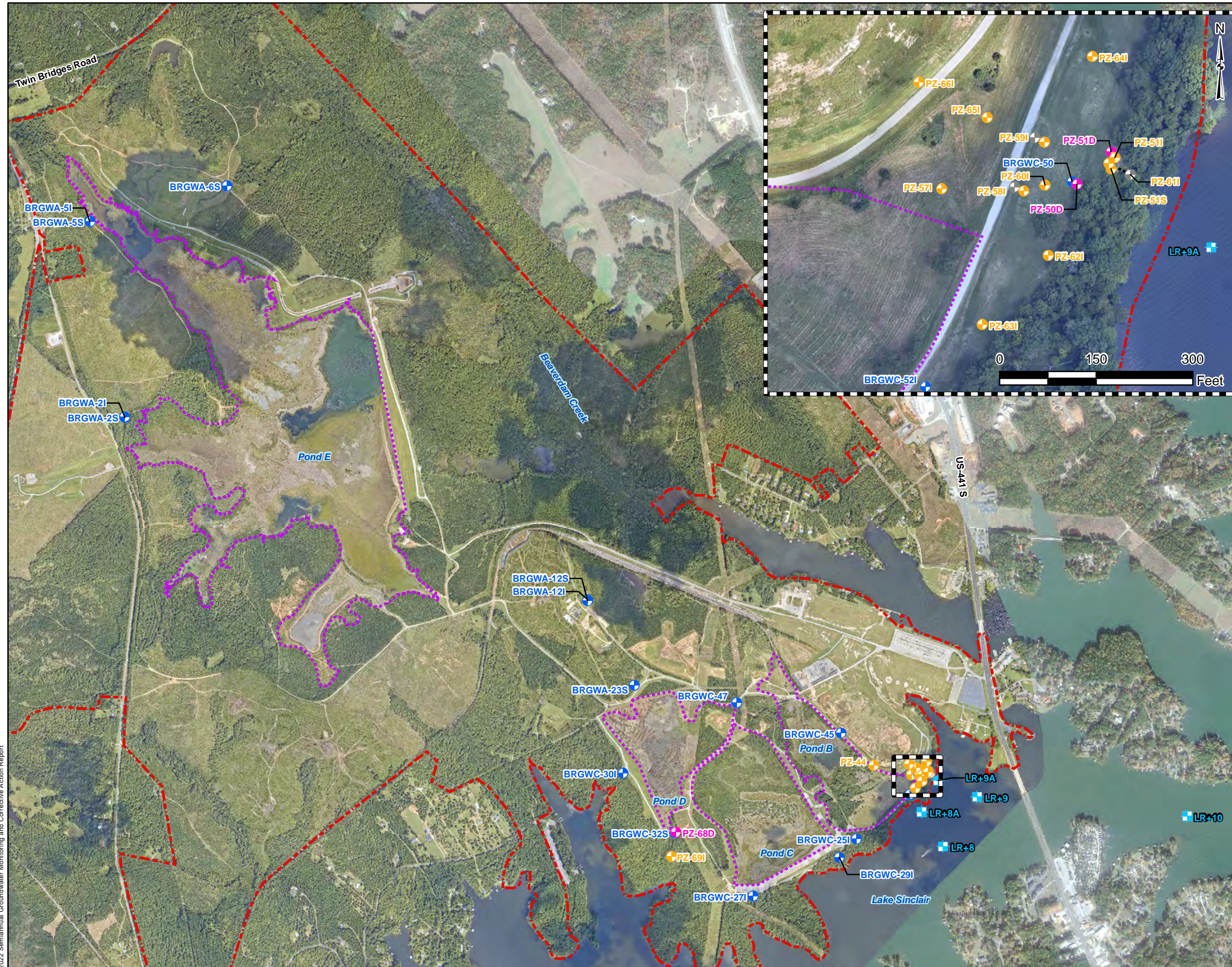
GEORGIA POWER COMPANY
 PLANT BRANCH AP-BCD
 PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
 consultants

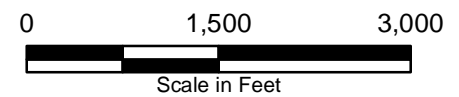
KENNESAW, GA FEBRUARY 2023

FIGURE
1



- LEGEND**
- Detection Monitoring Well
 - Horizontal Assessment Monitoring Well
 - Vertical Assessment Monitoring Well
 - Angled Well Screen
 - Surface Water
 - Plant Branch Property Boundary
 - Approximate Ash Pond Boundary

Notes:
 1. Property Boundary Provided by Southern Company Services.
 2. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



MONITORING WELL NETWORK MAP

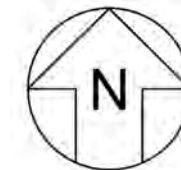
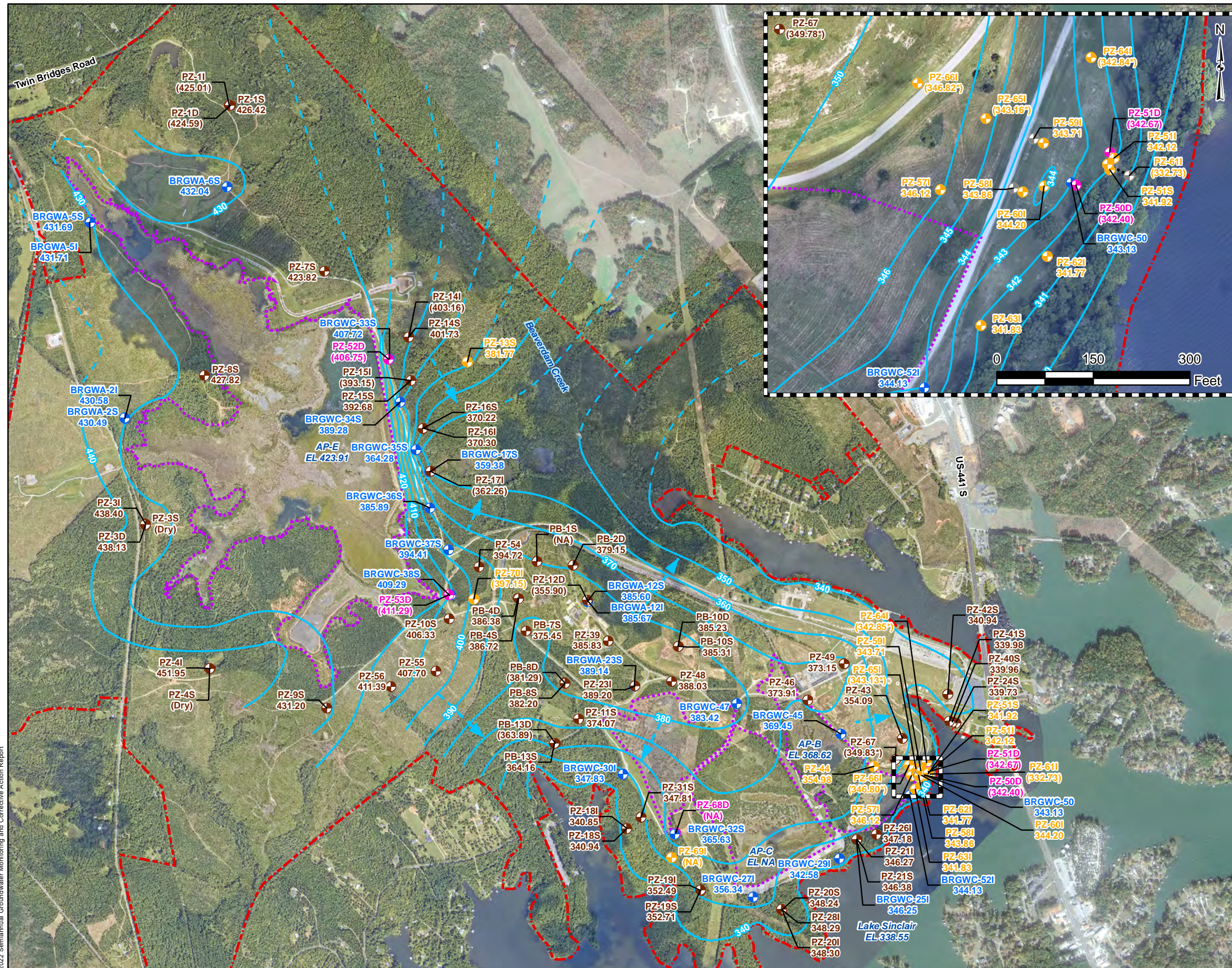
GEORGIA POWER COMPANY
 PLANT BRANCH AP-BCD
 PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

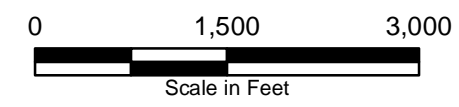
KENNESAW, GA FEBRUARY 2023

FIGURE 2



- LEGEND**
- Detection Monitoring Well
 - Horizontal Assessment Monitoring Well
 - Vertical Assessment Monitoring Well
 - Piezometer
 - Angled Well Screen
 - Groundwater Elevation Iso-Contour
 - - - Groundwater Elevation Iso-Contour (Inferred)
 - ▶ Approximate Groundwater Flow Direction
 - - - Plant Branch Property Boundary
 - - - Approximate Ash Pond Boundary

- Notes:**
1. Water level elevation recorded on August 22, 2022 for semi-annual groundwater event.
 2. Wells PZ-64I, PZ-65I, PZ-66I, PZ-67, PZ-68D, and PZ-69I were installed in September 2022 and were not part of the semi-annual groundwater event. * - indicates wells PZ-64I, PZ-65I, PZ-66I, and PZ-67 water level elevation was recorded on December 14, 2022.
 3. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).
 4. Groundwater iso-contours based on linear interpolation and extrapolation from known groundwater elevation data, and topographic elevations.
 5. 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.
 6. NA - not available
 7. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
 8. Property Boundary Provided by Southern Company Services.
 9. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



**POTENTIOMETRIC SURFACE CONTOUR
MAP - AUGUST 2022**

GEORGIA POWER COMPANY
PLANT BRANCH AP-BCD
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

KENNESAW, GA FEBRUARY 2023

**FIGURE
3**

APPENDIX A

Well Design, Installation, and Development Report, Plant Branch Ash Pond BCD (AP- BCD)



Prepared for

Southern Company Services
3535 Colonnade Parkway
Birmingham, Alabama 35243

**WELL DESIGN, INSTALLATION, AND
DEVELOPMENT REPORT
PLANT BRANCH ASH PONDS B, C, & D (AP-BCD)**

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW8862

November 2022



CERTIFICATION PAGE

I hereby certify that this *Well Design, Installation, and Development Report – Plant Branch AP-BCD* has been prepared by, or under the direct supervision of, a Qualified Groundwater Scientist with Geosyntec Consultants and is in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations 257 Subpart D], specifically §257.91(e)(1), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10.

According to 391-3-4-.01(57), a Qualified Groundwater Scientist is “a professional engineer or geologist registered to practice in Georgia who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields that enable individuals to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.”



Date: November 18, 2022
Joseph Ivanowski, P.G.
Georgia Professional Geologist No. 2140
Project Manager
Geosyntec Consultants

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Appendix C	Well Development Forms
Appendix D	Certified Well Survey Data

LIST OF ACRONYMS

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

1. INTRODUCTION

Georgia Power Company's (Georgia Power) Plant Branch (Plant) is located near Milledgeville and Eatonton, in Putnam County, Georgia. Over the course of power generation at the Plant, five Coal Combustion Residuals (CCR) ponds, identified as Ash Ponds A, B, C, D, and E were utilized. Ash Ponds B, C, and D (Site) are monitored collectively as a single groundwater monitoring unit (AP-BCD). This report provides details regarding the design, installation, and development of three (3) assessment monitoring wells (PZ-64I, PZ-65I, and PZ-66I) and three (3) piezometers (PZ-67, PZ-68D and PZ-69I), to supplement the current groundwater monitoring system at AP-BCD. PZ-64I, PZ-65I, PZ-66I, and PZ-67 are located at AP-B and are shown on **Figure 1**. PZ-68D and PZ-69I are located near AP-D and are shown on **Figure 2**.

The well installations were completed to meet the requirements promulgated in the United States Environmental Protection Agency (USEPA) CCR rule [40 Code of Federal Regulations (CFR) Part 257, Subpart D], specifically 40 CFR §257.91(e)(1) and Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10.

2. DRILLING AND WELL INSTALLATION

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

PZ-64I through PZ-69I were installed and completed between August and September 2022. The locations of these wells are shown on **Figure 1** and **Figure 2**. Well construction details are provided in **Table 1** and boring and well construction logs are included in **Appendix B**.

2.1 Drilling Method

The boreholes were advanced using rotasonic drilling techniques with continuous core collection. A track mounted Terra Sonic C-200 drill rig was used to install the wells, using a nominal 6-inch diameter outer drill casing and a 4-inch diameter core barrel. Care was taken so that the drilling methods did not introduce contamination of the groundwater from surface activities.

2.2 Screened Interval

Details regarding well screened intervals are provided in **Table 1**. Wells are screened in the uppermost water bearing unit of the Site. The wells are screened from approximately 351 to 311 feet [referenced to the North American Vertical Datum of 1988 (NAVD 88)]. All wells are constructed with a 10-foot well screen segment.

2.3 Well Casings and Screens

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

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

2.4 Well Intake Design

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

2.5 Filter Pack

Highly Pure Quartzite manufactured by Southern Products and Silica Co. was used as the filter pack material for the well. The filter pack material meets the ASTM D5092 uniformity coefficient specification of 2.5 or less, with a uniformity coefficient of 1.6.

Filter pack material was placed within the U-Pack well screen and in the annular space between the outside of the screen and the borehole wall to ensure an adequate thickness of filter pack material between the well and the formation. Placement of the filter pack between the borehole wall and PVC was placed via gravity-pouring. Filter pack material placed in the annular space outside of the well screen extended a minimum of two (2) feet above the top of screen. No bridging occurred during filter pack placement.

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

2.6 Annular Seal

A minimum of two feet of bentonite chips (PelPlug time-release-coated 3/8-inch bentonite pellets) were placed immediately above the filter pack by gravity-pouring into the annular space and hydrated per manufacture's specifications. A tremie pipe was used to probe the annular space to ensure that no bridging occurred. In cases where the bentonite seal extended above the estimated water table surface, the bentonite was hydrated with potable water for a duration meeting the manufacture's specifications prior to grouting the remaining annulus.

The annulus above the bentonite seal was grouted with AQUAGUARD[®] bentonite grout containing 20-percent solids, placed via tremie pipe (initial grouting) and direct pour methods (for topping off) from the top of the bentonite seal. During grouting, care was taken to assure that the bentonite seal was not disturbed by locating the base of the tremie pipe approximately 2 feet above the bentonite seal and injecting grout at low pressure/velocity. A cement apron 4-feet by 4-feet by 4-inches was poured around the wells. The pads were mounded slightly outward to direct surface drainage away from the wells.

2.7 Cap and Protective Casing

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

A weep hole was drilled in the outer protective casing near the bottom above the concrete pad. Pea gravel was placed inside the protective casing between the riser pipe and the outer casing. The wells were clearly marked with the proper well identification number on the stand-up casing.

3. WELL DEVELOPMENT

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

4. SURVEY

Upon completion of the well installations, horizontal locations and vertical elevations were surveyed by a Georgia-licensed surveyor, and certified on October 03, 2022. The top of the PVC well casings [top of casing (TOC) elevations] and the survey pin installed at the well pads were surveyed to within 0.5-foot horizontal accuracy and to 0.01-foot vertical accuracy. The horizontal location (i.e., northings and eastings) was recorded in feet relative to the North America Datum of 1983 (NAD) with the vertical elevation recorded in feet relative to the North American Vertical Datum of 1988. Certified survey data are provided in the well construction table (**Table 1**). A copy of the certified well survey data for the wells is provided in **Appendix D**.

5. REFERENCES

Georgia Environmental Protection Division (GA EPD), Georgia Department of Natural Resources, 1991. *Manual for Groundwater Monitoring*. September 1991.

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United States Environmental Protection Agency. 2015a. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81, April 2015

TABLE

Table 1
 Summary of Well Construction Details
 Plant Branch AP-BCD
 Putnam County, Georgia

Well ID	Ash Pond	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation ⁽²⁾ (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Well Depth (ft bgs) ⁽³⁾
PZ-64I	AP-B	9/10/2022	1161787.72	2562404.29	379.37	381.94	320.62	310.62	69.3
PZ-65I	AP-B	9/09/2022	1161692.72	2562240.57	379.61	382.06	320.86	310.86	69.3
PZ-66I	AP-B	9/08/2022	1161747.91	2562134.65	380.86	383.52	323.11	313.11	68.3
PZ-67	AP-B	9/07/2022	1161831.98	2561919.76	378.78	381.48	351.03	341.03	38.3
PZ-68D	AP-D	9/06/2022	1160690.48	2558512.90	402.50	405.25	328.75	318.75	84.3
PZ-69I	AP-D	8/31/2022	1160311.39	2558447.46	376.97	379.36	348.22	338.22	39.3

Notes:

AP = ash pond

ID = identification

ft = feet

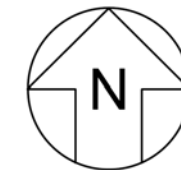
bgs = below ground surface

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey was completed by GEL Solutions and certified October 03, 2022.

(2) Vertical elevations are referenced to the North American Vertical Datum (NAVD) of 1988. Ground surface elevation defined at the survey nail installed within the well pad.

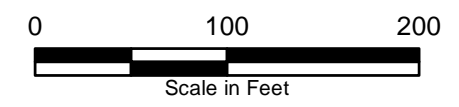
(3) Total well depth accounts for 6-inch sump.

FIGURES



- LEGEND**
- Compliance Monitoring Well
 - Piezometer (Installed 2022)
 - Piezometer
 - Plant Branch Property Boundary
 - Approximate Ash Pond Boundary

Notes:
 1. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
 2. Property Boundary Provided by Southern Company Services.
 3. Aerial Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community 2019 and Georgia Power Company, February 2022.



AP-B Well Location Map

GEORGIA POWER COMPANY
 PLANT BRANCH
 PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
 consultants

FIGURE
1

KENNESAW, GA NOVEMBER 2022



- LEGEND**
- - - Plant Branch Property Boundary
 - ⋯ Approximate Ash Pond Boundary
 - Compliance Monitoring Well
 - Piezometer (Installed 2022)
 - Piezometer

Notes:

1. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
2. Property Boundary Provided by Southern Company Services.
3. Aerial Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community 2019 and Georgia Power Company, February 2022.



AP-D Well Location Map

GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

FIGURE
2

KENNESAW, GA NOVEMBER 2022

APPENDIX A

Well Driller Performance Bonds



Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson, William M. Smith, Derek Sabo, Charla M. Boadle**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

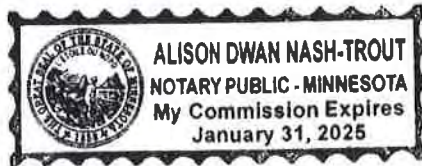
IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.



By *Paul J. Brehm*
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



Alison Nash-Trout
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 12 day of April, 2021.

This Power of Attorney expires
January 31, 2025



Kara Barrow
Kara Barrow, Secretary

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

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

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

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

does hereby continue said bond in force for the further period

beginning on 06/30/2021
(MONTH-DAY-YEAR)

and ending on 06/30/2023
(MONTH-DAY-YEAR)

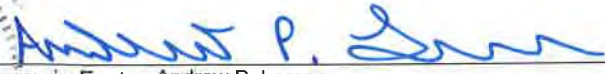
Amount of bond Thirty Thousand and 00/100 Dollars (\$30,000.00)

Description of bond Performance Bond for Water Well Contractors

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

Signed and dated on April 12th, 2021
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

By 
Attorney-in-Fact Andrew P. Larsen

Parker, Smith & Feek, Inc.

Agent
2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

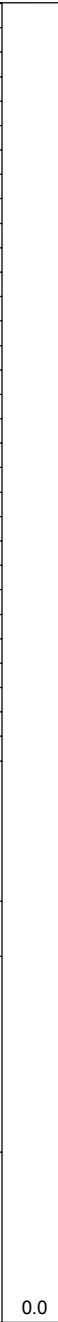
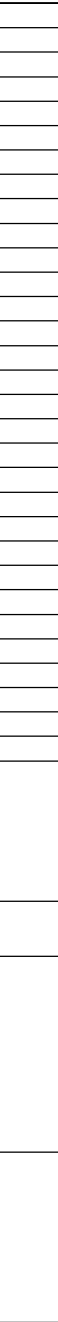
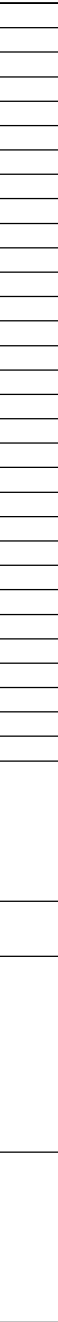
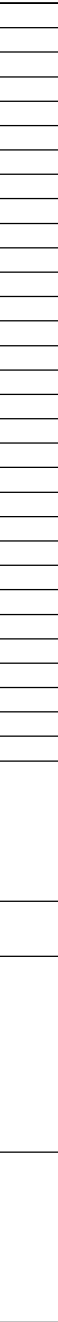
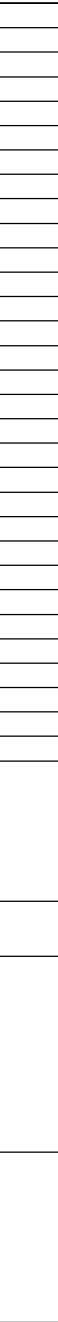
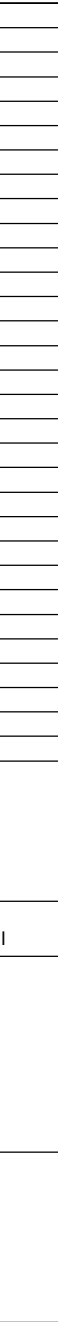
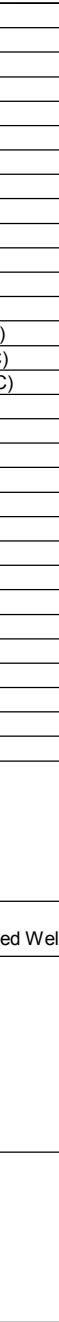
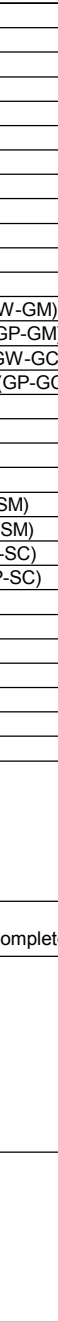
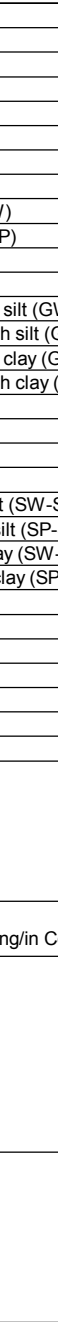
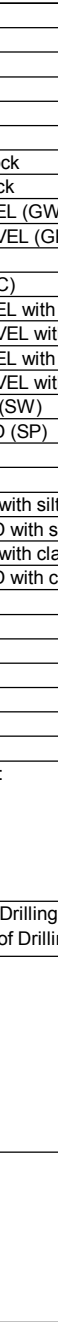
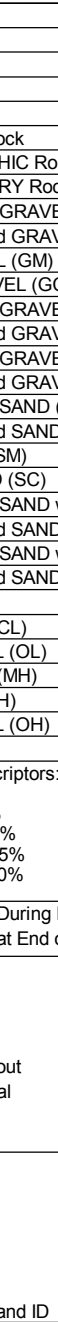
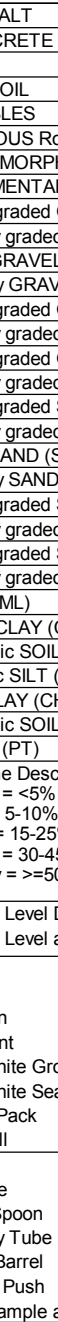
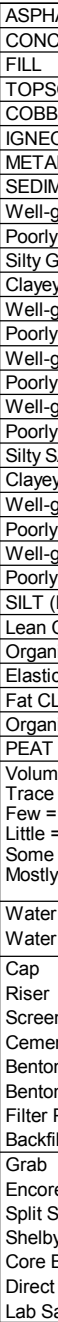
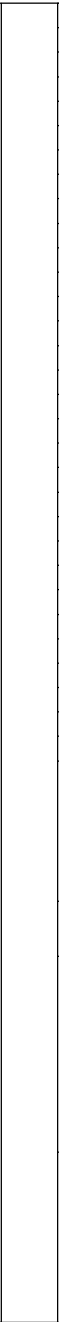
Telephone Number of Agent

APPENDIX B

Boring and Well Construction Logs

BORING AND WELL LOG LEGEND

LITHOLOGY	WATER LEVEL	WELL/BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE	
			Sample Type	Date & Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample



- ASPHALT
- CONCRETE
- FILL
- TOPSOIL
- COBBLES
- IGNEOUS Rock
- METAMORPHIC Rock
- SEDIMENTARY Rock
- Well-graded GRAVEL (GW)
- Poorly graded GRAVEL (GP)
- Silty GRAVEL (GM)
- Clayey GRAVEL (GC)
- Well-graded GRAVEL with silt (GW-GM)
- Poorly graded GRAVEL with silt (GP-GM)
- Well-graded GRAVEL with clay (GW-GC)
- Poorly graded GRAVEL with clay (GP-GC)
- Well-graded SAND (SW)
- Poorly graded SAND (SP)
- Silty SAND (SM)
- Clayey SAND (SC)
- Well-graded SAND with silt (SW-SM)
- Poorly graded SAND with silt (SP-SM)
- Well-graded SAND with clay (SW-SC)
- Poorly graded SAND with clay (SP-SC)
- SILT (ML)
- Lean CLAY (CL)
- Organic SOIL (OL)
- Elastic SILT (MH)
- Fat CLAY (CH)
- Organic SOIL (OH)
- PEAT (PT)
- Volume Descriptors:
Trace = <5%
Few = 5-10%
Little = 15-25%
Some = 30-45%
Mostly = >=50%
- Water Level During Drilling
- Water Level at End of Drilling/in Completed Well
- Cap
- Riser
- Screen
- Cement
- Bentonite Grout
- Bentonite Seal
- Filter Pack
- Backfill
- Grab
- Encore
- Split Spoon
- Shelby Tube
- Core Barrel
- Direct Push
- Lab Sample and ID

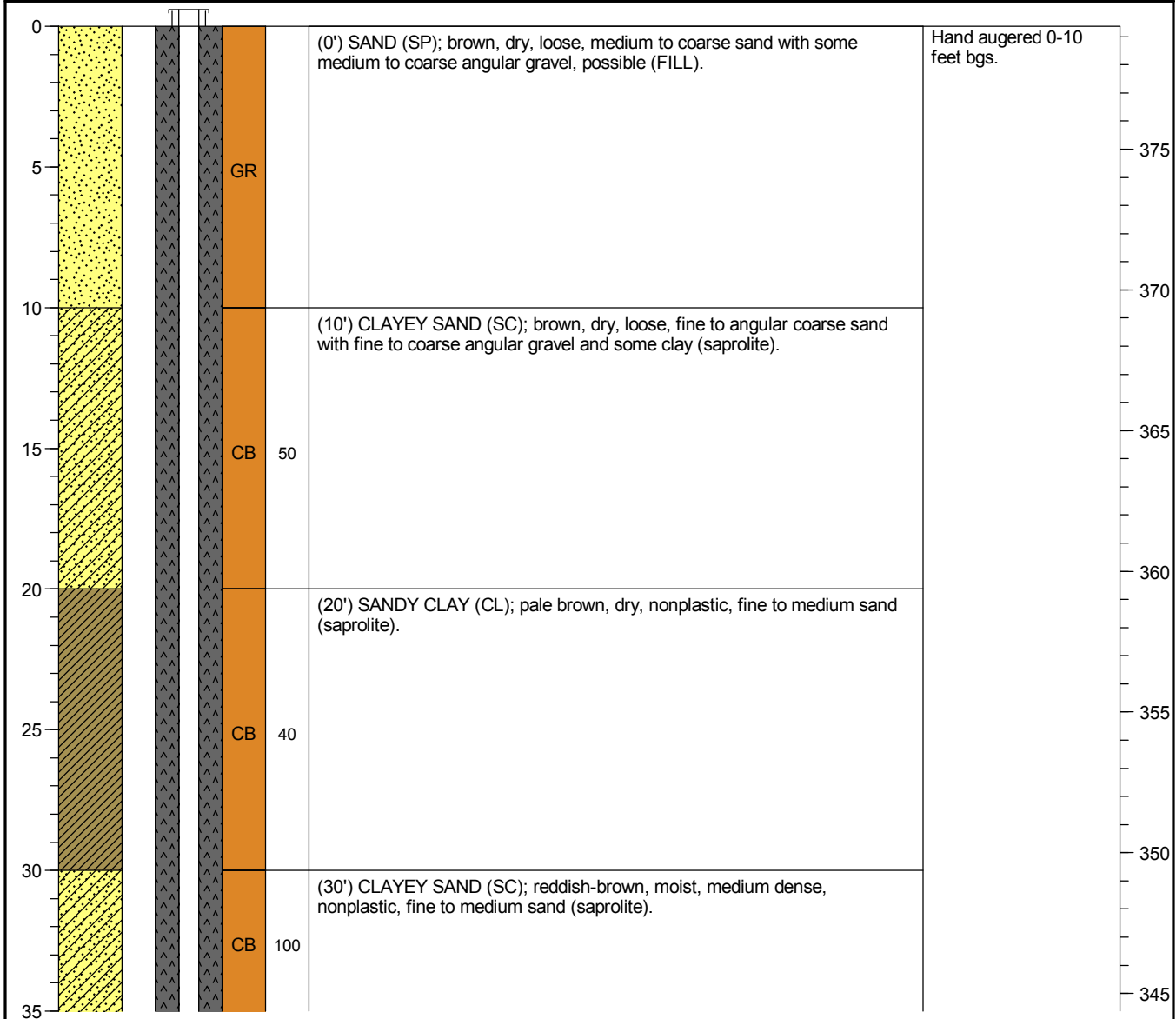
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ID

NOTES:

Drilling Start Date: 09/09/2022	Boring Depth (ft): 70	Well Depth (ft TOC): 71.57
Drilling End Date: 09/10/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 379.37 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 381.94 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161787.72, 2562404.29	Filter Pack: 20/40 Sand

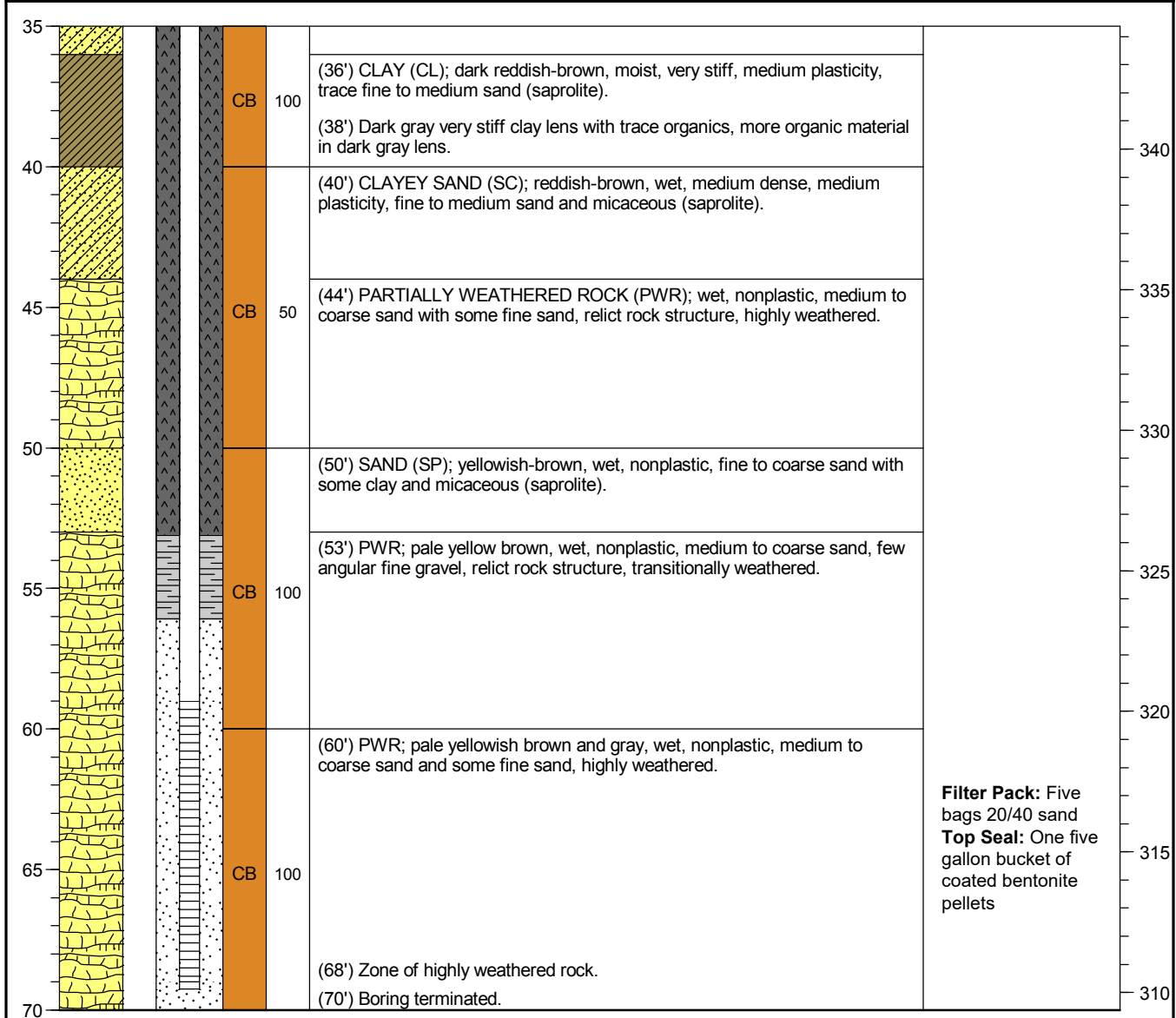
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.57 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/09/2022	Boring Depth (ft): 70	Well Depth (ft TOC): 71.57
Drilling End Date: 09/10/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 379.37 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 381.94 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161787.72, 2562404.29	Filter Pack: 20/40 Sand

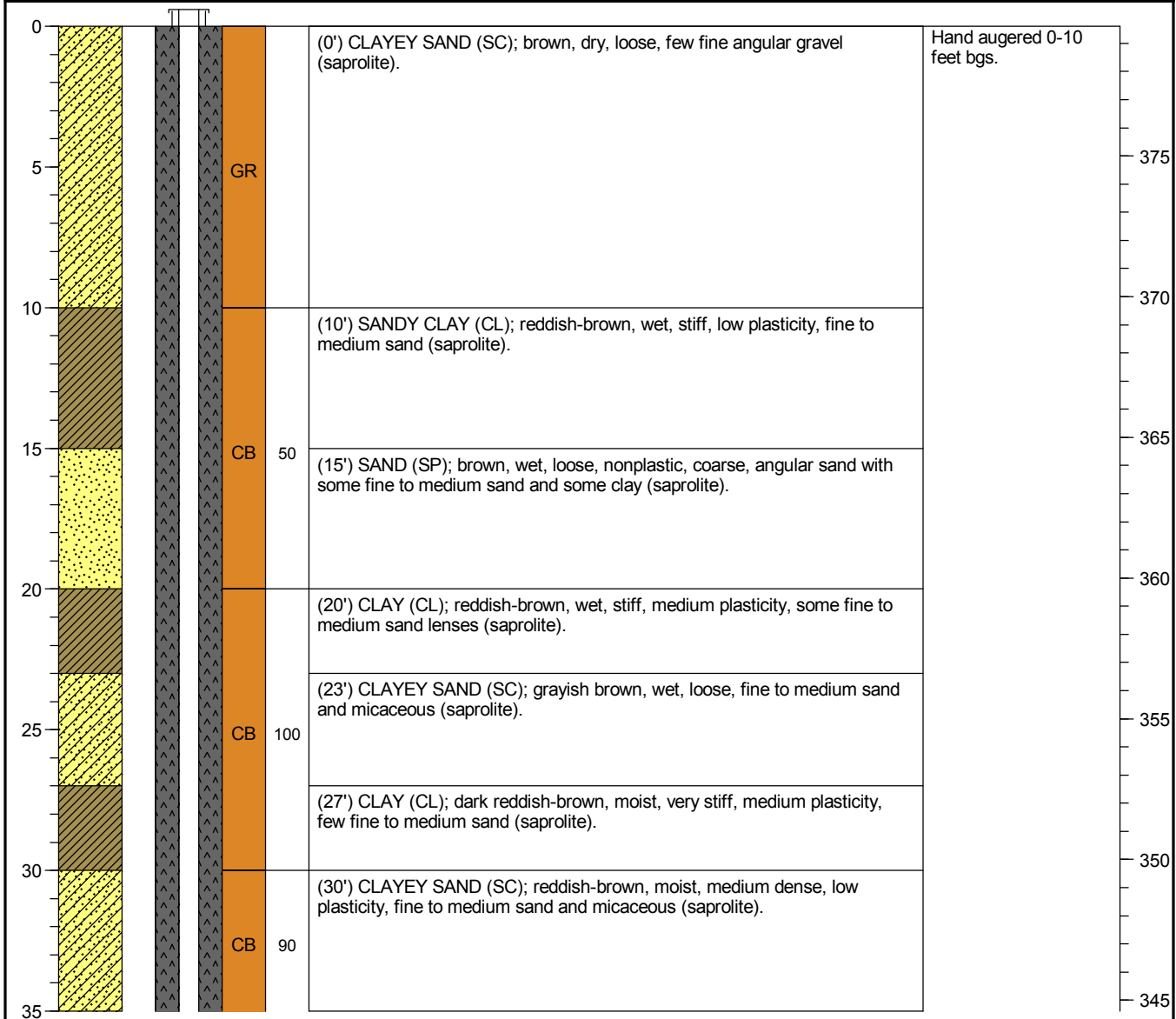
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.57 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/09/2022	Boring Depth (ft): 70	Well Depth (ft TOC): 72.27
Drilling End Date: 09/09/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 379.61 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 382.06 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161692.72, 2562240.57	Filter Pack: 20/40 Sand

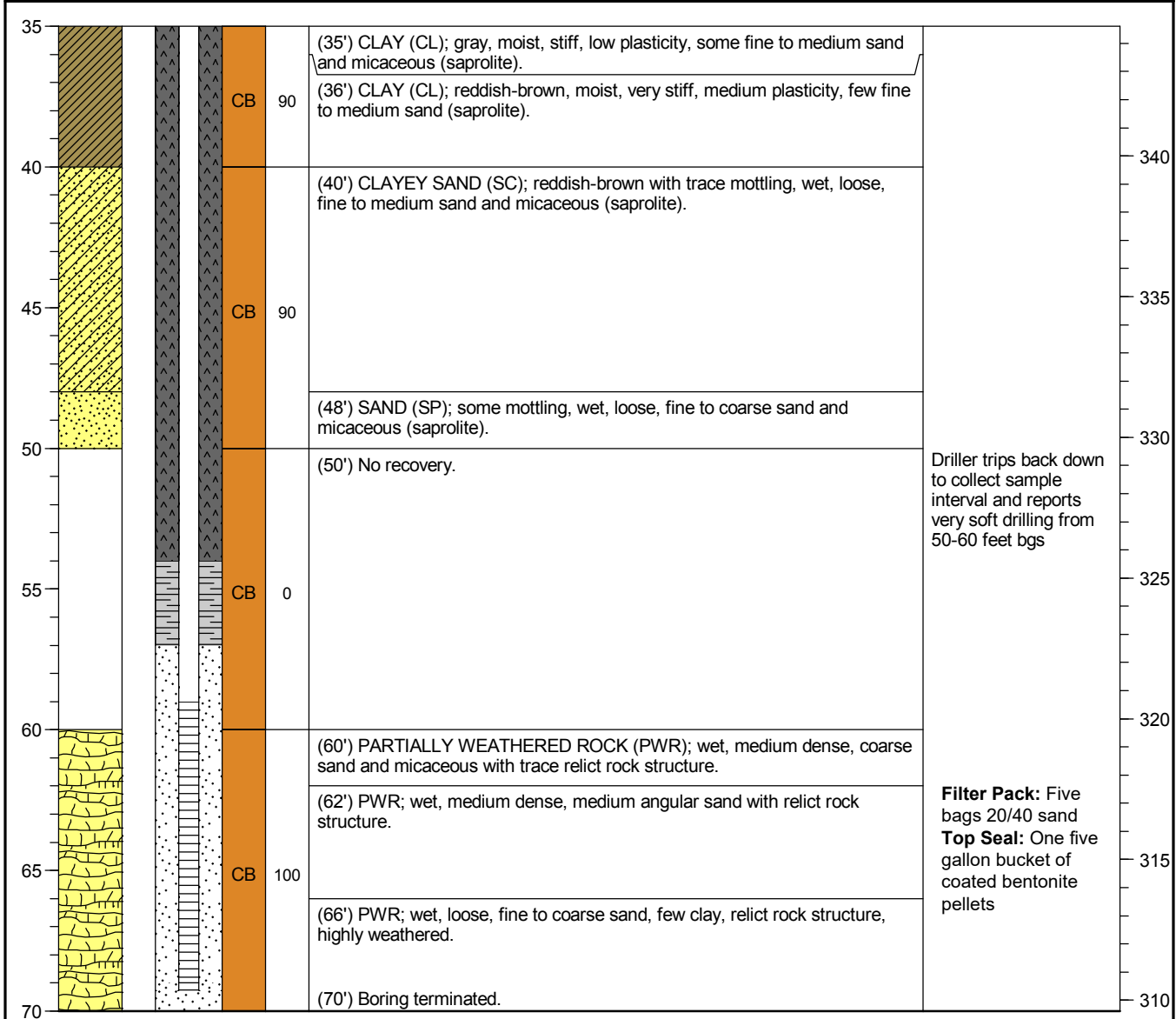
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.45 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/09/2022	Boring Depth (ft): 70	Well Depth (ft TOC): 72.27
Drilling End Date: 09/09/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 379.61 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 382.06 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161692.72, 2562240.57	Filter Pack: 20/40 Sand

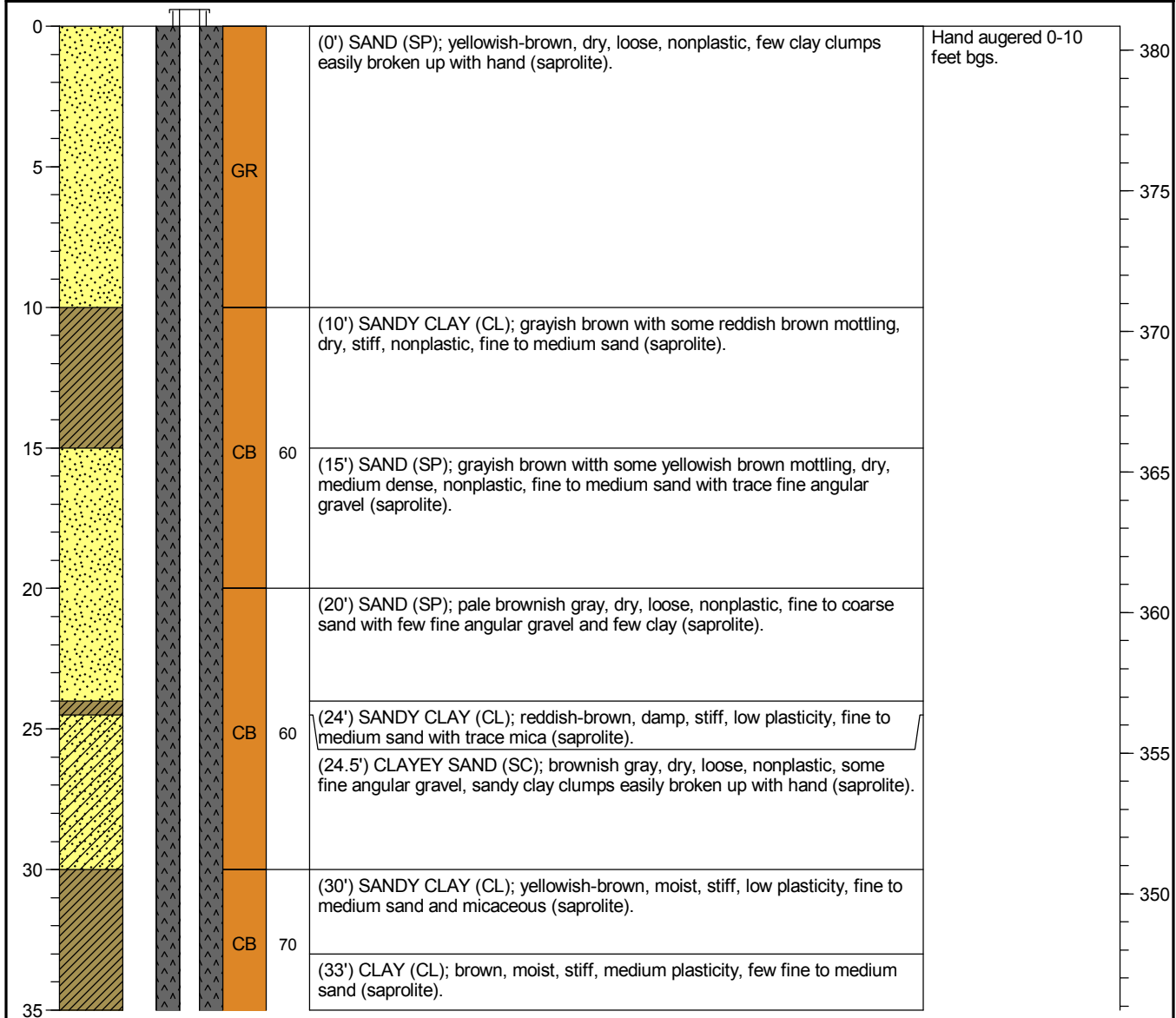
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.45 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/08/2022	Boring Depth (ft): 70	Well Depth (ft TOC): 70.87
Drilling End Date: 09/08/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 380.86 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 383.52 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161747.91, 2562134.65	Filter Pack: 20/40 Sand

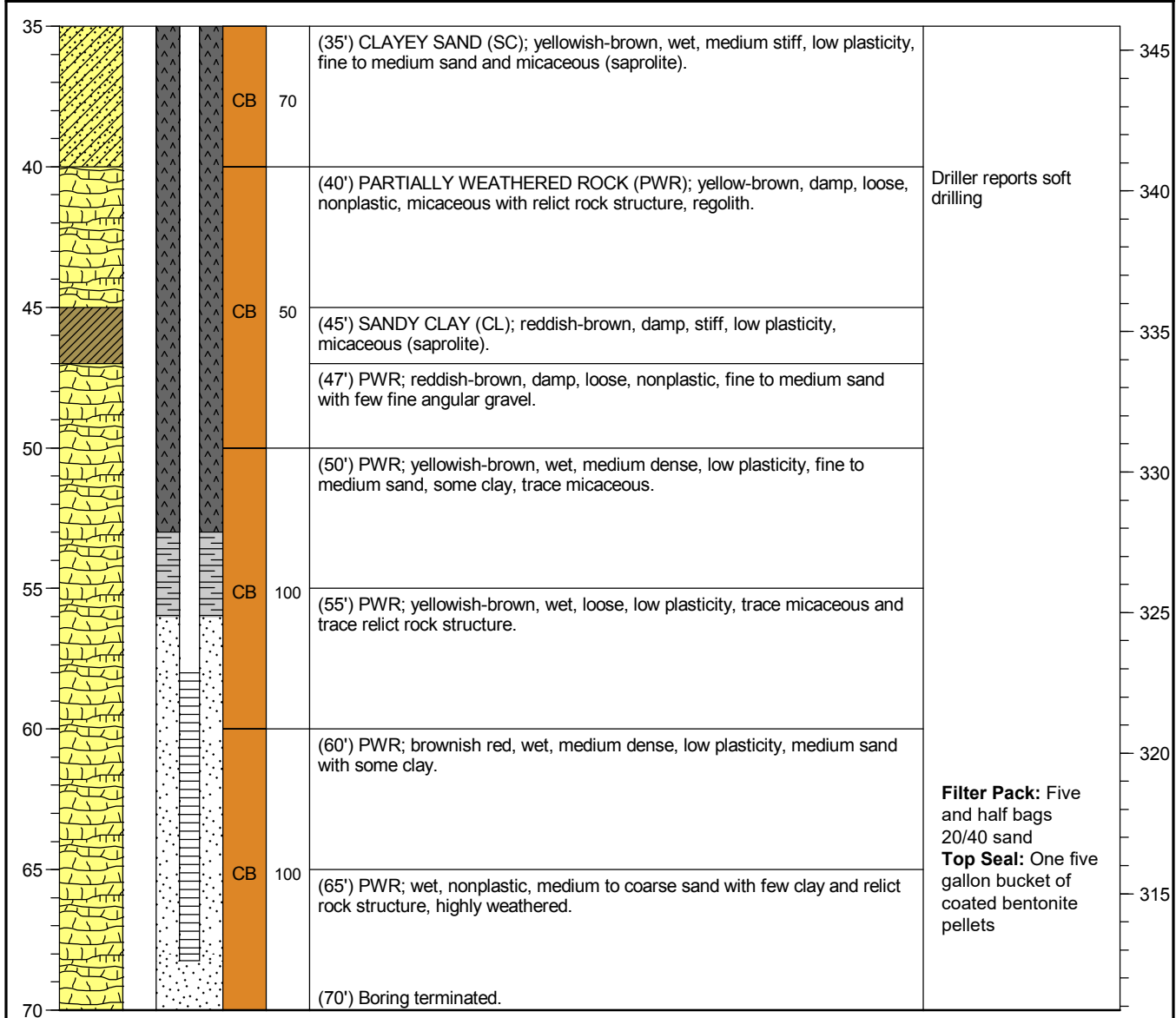
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.66 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/08/2022	Boring Depth (ft): 70	Well Depth (ft TOC): 70.87
Drilling End Date: 09/08/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 380.86 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 383.52 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161747.91, 2562134.65	Filter Pack: 20/40 Sand

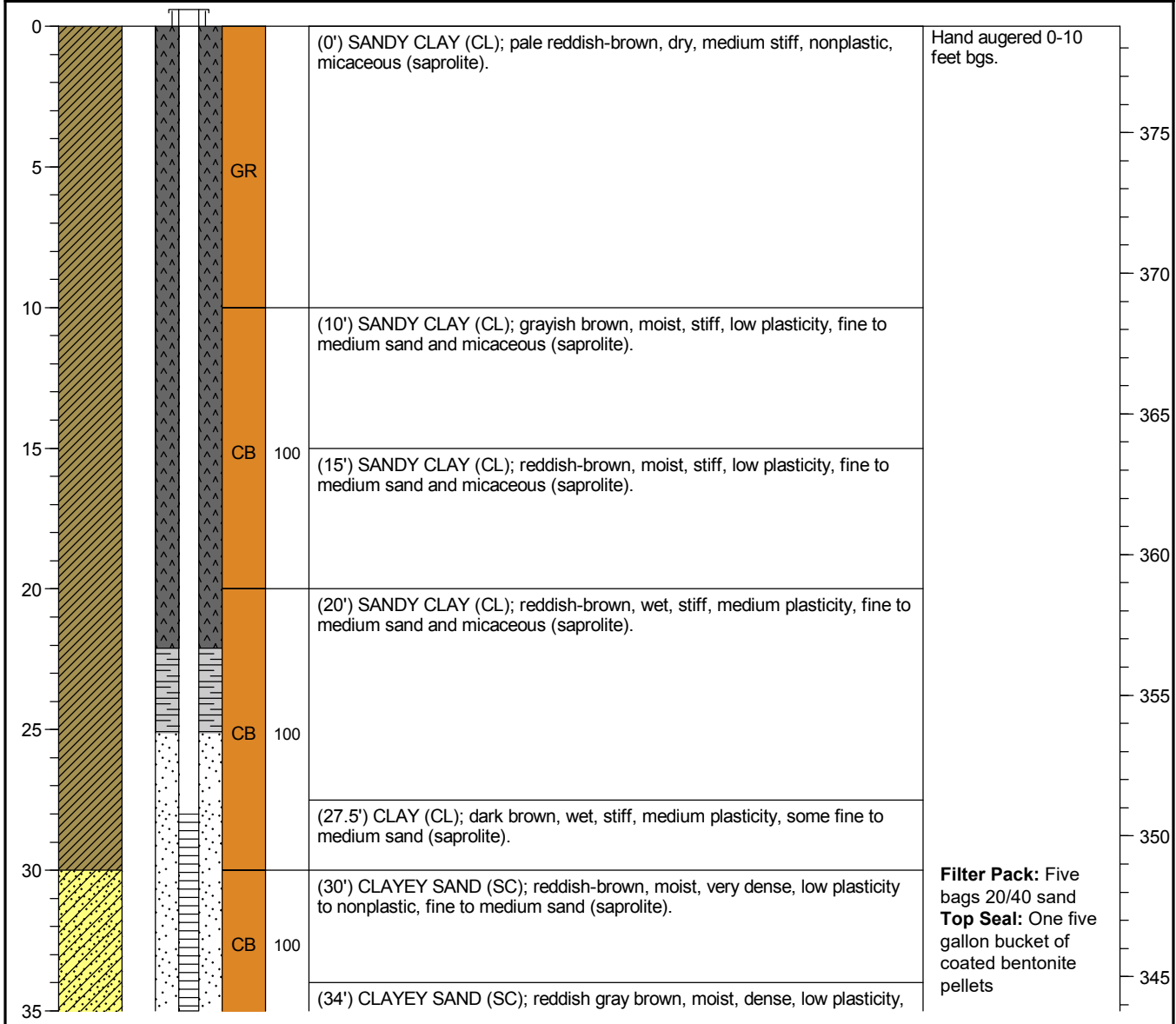
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.66 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/07/2022	Boring Depth (ft): 55	Well Depth (ft TOC): 41.24
Drilling End Date: 09/07/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 378.78 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 381.48 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161831.98, 2561919.76	Filter Pack: 20/40 Sand

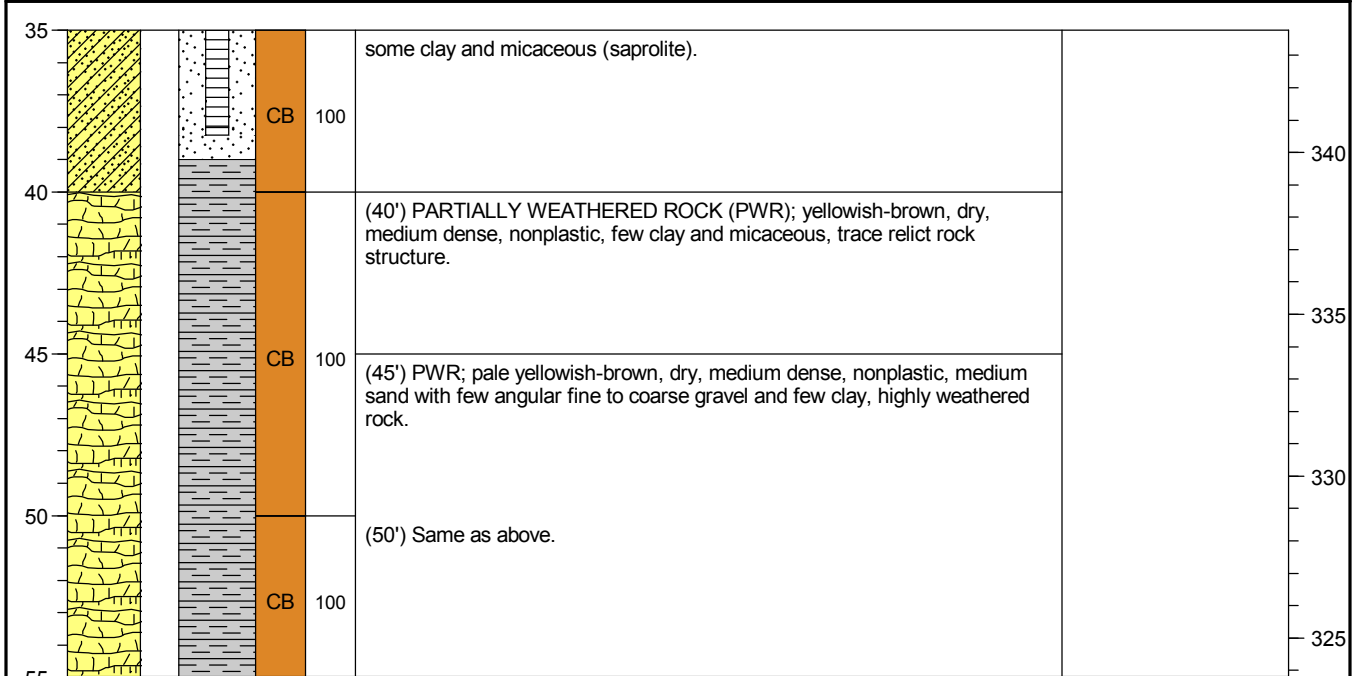
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.7 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 09/07/2022	Boring Depth (ft): 55	Well Depth (ft TOC): 41.24
Drilling End Date: 09/07/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 378.78 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 381.48 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1161831.98, 2561919.76	Filter Pack: 20/40 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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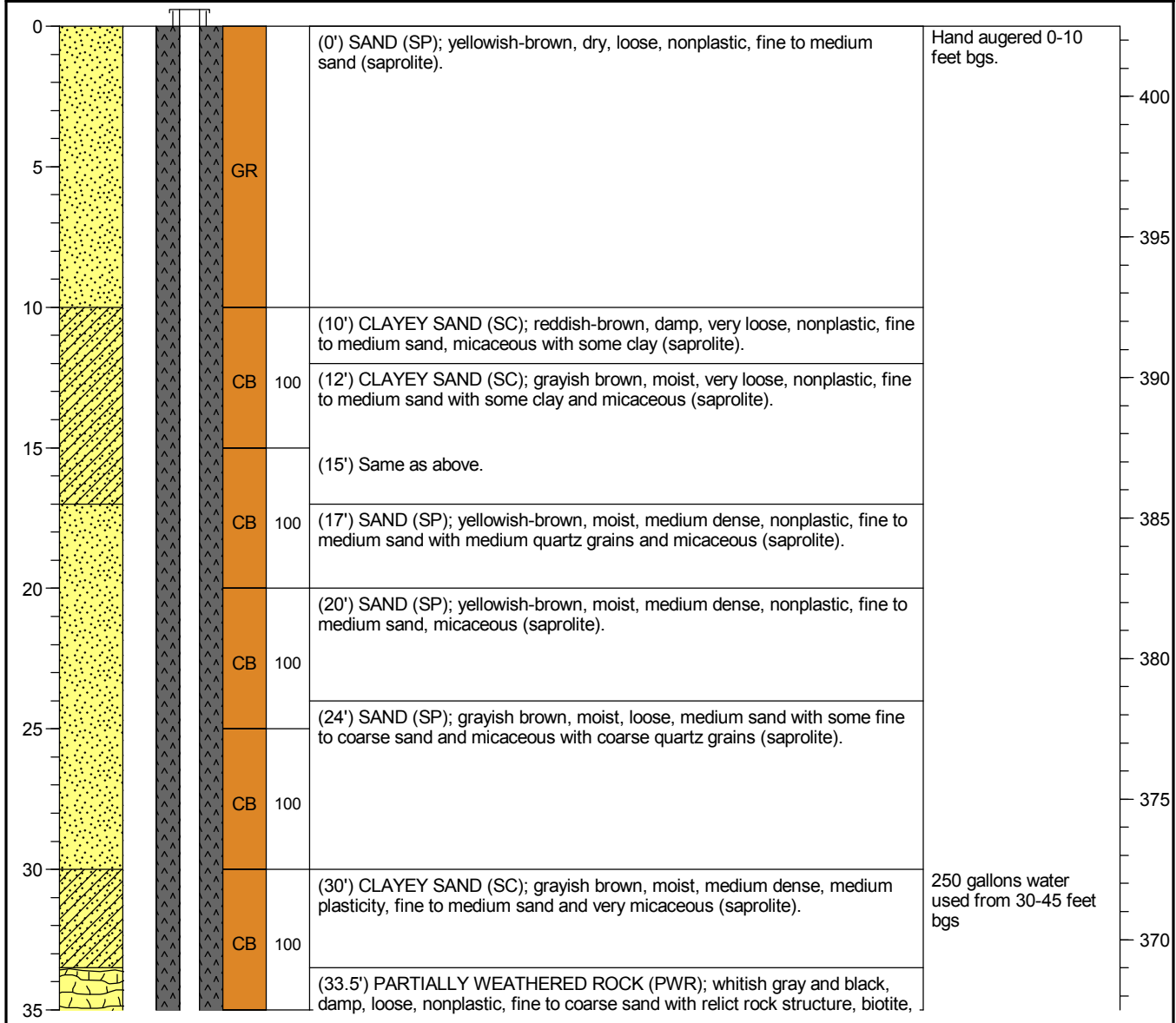


(55') Boring terminated.

NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.7 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 08/31/2022	Boring Depth (ft): 100	Well Depth (ft TOC): 86.93
Drilling End Date: 09/06/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 402.50 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 405.25 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1160690.48, 2558512.9	Filter Pack: 20/40 Sand



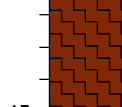
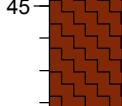
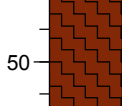
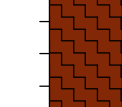
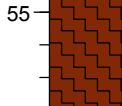
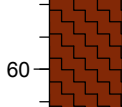
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.75 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 08/31/2022	Boring Depth (ft): 100	Well Depth (ft TOC): 86.93
Drilling End Date: 09/06/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 402.50 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 405.25 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1160690.48, 2558512.9	Filter Pack: 20/40 Sand

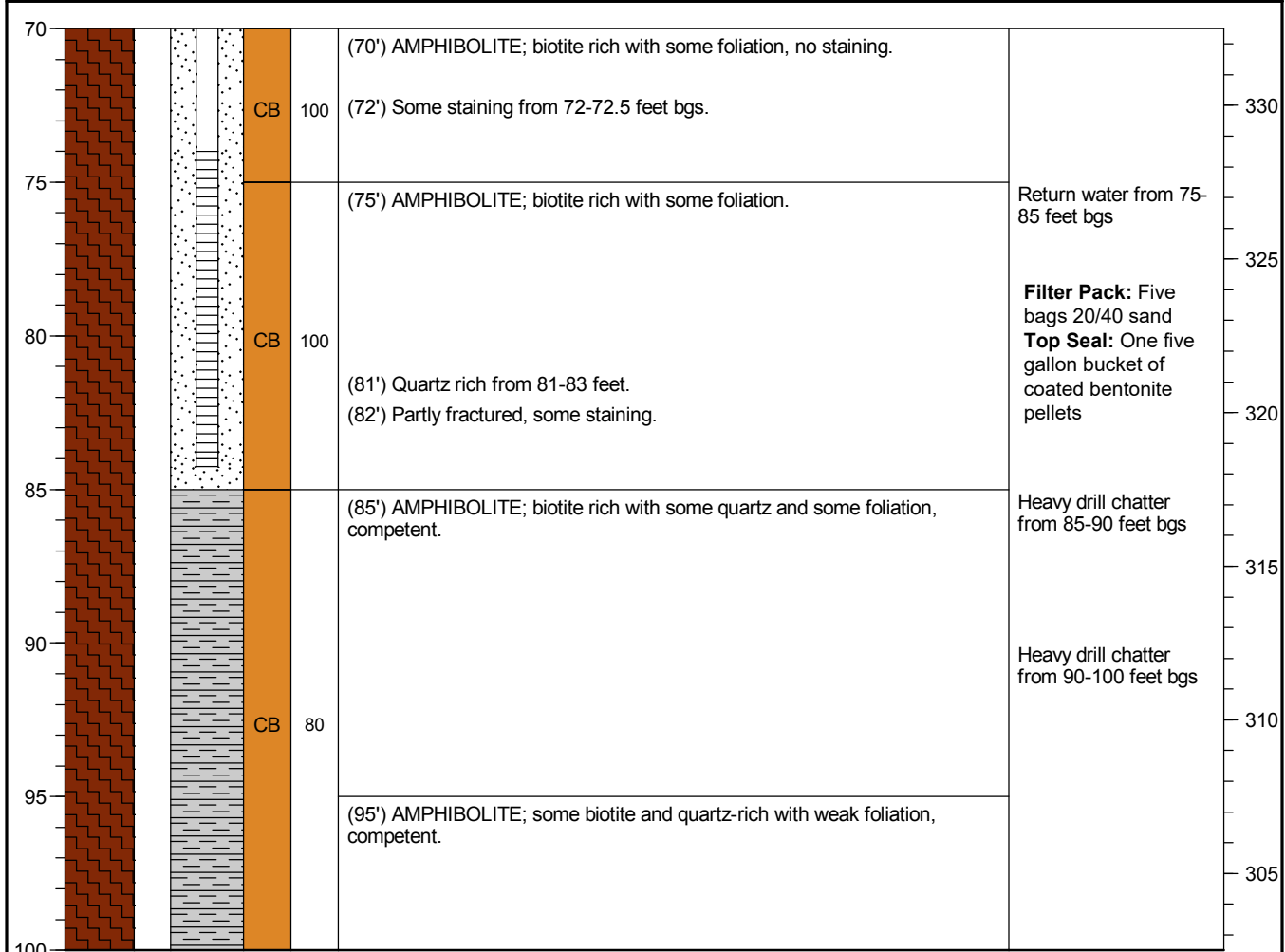
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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35				CB	100	medium quartz grains. (35') PWR; whitish gray, damp, hard, fine to coarse sand with few angular gravel, micaceous, relict rock structure (gneiss/amphibolite), weathered rock.		365
40				CB	100	(40') AMPHIBOLITE; weak, biotite rich with coarse quartz grains, competent, unweathered.	Drill chatter increases; drilling slows	360
45				CB	50	(45') AMPHIBOLITE; weak, biotite rich with coarse quartz grains, competent rock and weathered from 46-47 feet bgs.		355
50				CB	100	(50') AMPHIBOLITE; biotite rich with coarse quartz foliations present in rock, competent, no staining.	Driller has return water; approximately 50 gallons used for 45-50 foot run	350
55				CB	100	(55') Same as above.		345
60				CB	100	(60') AMPHIBOLITE; biotite rich with coarse quartz grains, foliated layering, competent highly weathered/stained zone from 63-63.5 feet bgs.	Return water Heavy rig chatter from 61-65 feet bgs	340
65				CB	100	(65') AMPHIBOLITE; biotite rich with coarse quartz grains and foliated, competent, no staining.		335
70								

NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.75 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 08/31/2022	Boring Depth (ft): 100	Well Depth (ft TOC): 86.93
Drilling End Date: 09/06/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 402.50 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 405.25 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1160690.48, 2558512.9	Filter Pack: 20/40 Sand

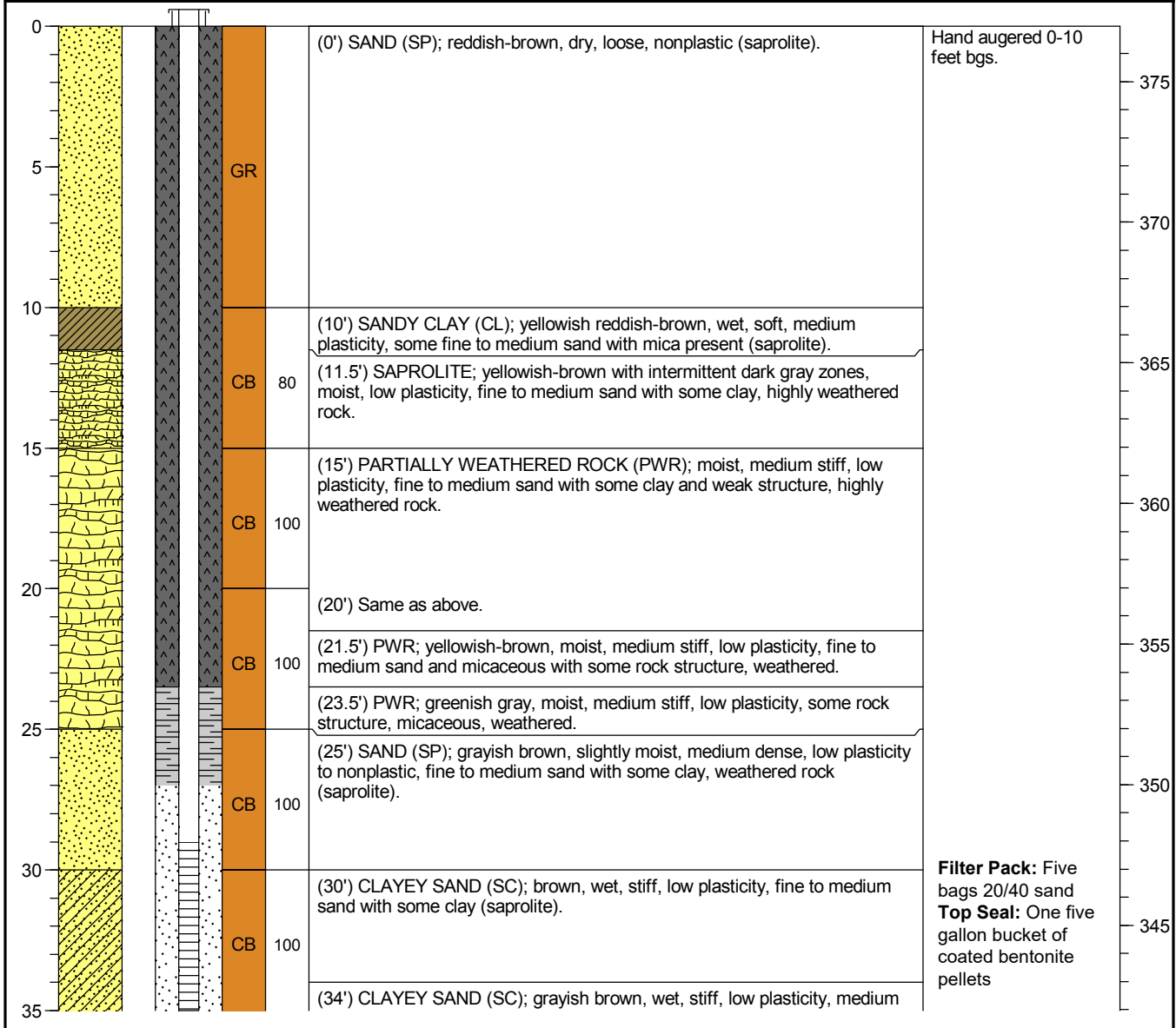
DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.75 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 08/31/2022	Boring Depth (ft): 40	Well Depth (ft TOC): 41.59
Drilling End Date: 08/31/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 376.97 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 379.36 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1160311.39, 2558447.46	Filter Pack: 20/40 Sand


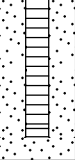

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.39 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

Drilling Start Date: 08/31/2022	Boring Depth (ft): 40	Well Depth (ft TOC): 41.59
Drilling End Date: 08/31/2022	Boring Diameter (in): 6	Well Diameter (in): 2
Drilling Company: Cascade Drilling	Sampling Method(s): Core Barrel	Screen Slot (in): 0.010
Drilling Method: Sonic 4x6	DTW Post-Installation (ft): --	Riser Material: Sch 40 PVC
Drilling Equipment: C-200	Ground Surface Elevation: 376.97 NAV88	Screen Material: Sch 40 PVC Pre-Pack
Driller: V. Scott	Top of Casing Elevation: 379.36 NAV88	Seal Material(s): Grout, Bentonite
Logged By: C. Cain	North, East (Y,X): 1160311.39, 2558447.46	Filter Pack: 20/40 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
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35				CB	100	to coarse sand with some clay (saprolite).		340
				CB	100	(37') AMPHIBOLITE; gray, wet.		
				CB	100	(38') AMPHIBOLITE; competent with few fractures.	Heavy drill chatter from 38-40 feet bgs	
40						(40') Boring terminated.		

NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.39 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

APPENDIX C

Well Development Forms

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Plant Branch Developments Job No. Well ID PB-64
 Developed By: H. Auld Date of Installation: Sheet 1 of 1
 Started Dev. 9-27-22 / 1107 Completed Dev. 9-27-22 / 1555 1600
Date / Time
 W.L. Before Dev. 38.86 / 9-27-22 / 1100 W.L. After Dev. 53.20 / 9-27-22 / 1605
BTOC / Date / Time
 Well Depth Before Dev.: 71.55 BTOC Well Depth After Dev.: 71.57 BTOC
 Water Column (H): 32.69 Ft. Well Dia.: 2 In. Well Volume: 5.23 Gal. Screen Length: 10 Ft.
or 20.27 Liters

Date / Time	Volume Removed (L)	Field Parameters						Remarks
		pH (S.U.) ±0.1	Specific Cond. (umhos/cm) ±5%	DO mg/L ±10%	Turbidity (NTU) ≤5	Temperature (°C) Record Only	ORP Record Only	
9-27-22/1140	41	5.18	1068	8.8	>1000	24.5	165	Reclaimer Pump
1236	82	4.38	1773	3.5	>1000	24.3	111	↓ Mega Monsoon Pro ↓
1306	103	4.68	1879	8.6	>1000	22.9	73	
1410	116	5.26	2738	5.8	453	24.5	26	
1435	124	5.41	2699	5.7	113	25.5	34	
1500	131	5.49	2792	4.6	38.7	25.2	38	
1525	137	5.54	2852	4.5	14.6	25.0	15	
1545	142	5.56	2861	4.4	6.0	25.2	13	
1555	144	5.57	2869	4.4	5.1	25.5	10	
1600	145	5.57	2876	4.4	4.8	25.3	9	
Total Volume Removed:		144 Liters / 7 well volumes						

Development Method: 1) Reclaimer Pump - surged/pumped well volumes (144)
2) Mega Monsoon Pro

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe: 20.27L
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = volume in gallons

Atlantic Coast Consulting, Inc.
Well Development Field Record

Job Name: Plant Branch Well Developments Job No. Well ID PZ-65
 Developed By: A Schmittner Date of Installation: Sheet 1 of 1
 Started Dev. 9/26/22 1415 Completed Dev. 9/27/22 1050
 W.L. Before Dev. 36.47 9/26/22 1415 W.L. After Dev. 51.12 9/27/22 1055
 BTOC / Date / Time BTOC / Date / Time
 Well Depth Before Dev.: 72.27 BTOC Well Depth After Dev.: 72.27 BTOC
 Water Column (H): 35.8 Ft. Well Dia.: 2 In. Well Volume: 5.73 Gal. Screen Length: 10 Ft.

Date / Time	Volume Removed (L)	Field Parameters						Remarks
		pH (S.U.) ±0.1	Specific Cond. (umhos/cm) ± 5%	DO mg/L ±10%	Turbidity (NTU) ≤ 5	Temperature (°C) Record Only	ORP Record Only	
9/26 1430	44	4.74	2242	1.9	>1000	27.0	75	predev. w/ Bailer
1610	60	4.72	2265	1.7	>1000	26.9	78	
1635	74	5.21	2324	1.6	644	26.4	79	Surged pump
1655	88 102	5.36	2391	1.8	397	26.5	81	
9/27 0910	121	5.41	2486	4.1	51.3	17.8	85	
0935	140	4.21	2542	2.6	14.6	19.6	85	
0950	160	4.13	2482	0.8	14.4	21.5	82	
1010	180	4.11	2523	0.8	276	21.5	84	Surged Pump
1020	200	4.10	2532	0.8	21.7	21.8	89	
1035	220	4.08	2541	0.8	5.33	21.7	91	
1040	223	4.07	2593	0.8	5.10	21.8	101	
1045	226	4.07	2597	0.8	2.77	21.7	103	
1050	234	4.07	2591	0.9	2.72	21.7	106	
Total Volume Removed:	234L, 6.2 gal, 10.9 well vol							

Development Method: Bailed / Submersible pump

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe: 21.7 L
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = volume in gallons

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Plant Branch Well Developments Job No. Well ID PZ-67
 Developed By: T. Goble Date of Installation: Sheet 1 of 1
 Started Dev. 9-26-22/1330 Completed Dev. 9-27-22/1345
 W.L. Before Dev. 31.02 / 9-26-22/1325 W.L. After Dev. 36.63 / 9-27-22/1355
 BTOC / Date / Time BTOC / Date / Time
 Well Depth Before Dev.: 41.24 BTOC Well Depth After Dev.: 41.24 BTOC
 Water Column (H): 10.22 Ft. Well Dia.: 2 In. Well Volume: 1.63 Gal. Screen Length: 10 Ft.

Date / Time	Volume Removed (Gal)	Field Parameters						Remarks
		pH (S.U.) ±0.1	Specific Cond. (umhos/cm) ± 5%	DO mg/L ±10%	Turbidity (NTU) ≤5	Temperature (°C) Record Only	ORP Record Only	
9-27-22 0930	2	5.36	5621	2.96	369	19.92	69	Monsoon pump
0950	3.5	4.80	5451	4.56	887	20.39	124	
1020	4.5	5.02	5112	4.33	959	21.87	115	
1050	5.5	5.09	5043	4.20	612	22.45	106	
1120	6.5	5.05	5030	4.11	337	22.89	102	
1150	7.5	5.36	4696	3.68	87	22.79	62	
1220	8.5	5.28	4712	3.55	51	23.02	69	
1250	9.5	5.37	4369	3.25	22	23.18	54	
1320	10.5	5.33	4312	3.21	9.6	23.34	52	
1345	11.25	5.31	4290	2.97	4.7	23.44	47	
								9-26 pre developed + surged w/ bailer
Total Volume Removed:	15.25 gal (11.25 pumped + 4 bailed) / 10 well volumes							57.73L

Development Method: Surged/pre-developed w/ bailer on 9-26-22 (3 well volumes = 4 gallons)
Continued 9-27-22 w/ Mega Monsoon Pro at 0910

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe: 6.17L
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = volume in gallons

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: <u>Plant Branch Well Developments</u>	Job No. <u>✓</u>	Well ID <u>PZ-68</u>
Developed By: <u>A. Schmittker / H. Anld</u>	Date of Installation: <u>✓</u>	Sheet <u>1</u> of <u>1</u>
Started Dev. <u>9/27/22 1210</u>	Completed Dev. <u>9-30-22/0945</u>	
W.L. Before Dev. <u>41.87</u> <small>Date / Time</small> <u>9/27/22 1200</u>	W.L. After Dev. <u>60.84</u> <small>Date / Time</small> <u>9-30-22/1002</u>	
Well Depth Before Dev.: <u>86.92</u> <small>BTOC / Date / Time</small> <u> </u> BTOC	Well Depth After Dev.: <u>86.93</u> <small>BTOC / Date / Time</small> <u> </u> BTOC	
Water Column (H): <u>45.05</u> Ft. Well Dia.: <u>2</u> In.	Well Volume: <u>7.2</u> Gal. Screen Length: <u>10</u> Ft.	

Date / Time	Volume Removed (L)	Field Parameters						Remarks
		pH (S.U.) ±0.1	Specific Cond. (umhos/cm) ± 5%	DO mg/L ±10%	Turbidity (NTU) ≤ 5	Temperature (°C) Record Only	ORP Record Only	
9/27 1220	10	—	—	—	71000	—	—	
1440	40	—	—	—	71000	—	—	
9/28 0950	61	7.19	607	5.9	38	18.0	196	WL 54.08 @ 0910
1650	66	—	—	—	—	—	—	WL 73.47 @ 1636
9/29 0945	73	—	—	—	98	—	—	WL 58.75 @ 0913
9/30 0945	76	7.53	657	6.4	4.0	18.8	220	WL 53.84 @ 0905
Total Volume Removed:	19.61 gallons, (2.7 well vols)							

Development Method: Submersible Pump/ Reclaimer /
 - Purged dry @ 1000 on 9-28-22 - allow recharge, dry @ 1650 (~4 1/2 more gallons)
 - purged dry again @ 0945 on 9-29-22, allow recharge for purging with Monsoon on 9-30-22

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe: 27.3 L
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = voume in gallons

Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name: Plant Branch Well developments Job No. ✓ Well ID PZ-69
 Developed By: H. Auld Date of Installation: ✓ Sheet 1 of 1
 Started Dev.: 9/27/22 @ 1430 Completed Dev.: 9-27-22 / 1623
 W.L. Before Dev.: 22.84 / 9-27-22 / 1430 W.L. After Dev.: 24.8 / 9-27-22 / 1430
 Well Depth Before Dev.: 41.57 BTOC Well Depth After Dev.: 41.59 BTOC
 Water Column (H): 18.73 Ft. Well Dia.: 2 In. Well Volume: 3.0 Gal. Screen Length: 10 Ft.
or 11.61 L

Date / Time	Volume Removed (L)	Field Parameters						Remarks
		pH (S.U.) ±0.1	Specific Cond. (umhos/cm) ± 5%	DO mg/L ±10%	Turbidity (NTU) ≤ 5	Temperature (°C) Record Only	ORP Record Only	
9-27-22/1440	12	7.65	496	8.7	>1000	23.8	77	Reclaimer Pump
1500	48	7.76	464	8.9	75	21.8	79	↓
1513	60	7.86	474	9.5	74	19.8	82	↓
1518	72	7.51	471	6.6	47	19.4	84	↓
1555	77	6.56	465	4.9	488	21.4	89	Whale Pump
1605	101 101	6.33	473	5.3	473	20.0	92	↓
1618	125	6.16	472	5.6	3.5	19.9	94	↓
1623	137	5.97	468	8.7	3.8	19.9	95	↓
Total Volume Removed:		137L , 36 gal = 12 well vols purged						

Development Method: 1) Reclaimer Pump: Pumped well volumes (HTI)
 2) Whale Pump: Purged until under 5 NTU

Notes: H = well depth (BTOC) - W.L. (BTOC)
 Well volume in pipe: 11.61 L
 2" diameter well: 0.16 X H = volume in gallons
 4" diameter well: 0.66 X H = volume in gallons

APPENDIX D

Certified Well Survey Data

GEL ENGINEERING OF NC INC

Plant Branch Monitoring Wells

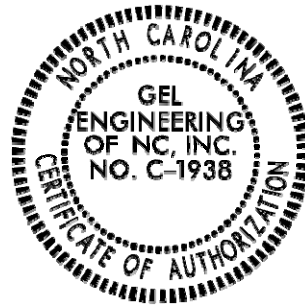
Field Surveys: 9/26/2022-9/26/2022

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail or Pad Northing	Nail or Pad Easting	Nail or Pad Elevation	Description
BRLFC-01	1162232.420	2557158.878	381.35	1162234.588	2557160.953	378.49	NAIL
BRLFC-02	1161957.831	2556825.523	384.13	1161957.141	2556824.248	381.63	NAIL
BRLFC-03	1162377.227	2556336.547	369.42	1162377.112	2556337.910	366.38	NAIL
BRLFC-04	1163049.095	2556365.006	388.42	1163047.818	2556364.818	385.43	NAIL
BRLFC-05	1163451.177	2556075.022	383.62	1163450.615	2556074.153	380.81	NAIL
BRLFC-06	1163851.241	2555822.506	397.85	1163852.017	2555823.832	391.96	NAIL
BRLFC-07	1164341.769	2555739.634	409.69	1164340.724	2555739.503	407.00	NAIL
BRLFC-08	1164864.460	2555903.702	400.44	1164863.290	2555903.253	397.72	NAIL
BRLFC-09	1165226.617	2556252.713	394.45	1165227.164	2556251.549	391.52	NAIL
BRLFC-10	1165147.934	2556780.479	415.79	1165146.733	2556780.432	412.83	NAIL
BRLFC-11	1164949.835	2557269.423	386.84	1164951.153	2557269.792	383.90	NAIL
BRLFC-12	1164623.001	2557646.354	379.92	1164622.609	2557645.281	376.87	NAIL
BRLFC-13	1164323.879	2557823.208	389.26	1164324.574	2557822.015	386.55	NAIL
BRLFC-14	1164274.064	2558403.895	384.99	1164274.959	2558404.532	382.29	NAIL
BRLFC-15	1164224.277	2558938.713	398.64	1164225.422	2558939.234	395.98	NAIL
BRLFC-16	1163744.066	2558875.358	418.68	1163743.046	2558876.074	416.10	NAIL
PZ-64I	1161787.721	2562404.290	381.94	1161790.008	2562403.066	379.37	NAIL
PZ-65I	1161692.719	2562240.567	382.06	1161693.105	2562242.972	379.61	NAIL
PZ-66I	1161747.912	2562134.650	383.52	1161747.859	2562137.193	380.86	NAIL
PZ-67	1161831.975	2561919.762	381.48	1161832.305	2561922.342	378.78	NAIL
PZ-68D	1160690.480	2558512.904	405.25	1160689.686	2558515.174	402.50	NAIL
PZ-69I	1160311.386	2558447.455	379.36	1160312.091	2558444.956	376.97	NAIL
PZ-70I	1164326.658	2555374.075	425.70	1164327.641	2555373.457	422.88	NAIL
PB-D01	1162230.144	2557916.814	400.83	N/A	N/A	N/A	BORING
PB-D02	1162246.300	2558208.403	402.96	N/A	N/A	N/A	BORING
PB-D03	1162358.679	2559046.329	408.09	N/A	N/A	N/A	BORING
PB-D04	1161913.252	2558507.940	403.12	N/A	N/A	N/A	BORING
PB-D05	1161840.817	2558094.790	399.40	N/A	N/A	N/A	BORING
PB-D06	1161478.306	2558295.128	399.53	N/A	N/A	N/A	BORING
SB-33S	1168079.825	2554050.908	414.87	N/A	N/A	N/A	BORING
SB-38S	1164375.049	2554988.232	430.68	N/A	N/A	N/A	BORING
Benchmark	Northing	Easting	Elevation				
GEL1	1162581.977	2556743.623	391.46				
GEL2	1161860.379	2562295.003	380.25				

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING. DATE OF FIELD SURVEY & INSPECTION: 09/26/2022-09/28/2022. FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD '88. EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 & R12 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARKS GEL1 & GEL2 SET BY GEL SOLUTIONS USING A TRIMBLE DINI LEVEL

Derek Bradner

10/3/2022



COA - LS003119
Exp. 12/31/2022

APPENDIX B

Well Maintenance and Repair Documentation Memoranda

Memo r a n d u m

Date: 22 December 2022

To: Joju Abraham, Southern Company Services
Ben Hodges, Georgia Power Company
Regina Linch, Plant Branch

From: Joe Ivanowski and Lauren Fitzgerald,
Geosyntec Consultants

Subject: Plant Branch Unit AP-BCD and AP-E – Well Inspection
Documentation
Plant Branch, Putnam County, Georgia

Geosyntec Consultants, Inc. (Geosyntec) has prepared this memorandum to provide documentation of groundwater monitoring well and piezometer inspections and repair/maintenance, if needed, performed at Plant Branch during the second semiannual reporting period of 2022. Inspections were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells.

The groundwater monitoring well network (including associated piezometers) for Ash Ponds B, C, and D (AP-BCD) and Ash Pond E (AP-E) at Plant Branch were inspected on 8/22/2022. The groundwater monitoring well network was observed to be well maintained and in good condition; no deficiencies requiring maintenance or repair were identified.

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only):		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	No	No	No	No

6 - Based on your professional judgment, is the well construction / location appropriate to:		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from "Georgia EPD's Groundwater Monitoring Well Integrity Form".
PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. Auld
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition?	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	Yes	No	No	No	No	No	No	No	No

6 - Based on your professional judgment, is the w		BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
a	Does the well recharge adequately when purged?	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
a	Does the well recharge adequately when purged?	N/A	N/A	N/A	N/A	N/A	Yes	N/A	N/A	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
a	Does the well recharge adequately when purged?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		PZ-24S	PZ-26I	PZ-28I	PZ-31S	PZ-39	PZ-40S	PZ-41S	PZ-42S	PZ-43	PZ-44	PZ-46
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		PZ-24S	PZ-26I	PZ-28I	PZ-31S	PZ-39	PZ-40S	PZ-41S	PZ-42S	PZ-43	PZ-44	PZ-46
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		PZ-24S	PZ-26I	PZ-28I	PZ-31S	PZ-39	PZ-40S	PZ-41S	PZ-42S	PZ-43	PZ-44	PZ-46
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		PZ-24S	PZ-26I	PZ-28I	PZ-31S	PZ-39	PZ-40S	PZ-41S	PZ-42S	PZ-43	PZ-44	PZ-46
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		PZ-24S	PZ-26I	PZ-28I	PZ-31S	PZ-39	PZ-40S	PZ-41S	PZ-42S	PZ-43	PZ-44	PZ-46
a	Does the well recharge adequately when purged?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	N/A

6 - Based on your professional judgment, is the well		PZ-24S	PZ-26I	PZ-28I	PZ-31S	PZ-39	PZ-40S	PZ-41S	PZ-42S	PZ-43	PZ-44	PZ-46
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
a	Does the well recharge adequately when purged?	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A	N/A	No	No	No	No	No	No	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	N/A	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes

2 - Protective Outer Casing		PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes

3 - Surface Pad		PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes

4 - Internal Well Casing		PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	N/A	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	N/A	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from
PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		PB-4D	PB-7S	PB-8S	PB-8D	PB-10S	PB-10D	PB-13S	PB-13D	IW-B-1	IW-B-2	IW-C-1
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		PB-4D	PB-7S	PB-8S	PB-8D	PB-10S	PB-10D	PB-13S	PB-13D	IW-B-1	IW-B-2	IW-C-1
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3 - Surface Pad		PB-4D	PB-7S	PB-8S	PB-8D	PB-10S	PB-10D	PB-13S	PB-13D	IW-B-1	IW-B-2	IW-C-1
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - Internal Well Casing		PB-4D	PB-7S	PB-8S	PB-8D	PB-10S	PB-10D	PB-13S	PB-13D	IW-B-1	IW-B-2	IW-C-1
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		PB-4D	PB-7S	PB-8S	PB-8D	PB-10S	PB-10D	PB-13S	PB-13D	IW-B-1	IW-B-2	IW-C-1
a	Does the well recharge adequately when purged?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		PB-4D	PB-7S	PB-8S	PB-8D	PB-10S	PB-10D	PB-13S	PB-13D	IW-B-1	IW-B-2	IW-C-1
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
Staff: J. Berisford/T. Goble/A. Schnittker/H. At
Date: 8/22/2022

Plant Branch
August 2022 Well Inspection Form



1 - Location/Identification		IW-C-2	IW-D-1	IW-D-2	IW-E-1
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes

2 - Protective Outer Casing		IW-C-2	IW-D-1	IW-D-2	IW-E-1
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes

3 - Surface Pad		IW-C-2	IW-D-1	IW-D-2	IW-E-1
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes

4 - Internal Well Casing		IW-C-2	IW-D-1	IW-D-2	IW-E-1
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No

5 - Sampling (Groundwater Monitoring Wells Only)		IW-C-2	IW-D-1	IW-D-2	IW-E-1
a	Does the well recharge adequately when purged?	N/A	N/A	N/A	N/A
b	If dedicated sampling equipment is installed, is it in good condition?	N/A	N/A	N/A	N/A
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A	N/A	N/A	N/A

6 - Based on your professional judgment, is the well		IW-C-2	IW-D-1	IW-D-2	IW-E-1
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from PB-1S: unable to locate well
 Staff: J. Berisford/T. Goble/A. Schnittker/H. At
 Date: 8/22/2022

APPENDIX C

Laboratory Analytical Results and Field Sampling Reports

LABORATORY ANALYTICAL REPORTS

Fall 2022

September 07, 2022

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

RE: Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Dear Kelley Sharpe:

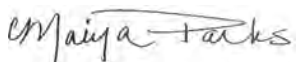
Enclosed are the analytical results for sample(s) received by the laboratory on August 24, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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 - Green Bay
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta
Laura Midkiff, Georgia Power



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92622290

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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 Laboratory ID: 99030

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: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92622290001	LR-1 (surface)	Water	08/24/22 11:52	08/24/22 14:32
92622290002	LR-1 (mid)	Water	08/24/22 11:50	08/24/22 14:32
92622290003	LR-1 (bottom)	Water	08/24/22 11:45	08/24/22 14:32
92622290004	LR+8A (surface)	Water	08/24/22 12:05	08/24/22 14:32
92622290005	LR+9A (surface)	Water	08/24/22 12:11	08/24/22 14:32
92622290006	LR+8 (surface)	Water	08/24/22 11:33	08/24/22 14:32
92622290007	LR+8 (mid)	Water	08/24/22 11:24	08/24/22 14:32
92622290008	LR+8 (bottom)	Water	08/24/22 11:30	08/24/22 14:32
92622290009	LR+9 (surface)	Water	08/24/22 11:15	08/24/22 14:32
92622290010	LR+9 (mid)	Water	08/24/22 11:09	08/24/22 14:32
92622290011	LR+9 (bottom)	Water	08/24/22 11:13	08/24/22 14:32
92622290012	LR+10 (surface)	Water	08/24/22 10:45	08/24/22 14:32
92622290013	LR-10 (mid)	Water	08/24/22 10:52	08/24/22 14:32
92622290014	LR-10 (bottom)	Water	08/24/22 10:58	08/24/22 14:32

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92622290001	LR-1 (surface)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290002	LR-1 (mid)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290003	LR-1 (bottom)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290004	LR+8A (surface)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290005	LR+9A (surface)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290006	LR+8 (surface)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290007	LR+8 (mid)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92622290008	LR+8 (bottom)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92622290009	LR+9 (surface)	SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
92622290010	LR+9 (mid)	SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
92622290011	LR+9 (bottom)	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92622290012	LR+10 (surface)	EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB, KH	4	PASI-GA
92622290013	LR-10 (mid)	EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
92622290014	LR-10 (bottom)	SM 2540C-2015	BTS	1	PASI-GA
		SM 2320B	TMK	2	PASI-G
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB, KH	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2540C-2015	BTS	1	PASI-GA

PASI-A = Pace Analytical Services - Asheville
PASI-G = Pace Analytical Services - Green Bay
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR-1 (surface)	Lab ID: 92622290001	Collected: 08/24/22 11:52	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.8	mg/L	0.20	1	08/25/22 12:48	08/26/22 13:52	7440-09-7	
Sodium	5.1	mg/L	1.0	1	08/25/22 12:48	08/26/22 13:52	7440-23-5	
Calcium	5.6	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:00	7440-70-2	
Magnesium	2.8	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:00	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:21	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:21	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	58.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	33.6	mg/L	10.0	1		08/29/22 21:18		
Alkalinity, Bicarbonate (CaCO ₃)	33.6	mg/L	10.0	1		08/29/22 21:18		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.6	mg/L	1.0	1		09/01/22 07:09	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 07:09	16984-48-8	
Sulfate	1.8	mg/L	1.0	1		09/01/22 07:09	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR-1 (mid)		Lab ID: 92622290002		Collected: 08/24/22 11:50		Received: 08/24/22 14:32		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	5.6	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:06	7440-70-2		
Magnesium	2.8	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:06	7439-95-4		
Potassium	2.8	mg/L	0.20	1	08/25/22 12:48	08/26/22 13:57	7440-09-7		
Sodium	5.1	mg/L	1.0	1	08/25/22 12:48	08/26/22 13:57	7440-23-5		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:27	7440-42-8		
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:27	7440-48-4		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	56.0	mg/L	25.0	1		08/26/22 13:57			
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO ₃	33.5	mg/L	10.0	1		08/29/22 21:38			
Alkalinity, Bicarbonate (CaCO ₃)	33.5	mg/L	10.0	1		08/29/22 21:38			
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.6	mg/L	1.0	1		09/01/22 07:23	16887-00-6		
Fluoride	0.10	mg/L	0.10	1		09/01/22 07:23	16984-48-8		
Sulfate	1.8	mg/L	1.0	1		09/01/22 07:23	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR-1 (bottom)	Lab ID: 92622290003	Collected: 08/24/22 11:45		Received: 08/24/22 14:32		Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.8	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:01	7440-09-7	
Sodium	5.0	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:01	7440-23-5	
Calcium	5.6	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:20	7440-70-2	
Magnesium	2.7	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:20	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:33	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:33	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	65.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	33.4	mg/L	10.0	1		08/29/22 21:44		
Alkalinity, Bicarbonate (CaCO ₃)	33.4	mg/L	10.0	1		08/29/22 21:44		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.6	mg/L	1.0	1		09/01/22 07:38	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 07:38	16984-48-8	
Sulfate	1.7	mg/L	1.0	1		09/01/22 07:38	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+8A (surface)	Lab ID: 92622290004	Collected: 08/24/22 12:05	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.7	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:06	7440-09-7	
Sodium	4.9	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:06	7440-23-5	
Calcium	5.1	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:25	7440-70-2	
Magnesium	2.5	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:25	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:39	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:39	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	63.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	30.8	mg/L	10.0	1		08/29/22 21:50		
Alkalinity, Bicarbonate (CaCO ₃)	30.8	mg/L	10.0	1		08/29/22 21:50		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.6	mg/L	1.0	1		09/01/22 08:36	16887-00-6	
Fluoride	ND	mg/L	0.10	1		09/01/22 08:36	16984-48-8	
Sulfate	2.3	mg/L	1.0	1		09/01/22 08:36	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+9A (surface)		Lab ID: 92622290005		Collected: 08/24/22 12:11	Received: 08/24/22 14:32	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Calcium	5.2	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:30	7440-70-2	
Magnesium	2.6	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:30	7439-95-4	
Potassium	2.7	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:11	7440-09-7	
Sodium	5.0	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:11	7440-23-5	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:45	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:45	7440-48-4	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	51.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	30.8	mg/L	10.0	1		08/29/22 21:55		
Alkalinity, Bicarbonate (CaCO ₃)	30.8	mg/L	10.0	1		08/29/22 21:55		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.6	mg/L	1.0	1		09/01/22 09:05	16887-00-6	
Fluoride	ND	mg/L	0.10	1		09/01/22 09:05	16984-48-8	
Sulfate	2.4	mg/L	1.0	1		09/01/22 09:05	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+8 (surface)	Lab ID: 92622290006	Collected: 08/24/22 11:33		Received: 08/24/22 14:32		Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.7	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:16	7440-09-7	
Sodium	5.0	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:16	7440-23-5	
Calcium	5.3	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:34	7440-70-2	
Magnesium	2.7	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:34	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:51	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:51	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	58.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	31.4	mg/L	10.0	1		08/29/22 22:01		
Alkalinity, Bicarbonate (CaCO ₃)	31.4	mg/L	10.0	1		08/29/22 22:01		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		09/01/22 09:20	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 09:20	16984-48-8	
Sulfate	2.2	mg/L	1.0	1		09/01/22 09:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+8 (mid)	Lab ID: 92622290007	Collected: 08/24/22 11:24	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.8	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:40	7440-09-7	
Sodium	5.1	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:40	7440-23-5	
Calcium	5.4	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:39	7440-70-2	
Magnesium	2.7	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:39	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 00:57	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 00:57	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	63.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	31.4	mg/L	10.0	1		08/29/22 22:21		
Alkalinity, Bicarbonate (CaCO ₃)	31.4	mg/L	10.0	1		08/29/22 22:21		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		09/01/22 09:34	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 09:34	16984-48-8	
Sulfate	2.2	mg/L	1.0	1		09/01/22 09:34	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+8 (bottom)	Lab ID: 92622290008	Collected: 08/24/22 11:30	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.6	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:45	7440-09-7	
Sodium	4.8	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:45	7440-23-5	
Calcium	5.2	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:44	7440-70-2	
Magnesium	2.6	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:44	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 01:03	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 01:03	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	51.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	31.9	mg/L	10.0	1		08/29/22 22:27		
Alkalinity, Bicarbonate (CaCO ₃)	31.9	mg/L	10.0	1		08/29/22 22:27		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.6	mg/L	1.0	1		09/01/22 10:18	16887-00-6	M1
Fluoride	0.10	mg/L	0.10	1		09/01/22 10:18	16984-48-8	
Sulfate	2.1	mg/L	1.0	1		09/01/22 10:18	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92622290

Sample: LR+9 (surface)	Lab ID: 92622290009	Collected: 08/24/22 11:15	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Calcium	5.0	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:49	7440-70-2	
Magnesium	2.5	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:49	7439-95-4	
Potassium	2.7	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:50	7440-09-7	
Sodium	4.8	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:50	7440-23-5	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 01:21	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 01:21	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	68.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	30.8	mg/L	10.0	1		08/29/22 22:33		
Alkalinity, Bicarbonate (CaCO ₃)	30.8	mg/L	10.0	1		08/29/22 22:33		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		09/01/22 13:50	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 13:50	16984-48-8	
Sulfate	2.2	mg/L	1.0	1		09/01/22 13:50	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+9 (mid)	Lab ID: 92622290010	Collected: 08/24/22 11:09	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Calcium	5.1	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:53	7440-70-2	
Magnesium	2.5	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:53	7439-95-4	
Potassium	2.7	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:55	7440-09-7	
Sodium	5.0	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:55	7440-23-5	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 01:27	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 01:27	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	52.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	31.1	mg/L	10.0	1		08/29/22 22:38		
Alkalinity, Bicarbonate (CaCO ₃)	31.1	mg/L	10.0	1		08/29/22 22:38		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		09/01/22 15:04	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 15:04	16984-48-8	
Sulfate	2.2	mg/L	1.0	1		09/01/22 15:04	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+9 (bottom)	Lab ID: 92622290011	Collected: 08/24/22 11:13	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Calcium	5.2	mg/L	1.0	1	08/25/22 12:48	08/25/22 22:58	7440-70-2	
Magnesium	2.6	mg/L	0.050	1	08/25/22 12:48	08/25/22 22:58	7439-95-4	
Potassium	2.8	mg/L	0.20	1	08/25/22 12:48	08/26/22 14:59	7440-09-7	
Sodium	5.1	mg/L	1.0	1	08/25/22 12:48	08/26/22 14:59	7440-23-5	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 01:32	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 01:32	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	58.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	31.0	mg/L	10.0	1		08/29/22 22:44		
Alkalinity, Bicarbonate (CaCO ₃)	31.0	mg/L	10.0	1		08/29/22 22:44		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		09/01/22 15:18	16887-00-6	
Fluoride	ND	mg/L	0.10	1		09/01/22 15:18	16984-48-8	
Sulfate	2.2	mg/L	1.0	1		09/01/22 15:18	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR+10 (surface)		Lab ID: 92622290012	Collected: 08/24/22 10:45	Received: 08/24/22 14:32	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Calcium	5.1	mg/L	1.0	1	08/25/22 12:48	08/25/22 23:03	7440-70-2	
Magnesium	2.5	mg/L	0.050	1	08/25/22 12:48	08/25/22 23:03	7439-95-4	
Potassium	2.8	mg/L	0.20	1	08/25/22 12:48	08/26/22 15:04	7440-09-7	
Sodium	5.0	mg/L	1.0	1	08/25/22 12:48	08/26/22 15:04	7440-23-5	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 01:38	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 01:38	7440-48-4	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	64.0	mg/L	25.0	1		08/26/22 13:57		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Green Bay						
Alkalinity, Total as CaCO ₃	29.2	mg/L	10.0	1		08/29/22 22:50		
Alkalinity, Bicarbonate (CaCO ₃)	29.2	mg/L	10.0	1		08/29/22 22:50		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.8	mg/L	1.0	1		09/01/22 15:33	16887-00-6	
Fluoride	ND	mg/L	0.10	1		09/01/22 15:33	16984-48-8	
Sulfate	2.3	mg/L	1.0	1		09/01/22 15:33	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR-10 (mid)	Lab ID: 92622290013	Collected: 08/24/22 10:52	Received: 08/24/22 14:32	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.7	mg/L	0.20	1	08/25/22 12:48	08/26/22 15:09	7440-09-7	
Sodium	4.9	mg/L	1.0	1	08/25/22 12:48	08/26/22 15:09	7440-23-5	
Calcium	4.9	mg/L	1.0	1	08/25/22 12:48	08/25/22 23:17	7440-70-2	
Magnesium	2.4	mg/L	0.050	1	08/25/22 12:48	08/25/22 23:17	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/02/22 12:19	09/03/22 01:44	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/02/22 12:19	09/03/22 01:44	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	48.0	mg/L	25.0	1		08/26/22 14:00		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	29.2	mg/L	10.0	1		08/29/22 22:56		
Alkalinity, Bicarbonate (CaCO ₃)	29.2	mg/L	10.0	1		08/29/22 22:56		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		09/01/22 15:47	16887-00-6	
Fluoride	ND	mg/L	0.10	1		09/01/22 15:47	16984-48-8	
Sulfate	2.3	mg/L	1.0	1		09/01/22 15:47	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Sample: LR-10 (bottom)		Lab ID: 92622290014	Collected: 08/24/22 10:58	Received: 08/24/22 14:32	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.6	mg/L	0.20	1	08/25/22 12:48	08/26/22 15:14	7440-09-7	
Sodium	4.8	mg/L	1.0	1	08/25/22 12:48	08/26/22 15:14	7440-23-5	
Calcium	4.8	mg/L	1.0	1	08/25/22 12:48	08/25/22 23:22	7440-70-2	
Magnesium	2.4	mg/L	0.050	1	08/25/22 12:48	08/25/22 23:22	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	09/06/22 12:19	09/06/22 21:06	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	09/06/22 12:19	09/06/22 21:06	7440-48-4	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	45.0	mg/L	25.0	1		08/26/22 14:00		
2320B Alkalinity								
Analytical Method: SM 2320B								
Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO ₃	29.7	mg/L	10.0	1		08/29/22 23:02		
Alkalinity, Bicarbonate (CaCO ₃)	29.7	mg/L	10.0	1		08/29/22 23:02		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.0	mg/L	1.0	1		09/01/22 16:02	16887-00-6	
Fluoride	0.10	mg/L	0.10	1		09/01/22 16:02	16984-48-8	
Sulfate	2.4	mg/L	1.0	1		09/01/22 16:02	14808-79-8	

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

QC Batch:	719530	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014

METHOD BLANK: 3750032 Matrix: Water
Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	08/25/22 20:58	
Magnesium	mg/L	ND	0.050	08/25/22 20:58	
Potassium	mg/L	ND	0.20	08/25/22 20:58	
Sodium	mg/L	ND	1.0	08/26/22 12:12	

LABORATORY CONTROL SAMPLE: 3750033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	
Magnesium	mg/L	1	1.1	105	80-120	
Potassium	mg/L	1	1.1	112	80-120	
Sodium	mg/L	1	.9J	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750034 3750035

Parameter	Units	92618667001 Result	MS Spike Conc.	MSD Spike Conc.	3750034		3750035		% Rec Limits	RPD	Max RPD	Qual
					MS Result	MSD Result	MS % Rec	MSD % Rec				
Calcium	mg/L	19400 ug/L	1	1	19.6	19.9	21	50	75-125	2	20	M1
Magnesium	mg/L	7380 ug/L	1	1	8.3	8.3	88	96	75-125	1	20	
Potassium	mg/L	1240 ug/L	1	1	2.2	2.3	96	104	75-125	4	20	
Sodium	mg/L	14100 ug/L	1	1	14.6	14.7	53	69	75-125	1	20	M1

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

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

QC Batch:	721240	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013

METHOD BLANK: 3757929 Matrix: Water
Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	09/02/22 22:57	
Cobalt	mg/L	ND	0.0050	09/02/22 22:57	

LABORATORY CONTROL SAMPLE: 3757930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.99	99	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3758268 3758269

Parameter	Units	92621399027 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MS Result	MSD Result						
Boron	mg/L	0.015J	1	1	0.99	1.0	97	98	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

QC Batch: 721533 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92622290014

METHOD BLANK: 3759377 Matrix: Water

Associated Lab Samples: 92622290014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	09/06/22 19:31	
Cobalt	mg/L	ND	0.0050	09/06/22 19:31	

LABORATORY CONTROL SAMPLE: 3759378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.95	95	80-120	
Cobalt	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3759379 3759380

Parameter	Units	92621970001		3759379		3759380		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Boron	mg/L	460 ug/L	1	1	1.3	1.3	83	85	75-125	2	20
Cobalt	mg/L	ND	0.1	0.1	0.094	0.093	94	93	75-125	1	20

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

QC Batch: 719723 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014

METHOD BLANK: 3751162 Matrix: Water
Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	08/26/22 13:54	

LABORATORY CONTROL SAMPLE: 3751163

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	382	96	80-120	

SAMPLE DUPLICATE: 3751165

Parameter	Units	92622290005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	51.0	52.0	2	25	

SAMPLE DUPLICATE: 3751739

Parameter	Units	92622142001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	481	469	3	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92622290

QC Batch:	424693	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014		

METHOD BLANK:	2445845	Matrix:	Water
Associated Lab Samples:	92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007, 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	08/29/22 21:07	

LABORATORY CONTROL SAMPLE: 2445846						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	200	210	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2445847												2445848	
Parameter	Units	92622290001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Alkalinity, Total as CaCO3	mg/L	33.6	200	200	243	243	105	105	80-120	0	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92622290

QC Batch:	720260	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: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007

METHOD BLANK: 3753399 Matrix: Water
Associated Lab Samples: 92622290001, 92622290002, 92622290003, 92622290004, 92622290005, 92622290006, 92622290007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	08/31/22 23:15	
Fluoride	mg/L	ND	0.10	08/31/22 23:15	
Sulfate	mg/L	ND	1.0	08/31/22 23:15	

LABORATORY CONTROL SAMPLE: 3753400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753401 3753402

Parameter	Units	92621399019		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
Chloride	mg/L	2.5	50	50	59.3	59.3	113	114	90-110	0	10	M1	
Fluoride	mg/L	0.051J	2.5	2.5	2.6	2.6	102	104	90-110	2	10		
Sulfate	mg/L	1.5	50	50	57.8	57.8	113	113	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753403 3753404

Parameter	Units	92621399029		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
Chloride	mg/L	0.88J	50	50	58.0	57.9	114	114	90-110	0	10	M1	
Fluoride	mg/L	0.053J	2.5	2.5	2.6	2.6	102	103	90-110	1	10		
Sulfate	mg/L	0.87J	50	50	57.5	57.6	113	113	90-110	0	10	M1	

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QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

QC Batch: 720261 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: 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014

METHOD BLANK: 3753405 Matrix: Water
Associated Lab Samples: 92622290008, 92622290009, 92622290010, 92622290011, 92622290012, 92622290013, 92622290014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	09/01/22 09:49	
Fluoride	mg/L	ND	0.10	09/01/22 09:49	
Sulfate	mg/L	ND	1.0	09/01/22 09:49	

LABORATORY CONTROL SAMPLE: 3753406

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.5	101	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753407 3753408

Parameter	Units	92622290008		3753407		3753408		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	3.6	50	50	61.6	61.0	116	115	90-110	1	10	M1	
Fluoride	mg/L	0.10	2.5	2.5	2.8	2.7	107	104	90-110	3	10		
Sulfate	mg/L	2.1	50	50	59.9	59.2	116	114	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753409 3753410

Parameter	Units	92620625004		3753409		3753410		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	3.3	50	50	61.9	61.1	117	116	90-110	1	10	M1	
Fluoride	mg/L	0.18	2.5	2.5	2.9	2.8	108	106	90-110	2	10		
Sulfate	mg/L	522	50	50	566	565	87	85	90-110	0	10	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92622290

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92622290001	LR-1 (surface)	EPA 3010A	719530	EPA 6010D	719707
92622290002	LR-1 (mid)	EPA 3010A	719530	EPA 6010D	719707
92622290003	LR-1 (bottom)	EPA 3010A	719530	EPA 6010D	719707
92622290004	LR+8A (surface)	EPA 3010A	719530	EPA 6010D	719707
92622290005	LR+9A (surface)	EPA 3010A	719530	EPA 6010D	719707
92622290006	LR+8 (surface)	EPA 3010A	719530	EPA 6010D	719707
92622290007	LR+8 (mid)	EPA 3010A	719530	EPA 6010D	719707
92622290008	LR+8 (bottom)	EPA 3010A	719530	EPA 6010D	719707
92622290009	LR+9 (surface)	EPA 3010A	719530	EPA 6010D	719707
92622290010	LR+9 (mid)	EPA 3010A	719530	EPA 6010D	719707
92622290011	LR+9 (bottom)	EPA 3010A	719530	EPA 6010D	719707
92622290012	LR+10 (surface)	EPA 3010A	719530	EPA 6010D	719707
92622290013	LR-10 (mid)	EPA 3010A	719530	EPA 6010D	719707
92622290014	LR-10 (bottom)	EPA 3010A	719530	EPA 6010D	719707
92622290001	LR-1 (surface)	EPA 3005A	721240	EPA 6020B	721359
92622290002	LR-1 (mid)	EPA 3005A	721240	EPA 6020B	721359
92622290003	LR-1 (bottom)	EPA 3005A	721240	EPA 6020B	721359
92622290004	LR+8A (surface)	EPA 3005A	721240	EPA 6020B	721359
92622290005	LR+9A (surface)	EPA 3005A	721240	EPA 6020B	721359
92622290006	LR+8 (surface)	EPA 3005A	721240	EPA 6020B	721359
92622290007	LR+8 (mid)	EPA 3005A	721240	EPA 6020B	721359
92622290008	LR+8 (bottom)	EPA 3005A	721240	EPA 6020B	721359
92622290009	LR+9 (surface)	EPA 3005A	721240	EPA 6020B	721359
92622290010	LR+9 (mid)	EPA 3005A	721240	EPA 6020B	721359
92622290011	LR+9 (bottom)	EPA 3005A	721240	EPA 6020B	721359
92622290012	LR+10 (surface)	EPA 3005A	721240	EPA 6020B	721359
92622290013	LR-10 (mid)	EPA 3005A	721240	EPA 6020B	721359
92622290014	LR-10 (bottom)	EPA 3005A	721533	EPA 6020B	721631
92622290001	LR-1 (surface)	SM 2540C-2015	719723		
92622290002	LR-1 (mid)	SM 2540C-2015	719723		
92622290003	LR-1 (bottom)	SM 2540C-2015	719723		
92622290004	LR+8A (surface)	SM 2540C-2015	719723		
92622290005	LR+9A (surface)	SM 2540C-2015	719723		
92622290006	LR+8 (surface)	SM 2540C-2015	719723		
92622290007	LR+8 (mid)	SM 2540C-2015	719723		
92622290008	LR+8 (bottom)	SM 2540C-2015	719723		
92622290009	LR+9 (surface)	SM 2540C-2015	719723		
92622290010	LR+9 (mid)	SM 2540C-2015	719723		
92622290011	LR+9 (bottom)	SM 2540C-2015	719723		
92622290012	LR+10 (surface)	SM 2540C-2015	719723		
92622290013	LR-10 (mid)	SM 2540C-2015	719723		
92622290014	LR-10 (bottom)	SM 2540C-2015	719723		
92622290001	LR-1 (surface)	SM 2320B	424693		
92622290002	LR-1 (mid)	SM 2320B	424693		
92622290003	LR-1 (bottom)	SM 2320B	424693		
92622290004	LR+8A (surface)	SM 2320B	424693		
92622290005	LR+9A (surface)	SM 2320B	424693		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch CCR-Ash Pond
Pace Project No.: 92622290

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92622290006	LR+8 (surface)	SM 2320B	424693		
92622290007	LR+8 (mid)	SM 2320B	424693		
92622290008	LR+8 (bottom)	SM 2320B	424693		
92622290009	LR+9 (surface)	SM 2320B	424693		
92622290010	LR+9 (mid)	SM 2320B	424693		
92622290011	LR+9 (bottom)	SM 2320B	424693		
92622290012	LR+10 (surface)	SM 2320B	424693		
92622290013	LR-10 (mid)	SM 2320B	424693		
92622290014	LR-10 (bottom)	SM 2320B	424693		
92622290001	LR-1 (surface)	EPA 300.0 Rev 2.1 1993	720260		
92622290002	LR-1 (mid)	EPA 300.0 Rev 2.1 1993	720260		
92622290003	LR-1 (bottom)	EPA 300.0 Rev 2.1 1993	720260		
92622290004	LR+8A (surface)	EPA 300.0 Rev 2.1 1993	720260		
92622290005	LR+9A (surface)	EPA 300.0 Rev 2.1 1993	720260		
92622290006	LR+8 (surface)	EPA 300.0 Rev 2.1 1993	720260		
92622290007	LR+8 (mid)	EPA 300.0 Rev 2.1 1993	720260		
92622290008	LR+8 (bottom)	EPA 300.0 Rev 2.1 1993	720261		
92622290009	LR+9 (surface)	EPA 300.0 Rev 2.1 1993	720261		
92622290010	LR+9 (mid)	EPA 300.0 Rev 2.1 1993	720261		
92622290011	LR+9 (bottom)	EPA 300.0 Rev 2.1 1993	720261		
92622290012	LR+10 (surface)	EPA 300.0 Rev 2.1 1993	720261		
92622290013	LR-10 (mid)	EPA 300.0 Rev 2.1 1993	720261		
92622290014	LR-10 (bottom)	EPA 300.0 Rev 2.1 1993	720261		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A

Required Client Information:
 Company: ARCADIS - Atlanta
 Address: 2839 Paces Ferry Rd
 Atlanta, GA 30339
 Email: warren.johnson@arcadis.com
 Phone: 678.485.5298
 Requested Due Date: 5 day TAT

Section B

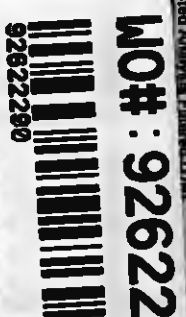
Required Project Information:
 Report To: Jolu Abraham, Ben Hodges
 Copy To: Warren Johnson
 Purchase Order #: SCS10382775
 Project Name: Plant Branch
 Project #:

Section C

Invoice Information:
 Attention: Jolu Abraham
 Company Name: GPC
 Address:
 Paces Quote:
 Paces Project Manager: Nayla.Park@pacelabs.com
 Paces Profile #: 2239

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	CCR Appendix III ¹	Major ions ²	Cobalt	Residual Chl				
					START	END							Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol							Other			
1	LR-1 (surface)	SM	G	G			8/24/2022	1152																					
2	LR-1 (mid)	SM	G	G			8/24/2022	1150																					
3	LR-1 (bottom)	SM	G	G			8/24/2022	1145																					
4	LR+8A (surface)	SM	G	G			8/24/2022	1205																					
5	LR+8A (surface)	SM	G	G			8/24/2022	1211																					
6	LR+8 (surface)	SM	G	G			8/24/2022	1133																					
7	LR+8 (mid)	SM	G	G			8/24/2022	1124																					
8	LR+8 (bottom)	SM	G	G			8/24/2022	1130																					
9	LR+9 (surface)	SM	G	G			8/24/2022	1115																					
10	LR+9 (mid)	SM	G	G			8/24/2022	1104																					
11	LR+9 (bottom)	SM	G	G			8/24/2022	1113																					
12	LR+10 (surface)	SM	G	G			8/24/2022	1045																					

W0# : 92622290



92622290

ADDITIONAL COMMENTS		RELAQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS			
Slide Stresses		SLD		8/24/22		1432		Charles Hank		8/24/22		1432		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: *Charles Hank*
 SIGNATURE of SAMPLER: *[Signature]*
 DATE Signed: 8/24-22



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis

Project #:

WO#: 92622290

PM: MP

Due Date: 08/31/22

CLIENT: GA-ArcadAtI

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *9/24/22 CM*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: *230*

Type of Ice: Wet Blue None

Cooler Temp: *12.4* 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): *12.4*

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

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>W</i>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Effective Date: 05/12/2022

WO#: 92622290

Project #

PH: MP

Due Date: 08/31/22

CLIENT: GA-ArcadAt1

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

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

Bottom half of box is to list number of bottles

*Check all unpreserved Nitrates for chlorine

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)	BP4B-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)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (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)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1			2																									
2			2																									
3			2																									
4			2																									
5			2																									
6			2																									
7			2																									
8			2																									
9			2																									
10			2																									
11			2																									
12			8																									

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 DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



Effective Date: 05/12/2022

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

Project # []

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

Bottom half of box is to list number of bottles

*Check all unpreserved Nitrates for chlorine

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)	BP4B-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)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (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)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	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 DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



October 03, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Branch CCR Groundwater Compliance APBCD
Work Orders: 591355,590855 and 590845

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 24, 2022 and August 29, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package is being revised to include 6 missing metals.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Erin Trent
Project Manager

Purchase Order: GPC82177-0003
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GPCC001 Georgia Power Company
Client SDG: 591355 GEL Work Order: 591355

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 590855 GEL Work Order: 590855

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 590845 GEL Work Order: 590845

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-01	Project: GPCC00101
Sample ID: 591355001	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 12:00	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		1.10	0.0330	0.100	mg/L		1	HXC1	08/30/22	1616	2310523	1
Sulfate		828	13.3	40.0	mg/L		100	HXC1	08/31/22	0143	2310523	2
Chloride		10.8	0.335	1.00	mg/L		5	HXC1	08/31/22	0213	2310523	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	0959	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1949	2310153	5
Arsenic	J	0.00242	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0176	0.000670	0.00400	mg/L	1.00	1					
Cadmium		0.00464	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.504	0.000300	0.00100	mg/L	1.00	1					
Iron		48.9	0.0330	0.100	mg/L	1.00	1					
Lead	J	0.000871	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0476	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		8.30	0.0800	0.300	mg/L	1.00	1					
Sodium		33.7	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium		0.0323	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0240	2310153	6
Selenium	J	0.00332	0.00150	0.00500	mg/L	1.00	1					
Boron		0.449	0.0260	0.0750	mg/L	1.00	5	BAJ	09/07/22	1857	2310153	7
Calcium		137	0.400	1.00	mg/L	1.00	5					
Magnesium		76.7	0.0500	0.150	mg/L	1.00	5					
Manganese		27.1	0.100	0.500	mg/L	1.00	100	BAJ	09/07/22	1952	2310153	8
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1350	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	9
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	U	ND	1.45	4.00	mg/L			HH2	09/07/22	1344	2310459	10
Bicarbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-01 Project: GPCC00101
Sample ID: 591355001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-58I	Project: GPCC00101
Sample ID: 591355002	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 10:30	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		3.81			SU			EOS1	08/24/22	1030	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		1.09	0.0330	0.100	mg/L	1		HXC1	08/30/22	1646	2310523	2
Sulfate		840	13.3	40.0	mg/L	100		HXC1	08/31/22	0243	2310523	3
Chloride		10.7	0.335	1.00	mg/L	5		HXC1	08/31/22	0313	2310523	4
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1001	2310246	5
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2001	2310153	6
Arsenic	J	0.00245	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0181	0.000670	0.00400	mg/L	1.00	1					
Cadmium		0.00460	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.503	0.000300	0.00100	mg/L	1.00	1					
Iron		48.9	0.0330	0.100	mg/L	1.00	1					
Lead	J	0.000894	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0488	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		8.25	0.0800	0.300	mg/L	1.00	1					
Sodium		34.3	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium		0.0335	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0244	2310153	7
Selenium	J	0.00348	0.00150	0.00500	mg/L	1.00	1					
Boron		0.464	0.0260	0.0750	mg/L	1.00	5	BAJ	09/07/22	1900	2310153	8
Calcium		146	0.400	1.00	mg/L	1.00	5					
Magnesium		80.0	0.0500	0.150	mg/L	1.00	5					
Manganese		29.8	0.100	0.500	mg/L	1.00	100	BAJ	09/08/22	0700	2310153	9
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1380	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	10
Titration and Ion Analysis												

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-58I Project: GPCC00101
Sample ID: 591355002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃	U	ND	1.45	4.00	mg/L			HH2	09/07/22	1346	2310459	11
Bicarbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 300.0	
5	SW846 7470A	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SM 2540C	
11	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-60I	Project: GPCC00101
Sample ID: 591355003	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 12:20	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		4.55			SU			EOS1	08/24/22	1220	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		1.32	0.0330	0.100	mg/L	1		HXC1	08/30/22	1716	2310523	2
Sulfate		1770	26.6	80.0	mg/L	200		HXC1	08/31/22	0343	2310523	3
Chloride		26.7	0.335	1.00	mg/L	5		HXC1	08/31/22	0413	2310523	4
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1013	2310246	5
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2007	2310153	6
Arsenic	J	0.00358	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0226	0.000670	0.00400	mg/L	1.00	1					
Cadmium		0.0170	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Iron		0.533	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.101	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		14.7	0.0800	0.300	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium		0.0703	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0247	2310153	7
Selenium	J	0.00417	0.00150	0.00500	mg/L	1.00	1					
Boron		0.293	0.0260	0.0750	mg/L	1.00	5	BAJ	09/07/22	1909	2310153	8
Cobalt		3.57	0.00150	0.00500	mg/L	1.00	5					
Magnesium		187	0.0500	0.150	mg/L	1.00	5					
Sodium		62.7	0.400	1.25	mg/L	1.00	5					
Calcium		281	0.800	2.00	mg/L	1.00	10	BAJ	09/07/22	2010	2310153	9
Manganese		179	1.00	5.00	mg/L	1.00	1000	BAJ	09/08/22	0702	2310153	10
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2830	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	11
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-60I Project: GPCC00101
Sample ID: 591355003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃	J	2.00	1.45	4.00	mg/L			HH2	09/07/22	1347	2310459	12
Bicarbonate alkalinity (CaCO ₃)	J	2.00	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 300.0	
5	SW846 7470A	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SW846 3005A/6020B	
11	SM 2540C	
12	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-02	Project: GPCC00101
Sample ID: 591355004	Client ID: GPCC001
Matrix: WQ	
Collect Date: 24-AUG-22 15:55	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.207	0.0670	0.200	mg/L		1	HXC1	08/30/22	1746	2310523	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1014	2310246	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2025	2310153	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium	U	ND	0.0800	0.300	mg/L	1.00	1					
Sodium	U	ND	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0251	2310153	4
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	BAJ	09/08/22	0648	2310153	5
Manganese	U	ND	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	J	3.00	1.45	4.00	mg/L			HH2	09/07/22	1348	2310459	7
Bicarbonate alkalinity (CaCO3)	J	3.00	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-02 Project: GPCC00101
Sample ID: 591355004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-29I	Project: GPCC00101
Sample ID: 591355005	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 17:10	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		4.39			SU			EOS1	08/24/22	1710	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.84	0.0670	0.200	mg/L		1	JLD1	08/30/22	2352	2310658	2
Fluoride		0.103	0.0330	0.100	mg/L		1					
Sulfate		298	13.3	40.0	mg/L		100	JLD1	08/31/22	1838	2310658	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1016	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2028	2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0175	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00660	0.000300	0.00100	mg/L	1.00	1					
Iron		24.8	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00304	0.00300	0.0100	mg/L	1.00	1					
Magnesium		7.83	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		10.2	0.0800	0.300	mg/L	1.00	1					
Sodium		17.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium		0.000845	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0302	2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		1.13	0.0520	0.150	mg/L	1.00	10	BAJ	09/07/22	1913	2310153	7
Calcium		61.0	0.800	2.00	mg/L	1.00	10					
Manganese		1.20	0.0100	0.0500	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		383	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-29I Project: GPCC00101
Sample ID: 591355005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃	U	ND	1.45	4.00	mg/L			HH2	09/07/22	1350	2310459	9
Bicarbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-30I	Project: GPCC00101
Sample ID: 591355006	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 16:09	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.38			SU			EOS1	08/24/22	1609	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.91	0.0670	0.200	mg/L		1	JLD1	08/31/22	0124	2310658	2
Fluoride		0.318	0.0330	0.100	mg/L		1					
Sulfate		935	13.3	40.0	mg/L		100	JLD1	08/31/22	1157	2310658	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1018	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2031	2310153	5
Arsenic	J	0.00283	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0389	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00163	0.000300	0.00100	mg/L	1.00	1					
Iron		1.41	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0238	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00141	0.000200	0.00100	mg/L	1.00	1					
Potassium		6.13	0.0800	0.300	mg/L	1.00	1					
Sodium		30.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0305	2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		2.15	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1916	2310153	7
Calcium		316	1.60	4.00	mg/L	1.00	20					
Magnesium		57.3	0.200	0.600	mg/L	1.00	20					
Manganese		1.15	0.0200	0.100	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1540	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-30I Project: GPCC00101
Sample ID: 591355006 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		132	1.45	4.00	mg/L			HH2	09/07/22	1351	2310459	9
Bicarbonate alkalinity (CaCO ₃)		132	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-50	Project: GPCC00101
Sample ID: 591355007	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 14:51	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.01			SU			EOS1	08/24/22	1451	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.497	0.0330	0.100	mg/L	1		JLD1	08/31/22	0155	2310658	2
Sulfate		1400	13.3	40.0	mg/L	100		JLD1	08/31/22	1228	2310658	3
Chloride		15.8	0.335	1.00	mg/L	5		JLD1	08/31/22	1259	2310658	4
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1019	2310246	5
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2035	2310153	6
Arsenic	J	0.00250	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0166	0.000670	0.00400	mg/L	1.00	1					
Cadmium		0.00818	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Iron		0.200	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0428	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		11.4	0.0800	0.300	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium		0.00831	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0309	2310153	7
Selenium	J	0.00176	0.00150	0.00500	mg/L	1.00	1					
Boron		0.406	0.0260	0.0750	mg/L	1.00	5	BAJ	09/07/22	1919	2310153	8
Calcium		215	0.400	1.00	mg/L	1.00	5					
Cobalt		1.42	0.00150	0.00500	mg/L	1.00	5					
Magnesium		151	0.0500	0.150	mg/L	1.00	5					
Sodium		51.7	0.400	1.25	mg/L	1.00	5					
Manganese		83.4	1.00	5.00	mg/L	1.00	1000	BAJ	09/08/22	0704	2310153	9
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1990	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	10
Titration and Ion Analysis												

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Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-50 Project: GPCC00101
Sample ID: 591355007 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		9.40	1.45	4.00	mg/L			HH2	09/07/22	1353	2310459	11
Bicarbonate alkalinity (CaCO ₃)		9.40	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 300.0	
5	SW846 7470A	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SM 2540C	
11	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-03	Project: GPCC00101
Sample ID: 591355008	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 12:00	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.163	0.0330	0.100	mg/L		1	JLD1	08/31/22	0226	2310658	1
Chloride		15.0	0.670	2.00	mg/L		10	JLD1	08/31/22	1330	2310658	2
Sulfate		114	1.33	4.00	mg/L		10					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1021	2310246	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2053	2310153	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0570	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		33.8	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00349	0.000300	0.00100	mg/L	1.00	1					
Iron		0.160	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		17.9	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000477	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.24	0.0800	0.300	mg/L	1.00	1					
Sodium		14.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0313	2310153	5
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		0.0448	0.00520	0.0150	mg/L	1.00	1	BAJ	09/08/22	0650	2310153	6
Manganese		0.297	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		246	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		42.4	1.45	4.00	mg/L			HH2	09/07/22	1746	2310460	8
Bicarbonate alkalinity (CaCO3)		42.4	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-03 Project: GPCC00101
Sample ID: 591355008 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-45	Project: GPCC00101
Sample ID: 591355009	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 10:10	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.74			SU			EOS1	08/25/22	1010	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.166	0.0330	0.100	mg/L	1		JLD1	08/31/22	0257	2310658	2
Chloride		14.9	0.670	2.00	mg/L	10		JLD1	08/31/22	1400	2310658	3
Sulfate		114	1.33	4.00	mg/L	10						
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1023	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2056	2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0574	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		33.5	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00357	0.000300	0.00100	mg/L	1.00	1					
Iron		0.166	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		17.9	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000424	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.19	0.0800	0.300	mg/L	1.00	1					
Sodium		14.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0316	2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		0.0458	0.00520	0.0150	mg/L	1.00	1	BAJ	09/08/22	0652	2310153	7
Manganese		0.302	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		248	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-45 Project: GPCC00101
Sample ID: 591355009 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		43.4	1.45	4.00	mg/L			HH2	09/07/22	1751	2310460	9
Bicarbonate alkalinity (CaCO ₃)		43.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-44	Project: GPCC00101
Sample ID: 591355010	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 11:31	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.06			SU			EOS1	08/25/22	1131	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.28	0.0670	0.200	mg/L		1	JLD1	08/31/22	0328	2310658	2
Fluoride		0.184	0.0330	0.100	mg/L		1					
Sulfate		47.0	1.33	4.00	mg/L		10	JLD1	08/31/22	1431	2310658	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1025	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2059	2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0560	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		27.2	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0537	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00652	0.00300	0.0100	mg/L	1.00	1					
Magnesium		11.5	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.67	0.0800	0.300	mg/L	1.00	1					
Sodium		12.7	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0320	2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		1.59	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1922	2310153	7
Manganese		0.447	0.00100	0.00500	mg/L	1.00	1	BAJ	09/08/22	0653	2310153	8
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		167	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-44 Project: GPCC00101
Sample ID: 591355010 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		78.0	1.45	4.00	mg/L			HH2	09/07/22	1753	2310460	10
Bicarbonate alkalinity (CaCO ₃)		78.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51I	Project: GPCC00101
Sample ID: 591355011	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 12:34	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.49			SU			EOS1	08/24/22	1234	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.148	0.0330	0.100	mg/L	1	JLD1	08/31/22	0500	2310658		2
Sulfate		1240	13.3	40.0	mg/L	100	JLD1	08/31/22	1502	2310658		3
Chloride		9.64	0.134	0.400	mg/L	2	JLD1	08/31/22	1635	2310658		4
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1026	2310246	5
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	2102	2310153	6
Arsenic	J	0.00222	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0154	0.000670	0.00400	mg/L	1.00	1					
Cadmium		0.00478	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0239	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0930	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0222	0.00300	0.0100	mg/L	1.00	5					
Molybdenum	J	0.000313	0.000200	0.00100	mg/L	1.00	1					
Potassium		11.8	0.0800	0.300	mg/L	1.00	1					
Sodium		47.2	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0323	2310153	7
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		0.459	0.0260	0.0750	mg/L	1.00	5	BAJ	09/07/22	1925	2310153	8
Calcium		197	0.400	1.00	mg/L	1.00	5					
Magnesium		134	0.0500	0.150	mg/L	1.00	5					
Manganese		47.4	1.00	5.00	mg/L	1.00	1000	BAJ	09/08/22	0659	2310153	9
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1740	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	10
Titration and Ion Analysis												

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Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51I	Project: GPCC00101
Sample ID: 591355011	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		22.0	1.45	4.00	mg/L			HH2	09/07/22	1355	2310459	11
Bicarbonate alkalinity (CaCO3)		22.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 300.0	
5	SW846 7470A	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SM 2540C	
11	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51D	Project: GPCC00101
Sample ID: 591355012	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 10:49	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		7.15			SU			EOS1	08/24/22	1049	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.318	0.0330	0.100	mg/L	1		JLD1	08/31/22	0531	2310658	2
Chloride		17.5	3.35	10.0	mg/L	50		JLD1	08/31/22	1705	2310658	3
Sulfate		377	6.65	20.0	mg/L	50						
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1031	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2055	2310155	5
Arsenic	J	0.00308	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0584	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000306	0.000300	0.00100	mg/L	1.00	1					
Iron		2.89	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00420	0.00300	0.0100	mg/L	1.00	1					
Magnesium		28.1	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.00171	0.000200	0.00100	mg/L	1.00	1					
Potassium		9.82	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		39.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1050	2310155	6
Boron		0.0360	0.00520	0.0150	mg/L	1.00	1					
Calcium		118	0.800	2.00	mg/L	1.00	10	PRB	09/10/22	0719	2310155	7
Manganese		1.11	0.0100	0.0500	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		715	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51D Project: GPCC00101
Sample ID: 591355012 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		129	1.45	4.00	mg/L			HH2	09/07/22	1356	2310459	9
Bicarbonate alkalinity (CaCO ₃)		129	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-61I	Project: GPCC00101
Sample ID: 591355013	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 14:02	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.14			SU			EOS1	08/24/22	1402	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.103	0.0330	0.100	mg/L	1		JLD1	08/31/22	0602	2310658	2
Sulfate		1800	26.6	80.0	mg/L	200		JLD1	08/31/22	1736	2310658	3
Chloride		19.2	0.670	2.00	mg/L	10		JLD1	08/31/22	1807	2310658	4
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1033	2310246	5
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2121	2310155	6
Arsenic	J	0.00295	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0133	0.000670	0.00400	mg/L	1.00	1					
Cadmium	J	0.000859	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.562	0.000300	0.00100	mg/L	1.00	1					
Iron		0.532	0.0330	0.100	mg/L	1.00	1					
Lead	J	0.00113	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00913	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		6.34	0.0800	0.300	mg/L	1.00	1					
Selenium		0.00510	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium		0.00198	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1100	2310155	7
Boron		0.277	0.0260	0.0750	mg/L	1.00	5	PRB	09/10/22	0734	2310155	8
Calcium		214	0.400	1.00	mg/L	1.00	5					
Magnesium		165	0.0500	0.150	mg/L	1.00	5					
Sodium		58.8	0.400	1.25	mg/L	1.00	5					
Manganese		108	1.00	5.00	mg/L	1.00	1000	PRB	09/10/22	0839	2310155	9
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2400	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	10
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-61I Project: GPCC00101
Sample ID: 591355013 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		16.8	1.45	4.00	mg/L			HH2	09/07/22	1401	2310459	11
Bicarbonate alkalinity (CaCO ₃)		16.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 300.0	
5	SW846 7470A	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SM 2540C	
11	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51S	Project: GPCC00101
Sample ID: 591355014	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 16:09	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.12			SU			EOS1	08/24/22	1609	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.58	0.0670	0.200	mg/L		1	JLD1	08/31/22	0633	2310658	2
Fluoride		0.131	0.0330	0.100	mg/L		1					
Sulfate		0.872	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1035	2310246	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2124	2310155	4
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0223	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		7.94	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00193	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		8.23	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.37	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		11.1	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1105	2310155	5
Boron	J	0.00563	0.00520	0.0150	mg/L	1.00	1					
Manganese		0.781	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		90.0	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	6
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51S Project: GPCC00101
Sample ID: 591355014 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		64.2	1.45	4.00	mg/L			HH2	09/07/22	1403	2310459	7
Bicarbonate alkalinity (CaCO ₃)		64.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-02	Project: GPCC00101
Sample ID: 591355015	Client ID: GPCC001
Matrix: WG	
Collect Date: 24-AUG-22 12:00	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.20	0.0670	0.200	mg/L		1	HXC1	08/31/22	1152	2310688	1
Fluoride		0.121	0.0330	0.100	mg/L		1					
Sulfate		0.880	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1037	2310246	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2128	2310155	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0228	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		8.37	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00188	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		8.58	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.47	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		11.3	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1111	2310155	4
Boron	J	0.00617	0.00520	0.0150	mg/L	1.00	1					
Manganese		0.805	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		87.0	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	5
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		64.6	1.45	4.00	mg/L			HH2	09/07/22	1404	2310459	6
Bicarbonate alkalinity (CaCO3)		64.6	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-02 Project: GPCC00101
Sample ID: 591355015 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SM 2540C	
6	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-50D	Project: GPCC00101
Sample ID: 591355016	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 09:51	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.11			SU			EOS1	08/25/22	0951	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		0.106	0.0330	0.100	mg/L		1	HXC1	08/31/22	1221	2310688	2
Chloride		26.2	6.70	20.0	mg/L		100	HXC1	08/31/22	2149	2310688	3
Sulfate		1060	13.3	40.0	mg/L		100					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1038	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2131	2310155	5
Arsenic	J	0.00235	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0257	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.506	0.000300	0.00100	mg/L	1.00	1					
Iron		3.62	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0255	0.00300	0.0100	mg/L	1.00	1					
Molybdenum		0.00109	0.000200	0.00100	mg/L	1.00	1					
Potassium		13.5	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	J	0.000269	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1113	2310155	6
Boron		0.278	0.0260	0.0750	mg/L	1.00	5	PRB	09/10/22	0741	2310155	7
Calcium		210	0.400	1.00	mg/L	1.00	5					
Magnesium		95.7	0.0500	0.150	mg/L	1.00	5					
Sodium		53.6	0.400	1.25	mg/L	1.00	5					
Manganese		36.1	0.100	0.500	mg/L	1.00	100	PRB	09/10/22	0745	2310155	8
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		1750	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
 Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-50D	Project: GPCC00101
Sample ID: 591355016	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		57.0	1.45	4.00	mg/L			HH2	09/07/22	1754	2310460	10
Bicarbonate alkalinity (CaCO3)		57.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-06	Project: GPCC00101
Sample ID: 591355017	Client ID: GPCC001
Matrix: WQ	
Collect Date: 25-AUG-22 09:42	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	08/31/22	1251	2310688	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1040	2310246	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2135	2310155	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium	U	ND	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium	U	ND	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1117	2310155	4
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Manganese		0.00523	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	5
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	J	3.00	1.45	4.00	mg/L			HH2	09/07/22	1755	2310460	6
Bicarbonate alkalinity (CaCO3)	J	3.00	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-06 Project: GPCC00101
Sample ID: 591355017 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SM 2540C	
6	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-62I	Project: GPCC00101
Sample ID: 591355018	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 11:21	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.50			SU			EOS1	08/25/22	1121	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		9.97	0.0670	0.200	mg/L		1	HXC1	08/31/22	1321	2310688	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		571	6.65	20.0	mg/L		50	HXC1	08/31/22	2219	2310688	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1042	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2139	2310155	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0259	0.000670	0.00400	mg/L	1.00	1					
Cadmium	J	0.000618	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.370	0.000300	0.00100	mg/L	1.00	1					
Iron		1.03	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00617	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000286	0.000200	0.00100	mg/L	1.00	1					
Potassium		9.67	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		25.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	J	0.000219	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1119	2310155	6
Boron		0.473	0.0260	0.0750	mg/L	1.00	5	PRB	09/10/22	0755	2310155	7
Calcium		104	0.400	1.00	mg/L	1.00	5					
Magnesium		54.2	0.0500	0.150	mg/L	1.00	5					
Manganese		26.9	0.100	0.500	mg/L	1.00	100	PRB	09/10/22	0759	2310155	8
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		918	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-62I Project: GPCC00101
Sample ID: 591355018 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		19.2	1.45	4.00	mg/L			HH2	09/07/22	1756	2310460	10
Bicarbonate alkalinity (CaCO ₃)		19.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-59I	Project: GPCC00101
Sample ID: 591355019	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 13:16	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		3.72			SU			EOS1	08/25/22	1316	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		1.80	0.0330	0.100	mg/L	1		HXC1	08/31/22	1351	2310688	2
Chloride		53.0	13.4	40.0	mg/L	200		HXC1	08/31/22	2348	2310688	3
Sulfate		2900	26.6	80.0	mg/L	200						
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1043	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2142	2310155	5
Arsenic		0.0221	0.00200	0.00500	mg/L	1.00	1					
Cadmium		0.00536	0.000300	0.00100	mg/L	1.00	1					
Chromium	J	0.00324	0.00300	0.0100	mg/L	1.00	1					
Lithium		0.164	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		16.4	0.0800	0.300	mg/L	1.00	1					
Selenium		0.113	0.00150	0.00500	mg/L	1.00	1					
Beryllium		0.100	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1121	2310155	6
Boron		0.0550	0.00520	0.0150	mg/L	1.00	1					
Barium	J	0.0121	0.00335	0.0200	mg/L	1.00	5	PRB	09/10/22	0803	2310155	7
Cobalt		1.46	0.00150	0.00500	mg/L	1.00	5					
Lead	U	ND	0.00250	0.0100	mg/L	1.00	5					
Magnesium		180	0.0500	0.150	mg/L	1.00	5					
Sodium		92.0	0.400	1.25	mg/L	1.00	5					
Thallium	U	ND	0.00300	0.0100	mg/L	1.00	5					
Calcium		267	8.00	20.0	mg/L	1.00	100	PRB	09/10/22	0806	2310155	8
Iron		448	3.30	10.0	mg/L	1.00	100					
Manganese		74.7	0.100	0.500	mg/L	1.00	100					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		4370	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-59I Project: GPCC00101
Sample ID: 591355019 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃	U	ND	1.45	4.00	mg/L			HH2	09/07/22	1758	2310460	10
Bicarbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-27I	Project: GPCC00101
Sample ID: 591355020	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 10:12	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.03			SU			EOS1	08/25/22	1012	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.65	0.0670	0.200	mg/L		1	HXC1	08/31/22	1421	2310688	2
Fluoride		0.234	0.0330	0.100	mg/L		1					
Sulfate		176	2.66	8.00	mg/L		20	HXC1	09/01/22	0018	2310688	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1045	2310246	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2153	2310155	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0161	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00790	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0361	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium		5.73	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		5.03	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		14.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1125	2310155	6
Manganese		0.674	0.00100	0.00500	mg/L	1.00	1					
Boron		1.03	0.0520	0.150	mg/L	1.00	10	PRB	09/10/22	0810	2310155	7
Calcium		64.0	0.800	2.00	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		311	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	8
Titration and Ion Analysis												

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Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-27I Project: GPCC00101
Sample ID: 591355020 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		33.4	1.45	4.00	mg/L			HH2	09/07/22	1801	2310460	9
Bicarbonate alkalinity (CaCO ₃)		33.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310245

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-03	Project: GPCC00101
Sample ID: 591355021	Client ID: GPCC001
Matrix: WQ	
Collect Date: 25-AUG-22 10:45	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	08/31/22	1451	2310688	1
Fluoride	J	0.0890	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1128	2310248	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2157	2310155	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium	U	ND	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium	J	0.107	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1129	2310155	4
Boron	J	0.00648	0.00520	0.0150	mg/L	1.00	1					
Manganese		0.00513	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	5
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	J	3.20	1.45	4.00	mg/L			HH2	09/07/22	1802	2310460	6
Bicarbonate alkalinity (CaCO3)	J	3.20	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-03 Project: GPCC00101
Sample ID: 591355021 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310247

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SM 2540C	
6	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-63I	Project: GPCC00101
Sample ID: 591355022	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 12:20	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.65			SU			EOS1	08/25/22	1220	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.15	0.0670	0.200	mg/L		1	HXC1	08/31/22	1521	2310688	2
Fluoride		0.235	0.0330	0.100	mg/L		1					
Sulfate		234	2.66	8.00	mg/L		20	HXC1	09/01/22	0048	2310688	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1133	2310248	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2200	2310155	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0230	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		45.1	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0232	0.000300	0.00100	mg/L	1.00	1					
Iron		2.04	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00509	0.00300	0.0100	mg/L	1.00	1					
Magnesium		30.1	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000741	0.000200	0.00100	mg/L	1.00	1					
Potassium		7.94	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		16.4	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1134	2310155	6
Boron		0.672	0.0520	0.150	mg/L	1.00	10	PRB	09/10/22	0813	2310155	7
Manganese		5.46	0.0100	0.0500	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		419	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-63I Project: GPCC00101
Sample ID: 591355022 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		32.8	1.45	4.00	mg/L			HH2	09/07/22	1803	2310460	9
Bicarbonate alkalinity (CaCO ₃)		32.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310247

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-57I	Project: GPCC00101
Sample ID: 591355023	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 10:55	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.91			SU			EOS1	08/25/22	1055	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		8.41	0.0670	0.200	mg/L		1	HXC1	08/31/22	1551	2310688	2
Fluoride		0.235	0.0330	0.100	mg/L		1					
Sulfate		294	5.32	16.0	mg/L		40	HXC1	09/01/22	0118	2310688	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1135	2310248	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2204	2310155	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0219	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.0194	0.000300	0.00100	mg/L	1.00	1					
Iron		1.35	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0231	0.00300	0.0100	mg/L	1.00	1					
Magnesium		31.1	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		5.52	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		19.0	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	J	0.000393	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1136	2310155	6
Boron		0.496	0.0260	0.0750	mg/L	1.00	5	PRB	09/10/22	0817	2310155	7
Calcium		53.0	0.400	1.00	mg/L	1.00	5					
Manganese		14.2	0.0200	0.100	mg/L	1.00	20	PRB	09/10/22	0821	2310155	8
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		554	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	9
Titration and Ion Analysis												

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Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-57I Project: GPCC00101
Sample ID: 591355023 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		27.0	1.45	4.00	mg/L			HH2	09/07/22	1804	2310460	10
Bicarbonate alkalinity (CaCO ₃)		27.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310247

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-32S	Project: GPCC00101
Sample ID: 591355024	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 12:35	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.06			SU			EOS1	08/25/22	1235	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.96	0.0670	0.200	mg/L	1		HXC1	08/31/22	1620	2310688	2
Fluoride		0.138	0.0330	0.100	mg/L	1						
Sulfate		254	2.66	8.00	mg/L	20		HXC1	09/01/22	0148	2310688	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1137	2310248	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2208	2310155	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0231	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		48.5	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00430	0.00300	0.0100	mg/L	1.00	1					
Magnesium		30.9	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		2.25	0.0800	0.300	mg/L	1.00	1					
Selenium		0.218	0.00150	0.00500	mg/L	1.00	1					
Sodium		26.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1138	2310155	6
Manganese		0.0107	0.00100	0.00500	mg/L	1.00	1					
Boron		1.07	0.0520	0.150	mg/L	1.00	10	PRB	09/10/22	0824	2310155	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		437	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-32S
Sample ID: 591355024

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		30.2	1.45	4.00	mg/L			HH2	09/07/22	1805	2310460	9
Bicarbonate alkalinity (CaCO ₃)		30.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310247

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-07	Project: GPCC00101
Sample ID: 591355025	Client ID: GPCC001
Matrix: WQ	
Collect Date: 25-AUG-22 12:45	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	08/31/22	1750	2310688	1
Fluoride	J	0.0758	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1139	2310248	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2211	2310155	3
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium	U	ND	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium	U	ND	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1140	2310155	4
Boron		0.0159	0.00520	0.0150	mg/L	1.00	1					
Manganese	J	0.00387	0.00100	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	5
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	J	2.80	1.45	4.00	mg/L			HH2	09/07/22	1806	2310460	6
Bicarbonate alkalinity (CaCO3)	J	2.80	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-07 Project: GPCC00101
Sample ID: 591355025 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310247

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SM 2540C	
6	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-52I	Project: GPCC00101
Sample ID: 591355026	Client ID: GPCC001
Matrix: WG	
Collect Date: 25-AUG-22 12:55	
Receive Date: 29-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.21			SU			EOS1	08/25/22	1255	2310143	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.27	0.0670	0.200	mg/L	1		HXC1	08/31/22	1820	2310688	2
Fluoride		0.157	0.0330	0.100	mg/L	1						
Sulfate		142	1.33	4.00	mg/L	10		HXC1	09/01/22	0218	2310688	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1140	2310248	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	PRB	09/09/22	2215	2310155	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0179	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		38.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		1.16	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0162	0.00300	0.0100	mg/L	1.00	1					
Magnesium		18.3	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000471	0.000200	0.00100	mg/L	1.00	1					
Potassium		4.96	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		19.2	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	PRB	09/10/22	1142	2310155	6
Manganese		0.601	0.00100	0.00500	mg/L	1.00	1					
Boron		1.56	0.104	0.300	mg/L	1.00	20	PRB	09/10/22	0828	2310155	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		296	2.38	10.0	mg/L			CH6	08/31/22	1439	2310760	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-52I
Sample ID: 591355026

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		57.2	1.45	4.00	mg/L			HH2	09/07/22	1807	2310460	9
Bicarbonate alkalinity (CaCO ₃)		57.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310154
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	2310247

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-12I	Project: GPCC00101
Sample ID: 590855001	Client ID: GPCC001
Matrix: WG	
Collect Date: 23-AUG-22 11:43	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.39			SU			EOS1	08/23/22	1143	2308295	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.50	0.0670	0.200	mg/L		1	JLD1	08/25/22	1857	2308691	2
Fluoride		0.151	0.0330	0.100	mg/L		1					
Sulfate		1.84	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1054	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0024	2308385	4
Barium		0.0602	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00451	0.00300	0.0100	mg/L	1.00	1					
Potassium		3.37	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		10.3	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony		0.0241	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1455	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1151	2308385	6
Boron	J	0.00653	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		15.8	0.0800	0.200	mg/L	1.00	1					
Magnesium		4.00	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.00506	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000413	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		104	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	7
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-12I
Sample ID: 590855001

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		65.8	1.45	4.00	mg/L			HH2	09/04/22	1349	2309339	8
Bicarbonate alkalinity (CaCO ₃)		65.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1146	2308547

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-01	Project: GPCC00101
Sample ID: 590855002	Client ID: GPCC001
Matrix: WQ	
Collect Date: 23-AUG-22 13:15	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.186	0.0670	0.200	mg/L		1	JLD1	08/25/22	1926	2308691	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1056	2308549	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0028	2308385	3
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Potassium	U	ND	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		0.565	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1457	2308385	4
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1134	2308385	5
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		0.250	0.0800	0.200	mg/L	1.00	1					
Magnesium	J	0.0137	0.0100	0.0300	mg/L	1.00	1					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		31.0	1.45	4.00	mg/L			HH2	09/04/22	1350	2309339	7
Bicarbonate alkalinity (CaCO3)		31.0	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Contact: Atlanta, Georgia 30308
Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-01 Project: GPCC00101
Sample ID: 590855002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1146	2308547

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-12S	Project: GPCC00101
Sample ID: 590855003	Client ID: GPCC001
Matrix: WG	
Collect Date: 23-AUG-22 13:38	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.90			SU			EOS1	08/23/22	1338	2308295	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.46	0.0670	0.200	mg/L		1	JLD1	08/25/22	1956	2308691	2
Fluoride		0.129	0.0330	0.100	mg/L		1					
Sulfate		0.636	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1058	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0039	2308385	4
Barium		0.0607	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Potassium		2.55	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		5.41	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1459	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1137	2308385	6
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		6.09	0.0800	0.200	mg/L	1.00	1					
Magnesium		3.53	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00103	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		55.0	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	7
Titration and Ion Analysis												

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-12S	Project: GPCC00101
Sample ID: 590855003	Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		32.0	1.45	4.00	mg/L			HH2	09/04/22	1351	2309339	8
Bicarbonate alkalinity (CaCO ₃)		32.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1146	2308547

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	SW846 7470A	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	
8	SM 2320B	

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-25I	Project: GPCC00101
Sample ID: 590855004	Client ID: GPCC001
Matrix: WG	
Collect Date: 23-AUG-22 15:41	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.11			SU			EOS1	08/23/22	1541	2308295	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		5.38	0.0670	0.200	mg/L		1	JLD1	08/25/22	2026	2308691	2
Fluoride		0.186	0.0330	0.100	mg/L		1					
Sulfate		158	2.66	8.00	mg/L		20	JLD1	08/26/22	0255	2308691	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1103	2308549	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0042	2308385	5
Barium		0.0259	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00342	0.000300	0.00100	mg/L	1.00	1					
Iron		0.193	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Potassium		4.20	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		16.7	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1504	2308385	6
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1233	2308385	7
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Magnesium		21.4	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.00105	0.000200	0.00100	mg/L	1.00	1					
Boron		1.38	0.104	0.300	mg/L	1.00	20	BAJ	09/03/22	1207	2308385	8
Calcium		51.5	1.60	4.00	mg/L	1.00	20					
Manganese		1.68	0.0200	0.100	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		315	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-25I Project: GPCC00101
Sample ID: 590855004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		75.6	1.45	4.00	mg/L			HH2	09/04/22	1352	2309339	10
Bicarbonate alkalinity (CaCO ₃)		75.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1146	2308547

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-23S	Project: GPCC00101
Sample ID: 590845001	Client ID: GPCC001
Matrix: WG	
Collect Date: 23-AUG-22 13:45	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.66			SU			EOS1	08/23/22	1345	2308297	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.16	0.0670	0.200	mg/L		1	JLD1	08/25/22	1627	2308691	2
Fluoride		0.157	0.0330	0.100	mg/L		1					
Sulfate		24.4	0.266	0.800	mg/L		2	JLD1	08/26/22	0155	2308691	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1148	2308555	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0014	2308385	5
Barium		0.0573	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000308	0.000300	0.00100	mg/L	1.00	1					
Iron		0.114	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00792	0.00300	0.0100	mg/L	1.00	1					
Potassium		2.52	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		9.81	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1450	2308385	6
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1119	2308385	7
Boron		0.0498	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		8.09	0.0800	0.200	mg/L	1.00	1					
Magnesium		4.69	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0360	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		103	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-23S Project: GPCC00101
Sample ID: 590845001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		30.4	1.45	4.00	mg/L			HH2	09/04/22	1346	2309339	9
Bicarbonate alkalinity (CaCO ₃)		30.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1147	2308553

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SM 2540C	
9	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-47	Project: GPCC00101
Sample ID: 590845002	Client ID: GPCC001
Matrix: WG	
Collect Date: 23-AUG-22 15:20	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.61			SU			EOS1	08/23/22	1520	2308297	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.49	0.0670	0.200	mg/L		1	JLD1	08/25/22	1757	2308691	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		1410	26.6	80.0	mg/L		200	JLD1	08/26/22	0225	2308691	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1150	2308555	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00228	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0017	2308385	5
Barium		0.0285	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.101	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0474	0.00300	0.0100	mg/L	1.00	1					
Potassium		11.8	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		42.5	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1452	2308385	6
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1230	2308385	7
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Manganese		0.0103	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000296	0.000200	0.00100	mg/L	1.00	1					
Boron		0.547	0.0520	0.150	mg/L	1.00	10	BAJ	09/03/22	1204	2308385	8
Calcium		323	0.800	2.00	mg/L	1.00	10					
Magnesium		125	0.100	0.300	mg/L	1.00	10					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2060	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-47
Sample ID: 590845002

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		28.4	1.45	4.00	mg/L			HH2	09/04/22	1347	2309339	10
Bicarbonate alkalinity (CaCO ₃)		28.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1147	2308553

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SM 2540C	
10	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-05	Project: GPCC00101
Sample ID: 590845003	Client ID: GPCC001
Matrix: WQ	
Collect Date: 23-AUG-22 14:55	
Receive Date: 24-AUG-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	J	0.188	0.0670	0.200	mg/L		1	JLD1	08/25/22	1827	2308691	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1152	2308555	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0021	2308385	3
Barium	J	0.000796	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	U	ND	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Potassium	U	ND	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		0.703	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1453	2308385	4
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1122	2308385	5
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		0.313	0.0800	0.200	mg/L	1.00	1					
Magnesium	J	0.0152	0.0100	0.0300	mg/L	1.00	1					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		20.6	1.45	4.00	mg/L			HH2	09/04/22	1348	2309339	7
Bicarbonate alkalinity (CaCO3)		20.6	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-05 Project: GPCC00101
Sample ID: 590845003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1147	2308553

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	SW846 7470A	
3	SW846 3005A/6020B	
4	SW846 3005A/6020B	
5	SW846 3005A/6020B	
6	SM 2540C	
7	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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QC Summary

Report Date: October 3, 2022

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 591355

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2310523										
QC1205179260	591351001	DUP									
Chloride		5.00		4.97	mg/L	0.702		(0%-20%)	HXC1	08/30/22	20:15
Fluoride		0.274		0.272	mg/L	0.88 ^		(+/-0.100)			
Sulfate		157		158	mg/L	0.766		(0%-20%)		08/30/22	21:44
QC1205179259	LCS										
Chloride	5.00			4.72	mg/L		94.4	(90%-110%)		08/30/22	19:45
Fluoride	2.50			2.51	mg/L		100	(90%-110%)			
Sulfate	10.0			9.64	mg/L		96.4	(90%-110%)			
QC1205179258	MB										
Chloride			U	ND	mg/L					08/30/22	19:15
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205179261	591351001	PS									
Chloride	5.00	5.00		10.4	mg/L		107	(90%-110%)		08/30/22	20:45
Fluoride	2.50	0.274		2.66	mg/L		95.4	(90%-110%)			
Sulfate	10.0	7.86		18.2	mg/L		103	(90%-110%)		08/30/22	22:14

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QC Summary

Workorder: 591355

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2310658										
QC1205179525	591355005	DUP									
Chloride		5.84		5.85	mg/L	0.157		(0%-20%)	JLD1	08/31/22	00:23
Fluoride		0.103		0.101	mg/L	2.06 ^		(+/-0.100)			
Sulfate		298		305	mg/L	2.44		(0%-20%)		08/31/22	19:09
QC1205179524	LCS										
Chloride	5.00			5.00	mg/L		100	(90%-110%)		08/30/22	23:21
Fluoride	2.50			2.41	mg/L		96.6	(90%-110%)			
Sulfate	10.0			10.4	mg/L		104	(90%-110%)			
QC1205179523	MB										
Chloride			U	ND	mg/L					08/30/22	22:50
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205179526	591355005	PS									
Chloride	5.00	5.84		12.4	mg/L		131 *	(90%-110%)		08/31/22	00:53
Fluoride	2.50	0.103		2.75	mg/L		106	(90%-110%)			
Sulfate	10.0	2.98		12.9	mg/L		99.2	(90%-110%)		08/31/22	19:40
Batch	2310688										
QC1205179579	591355015	DUP									
Chloride		4.20		4.21	mg/L	0.252		(0%-20%)	HXC1	08/31/22	19:49
Fluoride		0.121		0.116	mg/L	3.46 ^		(+/-0.100)			

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QC Summary

Workorder: 591355

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2310688										
Sulfate		0.880		0.815	mg/L	7.69 ^		(+/-0.400)	HXC1	08/31/22	19:49
QC1205179581	591355026	DUP									
Chloride		6.27		6.28	mg/L	0.231		(0%-20%)		08/31/22	20:49
Fluoride		0.157		0.155	mg/L	1.41 ^		(+/-0.100)			
Sulfate		142		142	mg/L	0.0739		(0%-20%)		09/01/22	02:48
QC1205179578	LCS										
Chloride	5.00			4.71	mg/L		94.3	(90%-110%)		08/31/22	19:20
Fluoride	2.50			2.53	mg/L		101	(90%-110%)			
Sulfate	10.0			9.76	mg/L		97.6	(90%-110%)			
QC1205179577	MB										
Chloride			U	ND	mg/L					08/31/22	18:50
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205179580	591355015	PS									
Chloride	5.00	4.20		9.73	mg/L		111 *	(90%-110%)		08/31/22	20:19
Fluoride	2.50	0.121		2.64	mg/L		101	(90%-110%)			
Sulfate	10.0	0.880		10.7	mg/L		97.8	(90%-110%)			
QC1205179582	591355026	PS									
Chloride	5.00	6.27		12.1	mg/L		117 *	(90%-110%)		08/31/22	21:19

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 591355

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2310688										
Fluoride	2.50	0.157		2.69	mg/L		101	(90%-110%)	HXC1	08/31/22	21:19
Sulfate	10.0	14.2		24.9	mg/L		107	(90%-110%)		09/01/22	03:17
Metals Analysis - ICPMS											
Batch	2310153										
QC1205178580	LCS										
Antimony	0.0500			0.0540	mg/L		108	(80%-120%)	BAJ	09/07/22	18:17
Arsenic	0.0500			0.0568	mg/L		114	(80%-120%)			
Barium	0.0500			0.0523	mg/L		105	(80%-120%)			
Beryllium	0.0500			0.0563	mg/L		113	(80%-120%)		09/07/22	01:53
Boron	0.100			0.108	mg/L		108	(80%-120%)		09/07/22	18:17
Cadmium	0.0500			0.0568	mg/L		114	(80%-120%)			
Calcium	2.00			2.13	mg/L		106	(80%-120%)			
Chromium	0.0500			0.0512	mg/L		102	(80%-120%)			
Cobalt	0.0500			0.0513	mg/L		103	(80%-120%)			
Iron	2.00			2.04	mg/L		102	(80%-120%)			
Lead	0.0500			0.0528	mg/L		106	(80%-120%)			
Lithium	0.0500			0.0505	mg/L		101	(80%-120%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310153										
Magnesium	2.00			2.14	mg/L		107	(80%-120%)	BAJ	09/07/22	18:17
Manganese	0.0500			0.0508	mg/L		102	(80%-120%)			
Molybdenum	0.0500			0.0534	mg/L		107	(80%-120%)			
Potassium	2.00			2.10	mg/L		105	(80%-120%)			
Selenium	0.0500			0.0499	mg/L		99.8	(80%-120%)		09/07/22	01:53
Sodium	2.00			2.08	mg/L		104	(80%-120%)		09/07/22	18:17
Thallium	0.0500			0.0505	mg/L		101	(80%-120%)			
QC1205178579	MB										
Antimony			U	ND	mg/L					09/07/22	18:14
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L					09/07/22	01:50
Boron			U	ND	mg/L					09/07/22	18:14
Cadmium			U	ND	mg/L						
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310153										
Cobalt			U	ND	mg/L				BAJ	09/07/22	18:14
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L					09/07/22	01:50
Sodium			U	ND	mg/L					09/07/22	18:14
Thallium			U	ND	mg/L						
QC1205178581 591351001 MS											
Antimony	0.0500	U	ND	0.0519	mg/L		103	(75%-125%)		09/07/22	18:23
Arsenic	0.0500	U	ND	0.0532	mg/L		104	(75%-125%)			
Barium	0.0500		0.0512	0.104	mg/L		106	(75%-125%)			
Beryllium	0.0500	U	ND	0.0560	mg/L		112	(75%-125%)		09/07/22	02:00

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310153										
Boron	0.100	0.0273		0.134	mg/L		107	(75%-125%)	BAJ	09/07/22	18:23
Cadmium	0.0500	U	ND	0.0522	mg/L		104	(75%-125%)			
Calcium	2.00		43.6	47.5	mg/L		N/A	(75%-125%)			
Chromium	0.0500		0.0127	0.0655	mg/L		106	(75%-125%)			
Cobalt	0.0500	U	ND	0.0502	mg/L		100	(75%-125%)			
Iron	2.00	U	ND	2.08	mg/L		103	(75%-125%)			
Lead	0.0500	U	ND	0.0511	mg/L		102	(75%-125%)			
Lithium	0.0500	U	ND	0.0528	mg/L		103	(75%-125%)			
Magnesium	2.00		25.7	28.9	mg/L		N/A	(75%-125%)			
Manganese	0.0500	U	ND	0.0507	mg/L		100	(75%-125%)			
Molybdenum	0.0500	U	ND	0.0559	mg/L		112	(75%-125%)			
Potassium	2.00		1.29	3.38	mg/L		105	(75%-125%)			
Selenium	0.0500	J	0.00208	0.0515	mg/L		98.9	(75%-125%)		09/07/22	02:00
Sodium	2.00		24.6	27.8	mg/L		N/A	(75%-125%)		09/07/22	18:23
Thallium	0.0500	U	ND	0.0502	mg/L		100	(75%-125%)			

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310153										
	QC1205178582 591351001 MSD										
Antimony	0.0500	U	ND	0.0533	mg/L	2.66	106	(0%-20%)	BAJ	09/07/22	18:26
Arsenic	0.0500	U	ND	0.0555	mg/L	4.3	109	(0%-20%)			
Barium	0.0500		0.0512	0.105	mg/L	0.178	107	(0%-20%)			
Beryllium	0.0500	U	ND	0.0546	mg/L	2.52	109	(0%-20%)		09/07/22	02:04
Boron	0.100		0.0273	0.134	mg/L	0.174	107	(0%-20%)		09/07/22	18:26
Cadmium	0.0500	U	ND	0.0544	mg/L	4.28	109	(0%-20%)			
Calcium	2.00		43.6	45.7	mg/L	3.85	N/A	(0%-20%)			
Chromium	0.0500		0.0127	0.0636	mg/L	2.93	102	(0%-20%)			
Cobalt	0.0500	U	ND	0.0494	mg/L	1.65	98.7	(0%-20%)			
Iron	2.00	U	ND	2.06	mg/L	1.04	102	(0%-20%)			
Lead	0.0500	U	ND	0.0512	mg/L	0.258	102	(0%-20%)			
Lithium	0.0500	U	ND	0.0515	mg/L	2.49	101	(0%-20%)			
Magnesium	2.00		25.7	27.9	mg/L	3.37	N/A	(0%-20%)			
Manganese	0.0500	U	ND	0.0506	mg/L	0.0711	100	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0558	mg/L	0.308	111	(0%-20%)			

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310153										
Potassium	2.00	1.29		3.38	mg/L	0.0861	105	(0%-20%)	BAJ	09/07/22	18:26
Selenium	0.0500	J	0.00208	0.0521	mg/L	1.07	100	(0%-20%)		09/07/22	02:04
Sodium	2.00	24.6		27.1	mg/L	2.51	N/A	(0%-20%)		09/07/22	18:26
Thallium	0.0500	U	ND	0.0503	mg/L	0.279	100	(0%-20%)			
QC1205178583 591351001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/07/22	18:54
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Barium			51.2		9.71	ug/L	5.13	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/07/22	02:11
Boron			27.3	J	5.37	ug/L	1.81	(0%-20%)		09/07/22	18:54
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			43600		8480	ug/L	2.85	(0%-20%)			
Chromium			12.7	U	ND	ug/L	N/A	(0%-20%)			
Cobalt		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Iron		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Lead		U	ND	U	ND	ug/L	N/A	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310153										
Lithium	U	ND	U	ND	ug/L	N/A		(0%-20%)	BAJ	09/07/22	18:54
Magnesium		25700		4930	ug/L	4.31		(0%-20%)			
Manganese	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium		1290	J	250	ug/L	2.87		(0%-20%)			
Selenium	J	2.08	U	ND	ug/L	N/A		(0%-20%)		09/07/22	02:11
Sodium		24600		4790	ug/L	2.6		(0%-20%)		09/07/22	18:54
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
<hr/>											
Batch	2310155										
QC1205178585	LCS										
Antimony	0.0500			0.0467	mg/L		93.4	(80%-120%)	PRB	09/09/22	20:52
Arsenic	0.0500			0.0462	mg/L		92.3	(80%-120%)			
Barium	0.0500			0.0489	mg/L		97.8	(80%-120%)			
Beryllium	0.0500			0.0518	mg/L		104	(80%-120%)		09/10/22	10:48
Boron	0.100			0.103	mg/L		103	(80%-120%)			
Cadmium	0.0500			0.0482	mg/L		96.5	(80%-120%)		09/09/22	20:52
Calcium	2.00			2.00	mg/L		99.9	(80%-120%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310155										
Chromium	0.0500			0.0474	mg/L		94.7	(80%-120%)	PRB	09/09/22	20:52
Cobalt	0.0500			0.0462	mg/L		92.4	(80%-120%)			
Iron	2.00			1.84	mg/L		92.2	(80%-120%)			
Lead	0.0500			0.0485	mg/L		97	(80%-120%)			
Lithium	0.0500			0.0478	mg/L		95.7	(80%-120%)			
Magnesium	2.00			1.94	mg/L		97	(80%-120%)			
Manganese	0.0500			0.0475	mg/L		95	(80%-120%)		09/10/22	10:48
Molybdenum	0.0500			0.0480	mg/L		95.9	(80%-120%)		09/09/22	20:52
Potassium	2.00			1.90	mg/L		95.2	(80%-120%)			
Selenium	0.0500			0.0473	mg/L		94.6	(80%-120%)			
Sodium	2.00			1.89	mg/L		94.4	(80%-120%)			
Thallium	0.0500			0.0469	mg/L		93.8	(80%-120%)			
QC1205178584	MB										
Antimony			U	ND	mg/L					09/09/22	20:48
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310155										
Beryllium			U	ND	mg/L				PRB	09/10/22	10:46
Boron			U	ND	mg/L						
Cadmium			U	ND	mg/L					09/09/22	20:48
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L						
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L						
Manganese			U	ND	mg/L					09/10/22	10:46
Molybdenum			U	ND	mg/L					09/09/22	20:48
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						
Sodium			U	ND	mg/L						

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310155										
Thallium			U	ND	mg/L				PRB	09/09/22	20:48
QC1205178586	591355012	MS									
Antimony	0.0500	U	ND	0.0503	mg/L		100	(75%-125%)		09/09/22	20:59
Arsenic	0.0500	J	0.00308	0.0527	mg/L		99.2	(75%-125%)			
Barium	0.0500		0.0584	0.109	mg/L		101	(75%-125%)			
Beryllium	0.0500	U	ND	0.0530	mg/L		106	(75%-125%)		09/10/22	10:52
Boron	0.100		0.0360	0.139	mg/L		103	(75%-125%)			
Cadmium	0.0500	U	ND	0.0508	mg/L		102	(75%-125%)		09/09/22	20:59
Calcium	2.00		118	122	mg/L		N/A	(75%-125%)		09/10/22	07:23
Chromium	0.0500	U	ND	0.0486	mg/L		95.7	(75%-125%)		09/09/22	20:59
Cobalt	0.0500	J	0.000306	0.0476	mg/L		94.5	(75%-125%)			
Iron	2.00		2.89	4.84	mg/L		97.5	(75%-125%)			
Lead	0.0500	U	ND	0.0477	mg/L		95.2	(75%-125%)			
Lithium	0.0500	J	0.00420	0.0536	mg/L		98.8	(75%-125%)			
Magnesium	2.00		28.1	29.9	mg/L		N/A	(75%-125%)			
Manganese	0.0500		1.11	1.23	mg/L		N/A	(75%-125%)		09/10/22	07:23

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310155										
Molybdenum	0.0500	0.00171		0.0548	mg/L		106	(75%-125%)	PRB	09/09/22	20:59
Potassium	2.00	9.82		11.9	mg/L		N/A	(75%-125%)			
Selenium	0.0500	U	ND	0.0488	mg/L		96.9	(75%-125%)			
Sodium	2.00	39.8		41.6	mg/L		N/A	(75%-125%)			
Thallium	0.0500	U	ND	0.0475	mg/L		94.8	(75%-125%)			
QC1205178587 591355012 MSD											
Antimony	0.0500	U	ND	0.0497	mg/L	1.19	99	(0%-20%)		09/09/22	21:03
Arsenic	0.0500	J	0.00308	0.0521	mg/L	1.05	98.1	(0%-20%)			
Barium	0.0500	0.0584		0.110	mg/L	1.1	104	(0%-20%)			
Beryllium	0.0500	U	ND	0.0526	mg/L	0.769	105	(0%-20%)		09/10/22	10:54
Boron	0.100	0.0360		0.142	mg/L	2.3	106	(0%-20%)			
Cadmium	0.0500	U	ND	0.0502	mg/L	1.27	100	(0%-20%)		09/09/22	21:03
Calcium	2.00	118		122	mg/L	0.00835	N/A	(0%-20%)		09/10/22	07:27
Chromium	0.0500	U	ND	0.0485	mg/L	0.0721	95.6	(0%-20%)		09/09/22	21:03
Cobalt	0.0500	J	0.000306	0.0486	mg/L	2.08	96.5	(0%-20%)			
Iron	2.00	2.89		4.88	mg/L	0.836	99.5	(0%-20%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310155										
Lead	0.0500	U	ND	0.0486	mg/L	1.79	97	(0%-20%)	PRB	09/09/22	21:03
Lithium	0.0500	J	0.00420	0.0539	mg/L	0.593	99.5	(0%-20%)			
Magnesium	2.00		28.1	29.3	mg/L	2.16	N/A	(0%-20%)			
Manganese	0.0500		1.11	1.20	mg/L	2.24	N/A	(0%-20%)		09/10/22	07:27
Molybdenum	0.0500		0.00171	0.0574	mg/L	4.63	111	(0%-20%)		09/09/22	21:03
Potassium	2.00		9.82	11.8	mg/L	0.219	N/A	(0%-20%)			
Selenium	0.0500	U	ND	0.0480	mg/L	1.7	95.3	(0%-20%)			
Sodium	2.00		39.8	41.0	mg/L	1.38	N/A	(0%-20%)			
Thallium	0.0500	U	ND	0.0483	mg/L	1.86	96.6	(0%-20%)			
QC1205178588 591355012 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/09/22	21:10
Arsenic		J	3.08	U	ND	ug/L	N/A	(0%-20%)			
Barium			58.4		11.4	ug/L	2.6	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/10/22	10:58
Boron			36.0	J	8.09	ug/L	12.5	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/09/22	21:10

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2310155										
Calcium		11800		2240	ug/L	4.96		(0%-20%)	PRB	09/10/22	07:30
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)		09/09/22	21:10
Cobalt	J	0.306	U	ND	ug/L	N/A		(0%-20%)			
Iron		2890		586	ug/L	1.52		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	J	4.20	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		28100		5720	ug/L	1.69		(0%-20%)			
Manganese		111		19.8	ug/L	10.8		(0%-20%)		09/10/22	07:30
Molybdenum		1.71	J	0.431	ug/L	26.1		(0%-20%)		09/09/22	21:10
Potassium		9820		1880	ug/L	4.48		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		39800		8040	ug/L	.915		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2310246										
QC1205178778	591355002 DUP										
Mercury	U	ND	U	ND	mg/L	N/A			JP2	08/31/22	10:03

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch 2310246											
QC1205178777	LCS										
Mercury	0.00200			0.00196	mg/L		98.2	(80%-120%)	JP2	08/31/22	09:58
QC1205178776	MB										
Mercury			U	ND	mg/L					08/31/22	09:56
QC1205178779	591355002	MS									
Mercury	0.00200	U	ND	0.00116	mg/L		57.7*	(75%-125%)		08/31/22	10:04
QC1205178781	591355002	PS									
Mercury	2.00	U	ND	1.10	ug/L		54.6*	(80%-120%)		08/31/22	10:11
QC1205178780	591355002	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		08/31/22	10:06
Batch 2310248											
QC1205178784	590142001	DUP									
Mercury		U	ND	U	ND	mg/L	N/A		JP2	08/31/22	10:55
QC1205178783	LCS										
Mercury	0.00200			0.00200	mg/L		99.9	(80%-120%)		08/31/22	10:52
QC1205178782	MB										
Mercury			U	ND	mg/L					08/31/22	10:47
QC1205178785	590142001	MS									
Mercury	0.00200	U	ND	0.00195	mg/L		96.6	(75%-125%)		08/31/22	10:57
QC1205178786	590142001	SDILT									
Mercury		U	ND	U	ND	ug/L	N/A	(0%-10%)		08/31/22	10:59

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2310249										
QC1205178791	591355007 DUP										
Total Dissolved Solids		1990		2040	mg/L	2.54		(0%-5%)	CH6	08/30/22	14:49
QC1205178789	LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)		08/30/22	14:49
QC1205178788	MB										
Total Dissolved Solids			U	ND	mg/L					08/30/22	14:49
Batch	2310760										
QC1205179716	591355024 DUP										
Total Dissolved Solids		437		437	mg/L	0		(0%-5%)	CH6	08/31/22	14:39
QC1205179715	LCS										
Total Dissolved Solids	300			300	mg/L		100	(95%-105%)		08/31/22	14:39
QC1205179714	MB										
Total Dissolved Solids			U	ND	mg/L					08/31/22	14:39
Titration and Ion Analysis											
Batch	2310459										
QC1205179134	591355012 DUP										
Alkalinity, Total as CaCO3		129		128	mg/L	0.311		(0%-20%)	HH2	09/07/22	13:57
Bicarbonate alkalinity (CaCO3)		129		128	mg/L	0.311		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205179131	LCS										
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		09/07/22	13:17
QC1205179135	591355012 MS										
Alkalinity, Total as CaCO3	100	129		228	mg/L		99	(80%-120%)		09/07/22	14:00

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2310460										
QC1205179137	591355008	DUP									
Alkalinity, Total as CaCO3		42.4		42.0	mg/L	0.948		(0%-20%)	HH2	09/07/22	17:47
Bicarbonate alkalinity (CaCO3)		42.4		42.0	mg/L	0.948		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205179139	591355026	DUP									
Alkalinity, Total as CaCO3		57.2		57.6	mg/L	0.697		(0%-20%)		09/07/22	18:09
Bicarbonate alkalinity (CaCO3)		57.2		57.6	mg/L	0.697		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205179136	LCS										
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		09/07/22	17:45
QC1205179138	591355008	MS									
Alkalinity, Total as CaCO3	100	42.4		146	mg/L		104	(80%-120%)		09/07/22	17:49
QC1205179140	591355026	MS									
Alkalinity, Total as CaCO3	100	57.2		156	mg/L		99	(80%-120%)		09/07/22	18:10

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation

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QC Summary

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: October 3, 2022

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 590855

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2308691										
QC1205175345	590838001	DUP									
Chloride		2.18		2.13	mg/L	2.51		(0%-20%)	JLD1	08/25/22	13:28
Fluoride	U	ND	U	ND	mg/L	N/A					
Sulfate		0.452		0.418	mg/L	7.86 ^		(+/-0.400)			
QC1205175347	590857001	DUP									
Chloride		30.3		30.4	mg/L	0.158 ^		(+/-8.00)		08/26/22	03:54
Fluoride		0.187		0.160	mg/L	15.7 ^		(+/-0.100)		08/25/22	21:26
Sulfate		385		387	mg/L	0.559		(0%-20%)		08/26/22	03:54
QC1205175344	LCS										
Chloride	5.00			4.72	mg/L		94.3	(90%-110%)		08/25/22	12:28
Fluoride	2.50			2.30	mg/L		91.9	(90%-110%)			
Sulfate	10.0			9.76	mg/L		97.6	(90%-110%)			
QC1205175343	MB										
Chloride			U	ND	mg/L					08/25/22	11:59
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205175346	590838001	PS									
Chloride	5.00	2.18		7.68	mg/L		110	(90%-110%)		08/25/22	13:58

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QC Summary

Workorder: 590855

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2308691										
Fluoride	2.50	U	ND	2.65	mg/L		106	(90%-110%)	JLD1	08/25/22	13:58
Sulfate	10.0		0.452	11.6	mg/L		111 *	(90%-110%)			
QC1205175348 590857001 PS											
Chloride	5.00		0.759	5.74	mg/L		99.7	(90%-110%)		08/26/22	04:24
Fluoride	2.50		0.187	2.68	mg/L		99.9	(90%-110%)		08/25/22	21:56
Sulfate	10.0		9.63	20.5	mg/L		109	(90%-110%)		08/26/22	04:24
Metals Analysis - ICPMS											
Batch	2308385										
QC1205174766 LCS											
Antimony	0.0500			0.0497	mg/L		99.4	(80%-120%)	BAJ	09/03/22	14:29
Arsenic	0.0500			0.0512	mg/L		102	(80%-120%)		09/02/22	23:30
Barium	0.0500			0.0504	mg/L		101	(80%-120%)			
Beryllium	0.0500			0.0588	mg/L		118	(80%-120%)		09/03/22	10:40
Boron	0.100			0.114	mg/L		114	(80%-120%)			
Cadmium	0.0500			0.0519	mg/L		104	(80%-120%)			
Calcium	2.00			2.18	mg/L		109	(80%-120%)			
Chromium	0.0500			0.0510	mg/L		102	(80%-120%)		09/02/22	23:30
Cobalt	0.0500			0.0497	mg/L		99.4	(80%-120%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Iron	2.00			2.10	mg/L		105	(80%-120%)	BAJ	09/02/22	23:30
Lead	0.0500			0.0527	mg/L		105	(80%-120%)			
Lithium	0.0500			0.0518	mg/L		104	(80%-120%)			
Magnesium	2.00			2.17	mg/L		109	(80%-120%)		09/03/22	10:40
Manganese	0.0500			0.0512	mg/L		102	(80%-120%)			
Molybdenum	0.0500			0.0521	mg/L		104	(80%-120%)			
Potassium	2.00			1.99	mg/L		99.7	(80%-120%)		09/02/22	23:30
Selenium	0.0500			0.0494	mg/L		98.9	(80%-120%)			
Sodium	2.00			2.22	mg/L		111	(80%-120%)			
Thallium	0.0500			0.0460	mg/L		92.1	(80%-120%)			
QC1205174765	MB										
Antimony			U	ND	mg/L					09/03/22	14:27
Arsenic			U	ND	mg/L					09/02/22	23:27
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L					09/03/22	10:37
Boron			U	ND	mg/L						

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Cadmium			U	ND	mg/L				BAJ	09/03/22	10:37
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L					09/02/22	23:27
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L					09/03/22	10:37
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L					09/02/22	23:27
Selenium			U	ND	mg/L						
Sodium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205174767	590838001	MS									
Antimony	0.0500	U	ND	0.0501	mg/L		99.4	(75%-125%)		09/03/22	14:32

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Arsenic	0.0500	U	ND	0.0500	mg/L		98	(75%-125%)	BAJ	09/02/22	23:37
Barium	0.0500		0.0120	0.0615	mg/L		99.1	(75%-125%)			
Beryllium	0.0500	U	ND	0.0613	mg/L		123	(75%-125%)		09/03/22	10:46
Boron	0.100	J	0.00532	0.120	mg/L		115	(75%-125%)			
Cadmium	0.0500	U	ND	0.0529	mg/L		106	(75%-125%)			
Calcium	2.00		4.65	7.04	mg/L		120	(75%-125%)			
Chromium	0.0500	J	0.00908	0.0603	mg/L		102	(75%-125%)		09/02/22	23:37
Cobalt	0.0500	J	0.000844	0.0514	mg/L		101	(75%-125%)			
Iron	2.00	J	0.0763	2.13	mg/L		103	(75%-125%)			
Lead	0.0500	U	ND	0.0508	mg/L		101	(75%-125%)			
Lithium	0.0500	U	ND	0.0545	mg/L		108	(75%-125%)			
Magnesium	2.00		4.86	7.40	mg/L		127*	(75%-125%)		09/03/22	10:46
Manganese	0.0500		0.0391	0.0930	mg/L		108	(75%-125%)			
Molybdenum	0.0500	U	ND	0.0538	mg/L		108	(75%-125%)			
Potassium	2.00		0.439	2.44	mg/L		100	(75%-125%)		09/02/22	23:37

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Selenium	0.0500	U	ND	0.0496	mg/L		99.2	(75%-125%)	BAJ	09/02/22	23:37
Sodium	2.00		3.36	5.52	mg/L		108	(75%-125%)			
Thallium	0.0500	U	ND	0.0463	mg/L		92.5	(75%-125%)			
QC1205174768	590838001 MSD										
Antimony	0.0500	U	ND	0.0492	mg/L	1.91	97.5	(0%-20%)		09/03/22	14:34
Arsenic	0.0500	U	ND	0.0495	mg/L	1.13	96.9	(0%-20%)		09/02/22	23:41
Barium	0.0500		0.0120	0.0611	mg/L	0.618	98.3	(0%-20%)			
Beryllium	0.0500	U	ND	0.0604	mg/L	1.57	121	(0%-20%)		09/03/22	10:49
Boron	0.100	J	0.00532	0.119	mg/L	1.12	114	(0%-20%)			
Cadmium	0.0500	U	ND	0.0516	mg/L	2.52	103	(0%-20%)			
Calcium	2.00		4.65	6.88	mg/L	2.39	111	(0%-20%)			
Chromium	0.0500	J	0.00908	0.0589	mg/L	2.28	99.7	(0%-20%)		09/02/22	23:41
Cobalt	0.0500	J	0.000844	0.0503	mg/L	2.26	98.9	(0%-20%)			
Iron	2.00	J	0.0763	2.09	mg/L	1.79	101	(0%-20%)			
Lead	0.0500	U	ND	0.0506	mg/L	0.396	101	(0%-20%)			
Lithium	0.0500	U	ND	0.0534	mg/L	2.01	105	(0%-20%)			

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QC Summary

Workorder: **590855**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Magnesium	2.00	4.86		7.28	mg/L	1.68	121	(0%-20%)	BAJ	09/03/22	10:49
Manganese	0.0500	0.0391		0.0926	mg/L	0.447	107	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0536	mg/L	0.447	107	(0%-20%)			
Potassium	2.00	0.439		2.38	mg/L	2.49	97.1	(0%-20%)		09/02/22	23:41
Selenium	0.0500	U	ND	0.0478	mg/L	3.8	95.5	(0%-20%)			
Sodium	2.00	3.36		5.45	mg/L	1.34	105	(0%-20%)			
Thallium	0.0500	U	ND	0.0449	mg/L	2.98	89.8	(0%-20%)			
QC1205182314 590838001 PS											
Magnesium	2000	4860		7000	ug/L		107	(75%-125%)		09/03/22	10:52
QC1205174769 590838001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/03/22	14:37
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/02/22	23:48
Barium		12.0	J	2.29	ug/L	4.59		(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/03/22	11:04
Boron		J	5.32	U	ND	ug/L	N/A	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium		4650		892	ug/L	4.21		(0%-20%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Chromium	J	9.08	U	ND	ug/L	N/A		(0%-20%)	BAJ	09/02/22	23:48
Cobalt	J	0.844	U	ND	ug/L	N/A		(0%-20%)			
Iron	J	76.3	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		4860		866	ug/L	11		(0%-20%)		09/03/22	11:04
Manganese		39.1		7.50	ug/L	3.96		(0%-20%)			
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium		439	J	85.4	ug/L	2.83		(0%-20%)		09/02/22	23:48
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		3360		579	ug/L	13.8		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2308549										
QC1205175103	590719007	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	08/26/22	10:26
QC1205175102	LCS										
Mercury	0.00200			0.00212	mg/L		106	(80%-120%)		08/26/22	10:09

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch	2308549										
QC1205175101	MB										
Mercury			U	ND	mg/L				JP2	08/26/22	10:07
QC1205175104	590719007	MS									
Mercury	0.00200	U		ND	0.00152	mg/L		73.9* (75%-125%)		08/26/22	10:28
QC1205175106	590719007	PS									
Mercury	2.00	U		ND	1.51	ug/L		73.5* (80%-120%)		08/26/22	10:31
QC1205175105	590719007	SDILT									
Mercury		U		ND	U	ND	ug/L	N/A		(0%-10%)	08/26/22 10:30
Solids Analysis											
Batch	2309029										
QC1205176100	590857001	DUP									
Total Dissolved Solids				614	616	mg/L	0.325			(0%-5%)	CH6 08/26/22 15:30
QC1205176099	LCS										
Total Dissolved Solids	300				300	mg/L		100		(95%-105%)	08/26/22 15:30
QC1205176098	MB										
Total Dissolved Solids			U		ND	mg/L					08/26/22 15:30
Titration and Ion Analysis											
Batch	2309339										
QC1205176799	590838001	DUP									
Alkalinity, Total as CaCO3				32.6	32.2	mg/L	1.23			(0%-20%)	HH2 09/04/22 13:40
Bicarbonate alkalinity (CaCO3)				32.6	32.2	mg/L	1.23			(0%-20%)	
Carbonate alkalinity (CaCO3)		U		ND	U	ND	mg/L	N/A			
QC1205176801	590857001	DUP									
Alkalinity, Total as CaCO3		J		3.40	J	3.60	mg/L	5.71 ^		(+/-4.00)	09/04/22 13:53

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2309339										
Bicarbonate alkalinity (CaCO3)	J	3.40	J	3.60	mg/L	5.71 ^		(+/-4.00)	HH2	09/04/22	13:53
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205176798 LCS											
Alkalinity, Total as CaCO3	100			104	mg/L		104	(90%-110%)		09/04/22	13:37
QC1205176800 590838001 MS											
Alkalinity, Total as CaCO3	100	32.6		136	mg/L		104	(80%-120%)		09/04/22	13:42
QC1205176802 590857001 MS											
Alkalinity, Total as CaCO3	100 J	3.40		107	mg/L		104	(80%-120%)		09/04/22	13:54

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: October 3, 2022

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 590845

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2308691										
QC1205175345	590838001	DUP									
Chloride		2.18		2.13	mg/L	2.51		(0%-20%)	JLD1	08/25/22	13:28
Fluoride	U	ND	U	ND	mg/L	N/A					
Sulfate		0.452		0.418	mg/L	7.86 ^		(+/-0.400)			
QC1205175347	590857001	DUP									
Chloride		30.3		30.4	mg/L	0.158 ^		(+/-8.00)		08/26/22	03:54
Fluoride		0.187		0.160	mg/L	15.7 ^		(+/-0.100)		08/25/22	21:26
Sulfate		385		387	mg/L	0.559		(0%-20%)		08/26/22	03:54
QC1205175344	LCS										
Chloride	5.00			4.72	mg/L		94.3	(90%-110%)		08/25/22	12:28
Fluoride	2.50			2.30	mg/L		91.9	(90%-110%)			
Sulfate	10.0			9.76	mg/L		97.6	(90%-110%)			
QC1205175343	MB										
Chloride			U	ND	mg/L					08/25/22	11:59
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205175346	590838001	PS									
Chloride	5.00	2.18		7.68	mg/L		110	(90%-110%)		08/25/22	13:58

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2308691										
Fluoride	2.50	U	ND	2.65	mg/L		106	(90%-110%)	JLD1	08/25/22	13:58
Sulfate	10.0		0.452	11.6	mg/L		111 *	(90%-110%)			
QC1205175348 590857001 PS											
Chloride	5.00		0.759	5.74	mg/L		99.7	(90%-110%)		08/26/22	04:24
Fluoride	2.50		0.187	2.68	mg/L		99.9	(90%-110%)		08/25/22	21:56
Sulfate	10.0		9.63	20.5	mg/L		109	(90%-110%)		08/26/22	04:24
Metals Analysis - ICPMS											
Batch	2308385										
QC1205174766 LCS											
Antimony	0.0500			0.0497	mg/L		99.4	(80%-120%)	BAJ	09/03/22	14:29
Arsenic	0.0500			0.0512	mg/L		102	(80%-120%)		09/02/22	23:30
Barium	0.0500			0.0504	mg/L		101	(80%-120%)			
Beryllium	0.0500			0.0588	mg/L		118	(80%-120%)		09/03/22	10:40
Boron	0.100			0.114	mg/L		114	(80%-120%)			
Cadmium	0.0500			0.0519	mg/L		104	(80%-120%)			
Calcium	2.00			2.18	mg/L		109	(80%-120%)			
Chromium	0.0500			0.0510	mg/L		102	(80%-120%)		09/02/22	23:30
Cobalt	0.0500			0.0497	mg/L		99.4	(80%-120%)			

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Iron	2.00			2.10	mg/L		105	(80%-120%)	BAJ	09/02/22	23:30
Lead	0.0500			0.0527	mg/L		105	(80%-120%)			
Lithium	0.0500			0.0518	mg/L		104	(80%-120%)			
Magnesium	2.00			2.17	mg/L		109	(80%-120%)		09/03/22	10:40
Manganese	0.0500			0.0512	mg/L		102	(80%-120%)			
Molybdenum	0.0500			0.0521	mg/L		104	(80%-120%)			
Potassium	2.00			1.99	mg/L		99.7	(80%-120%)		09/02/22	23:30
Selenium	0.0500			0.0494	mg/L		98.9	(80%-120%)			
Sodium	2.00			2.22	mg/L		111	(80%-120%)			
Thallium	0.0500			0.0460	mg/L		92.1	(80%-120%)			
QC1205174765	MB										
Antimony			U	ND	mg/L					09/03/22	14:27
Arsenic			U	ND	mg/L					09/02/22	23:27
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L					09/03/22	10:37
Boron			U	ND	mg/L						

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Cadmium			U	ND	mg/L				BAJ	09/03/22	10:37
Calcium			U	ND	mg/L						
Chromium			U	ND	mg/L					09/02/22	23:27
Cobalt			U	ND	mg/L						
Iron			U	ND	mg/L						
Lead			U	ND	mg/L						
Lithium			U	ND	mg/L						
Magnesium			U	ND	mg/L					09/03/22	10:37
Manganese			U	ND	mg/L						
Molybdenum			U	ND	mg/L						
Potassium			U	ND	mg/L					09/02/22	23:27
Selenium			U	ND	mg/L						
Sodium			U	ND	mg/L						
Thallium			U	ND	mg/L						
QC1205174767	590838001	MS									
Antimony	0.0500	U	ND	0.0501	mg/L		99.4	(75%-125%)		09/03/22	14:32

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Arsenic	0.0500	U	ND	0.0500	mg/L		98	(75%-125%)	BAJ	09/02/22	23:37
Barium	0.0500		0.0120	0.0615	mg/L		99.1	(75%-125%)			
Beryllium	0.0500	U	ND	0.0613	mg/L		123	(75%-125%)		09/03/22	10:46
Boron	0.100	J	0.00532	0.120	mg/L		115	(75%-125%)			
Cadmium	0.0500	U	ND	0.0529	mg/L		106	(75%-125%)			
Calcium	2.00		4.65	7.04	mg/L		120	(75%-125%)			
Chromium	0.0500	J	0.00908	0.0603	mg/L		102	(75%-125%)		09/02/22	23:37
Cobalt	0.0500	J	0.000844	0.0514	mg/L		101	(75%-125%)			
Iron	2.00	J	0.0763	2.13	mg/L		103	(75%-125%)			
Lead	0.0500	U	ND	0.0508	mg/L		101	(75%-125%)			
Lithium	0.0500	U	ND	0.0545	mg/L		108	(75%-125%)			
Magnesium	2.00		4.86	7.40	mg/L		127*	(75%-125%)		09/03/22	10:46
Manganese	0.0500		0.0391	0.0930	mg/L		108	(75%-125%)			
Molybdenum	0.0500	U	ND	0.0538	mg/L		108	(75%-125%)			
Potassium	2.00		0.439	2.44	mg/L		100	(75%-125%)		09/02/22	23:37

GEL LABORATORIES LLC

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Selenium	0.0500	U	ND	0.0496	mg/L		99.2	(75%-125%)	BAJ	09/02/22	23:37
Sodium	2.00		3.36	5.52	mg/L		108	(75%-125%)			
Thallium	0.0500	U	ND	0.0463	mg/L		92.5	(75%-125%)			
QC1205174768 590838001 MSD											
Antimony	0.0500	U	ND	0.0492	mg/L	1.91	97.5	(0%-20%)		09/03/22	14:34
Arsenic	0.0500	U	ND	0.0495	mg/L	1.13	96.9	(0%-20%)		09/02/22	23:41
Barium	0.0500		0.0120	0.0611	mg/L	0.618	98.3	(0%-20%)			
Beryllium	0.0500	U	ND	0.0604	mg/L	1.57	121	(0%-20%)		09/03/22	10:49
Boron	0.100	J	0.00532	0.119	mg/L	1.12	114	(0%-20%)			
Cadmium	0.0500	U	ND	0.0516	mg/L	2.52	103	(0%-20%)			
Calcium	2.00		4.65	6.88	mg/L	2.39	111	(0%-20%)			
Chromium	0.0500	J	0.00908	0.0589	mg/L	2.28	99.7	(0%-20%)		09/02/22	23:41
Cobalt	0.0500	J	0.000844	0.0503	mg/L	2.26	98.9	(0%-20%)			
Iron	2.00	J	0.0763	2.09	mg/L	1.79	101	(0%-20%)			
Lead	0.0500	U	ND	0.0506	mg/L	0.396	101	(0%-20%)			
Lithium	0.0500	U	ND	0.0534	mg/L	2.01	105	(0%-20%)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Magnesium	2.00	4.86		7.28	mg/L	1.68	121	(0%-20%)	BAJ	09/03/22	10:49
Manganese	0.0500	0.0391		0.0926	mg/L	0.447	107	(0%-20%)			
Molybdenum	0.0500	U	ND	0.0536	mg/L	0.447	107	(0%-20%)			
Potassium	2.00	0.439		2.38	mg/L	2.49	97.1	(0%-20%)		09/02/22	23:41
Selenium	0.0500	U	ND	0.0478	mg/L	3.8	95.5	(0%-20%)			
Sodium	2.00	3.36		5.45	mg/L	1.34	105	(0%-20%)			
Thallium	0.0500	U	ND	0.0449	mg/L	2.98	89.8	(0%-20%)			
QC1205182314	590838001 PS										
Magnesium	2000	4860		7000	ug/L		107	(75%-125%)		09/03/22	10:52
QC1205174769	590838001 SDILT										
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/03/22	14:37
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/02/22	23:48
Barium			12.0	J	2.29	ug/L	4.59	(0%-20%)			
Beryllium		U	ND	U	ND	ug/L	N/A	(0%-20%)		09/03/22	11:04
Boron		J	5.32	U	ND	ug/L	N/A	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			4650		892	ug/L	4.21	(0%-20%)			

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2308385										
Chromium	J	9.08	U	ND	ug/L	N/A		(0%-20%)	BAJ	09/02/22	23:48
Cobalt	J	0.844	U	ND	ug/L	N/A		(0%-20%)			
Iron	J	76.3	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lithium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Magnesium		4860		866	ug/L	11		(0%-20%)		09/03/22	11:04
Manganese		39.1		7.50	ug/L	3.96		(0%-20%)			
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium		439	J	85.4	ug/L	2.83		(0%-20%)		09/02/22	23:48
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium		3360		579	ug/L	13.8		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Metals Analysis-Mercury											
Batch	2308555										
QC1205175118	589727024 DUP										
Mercury	U	ND	U	ND	mg/L	N/A			JP2	08/26/22	11:15
QC1205175117	LCS										
Mercury		0.00200		0.00220	mg/L		110	(80%-120%)		08/26/22	11:07

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QC Summary

Workorder: **590845**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-Mercury											
Batch	2308555										
QC1205175116	MB										
Mercury			U	ND	mg/L				JP2	08/26/22	11:05
QC1205175119	589727024	MS									
Mercury	0.00200	U	ND	0.00222	mg/L		110	(75%-125%)		08/26/22	11:17
QC1205175120	589727024	SDILT									
Mercury		U	ND	U	ug/L	N/A		(0%-10%)		08/26/22	11:19
Solids Analysis											
Batch	2309029										
QC1205176100	590857001	DUP									
Total Dissolved Solids			614	616	mg/L	0.325		(0%-5%)	CH6	08/26/22	15:30
QC1205176099	LCS										
Total Dissolved Solids	300			300	mg/L		100	(95%-105%)		08/26/22	15:30
QC1205176098	MB										
Total Dissolved Solids			U	ND	mg/L					08/26/22	15:30
Titration and Ion Analysis											
Batch	2309339										
QC1205176799	590838001	DUP									
Alkalinity, Total as CaCO3			32.6	32.2	mg/L	1.23		(0%-20%)	HH2	09/04/22	13:40
Bicarbonate alkalinity (CaCO3)			32.6	32.2	mg/L	1.23		(0%-20%)			
Carbonate alkalinity (CaCO3)		U	ND	U	mg/L	N/A					
QC1205176801	590857001	DUP									
Alkalinity, Total as CaCO3		J	3.40	J	3.60	mg/L	5.71 ^	(+/-4.00)		09/04/22	13:53
Bicarbonate alkalinity (CaCO3)		J	3.40	J	3.60	mg/L	5.71 ^	(+/-4.00)			

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis											
Batch	2309339										
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A			HH2	09/04/22	13:53
QC1205176798 LCS Alkalinity, Total as CaCO3	100			104	mg/L		104	(90%-110%)		09/04/22	13:37
QC1205176800 590838001 MS Alkalinity, Total as CaCO3	100	32.6		136	mg/L		104	(80%-120%)		09/04/22	13:42
QC1205176802 590857001 MS Alkalinity, Total as CaCO3	100	J	3.40	107	mg/L		104	(80%-120%)		09/04/22	13:54

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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QC Summary

Workorder: 590845

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Y											
Z											
^											
d											
e											
h											

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative
Georgia Power Company
SDG #: 591355**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2310153

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2310152

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355001	FD-01
591355002	PZ-58I
591355003	PZ-60I
591355004	FB-02
591355005	BRGWC-29I
591355006	BRGWC-30I
591355007	BRGWC-50
591355008	FD-03
591355009	BRGWC-45
591355010	PZ-44
591355011	PZ-51I
1205178579	Method Blank (MB)ICP-MS
1205178580	Laboratory Control Sample (LCS)
1205178583	591351001(BRGWC-17SL) Serial Dilution (SD)
1205178581	591351001(BRGWC-17SS) Matrix Spike (MS)
1205178582	591351001(BRGWC-17SSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	591355							
	001	002	003	005	006	007	010	011
Boron	5X	5X	5X	10X	20X	5X	20X	5X
Calcium	5X	5X	10X	10X	20X	5X	1X	5X
Cobalt	1X	1X	5X	1X	1X	5X	1X	1X
Magnesium	5X	5X	5X	1X	20X	5X	1X	5X
Manganese	100X	100X	1000X	10X	20X	1000X	1X	1000X
Sodium	1X	1X	5X	1X	1X	5X	1X	1X

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2310155

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2310154

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355012	PZ-51D
591355013	PZ-61I
591355014	PZ-51S
591355015	FD-02
591355016	PZ-50D
591355017	EB-06
591355018	PZ-62I
591355019	PZ-59I
591355020	BRGWC-27I
591355021	FB-03
591355022	PZ-63I
591355023	PZ-57I
591355024	BRGWC-32S
591355025	EB-07
591355026	BRGWC-52I
1205178584	Method Blank (MB)ICP-MS
1205178585	Laboratory Control Sample (LCS)
1205178588	591355012(PZ-51DL) Serial Dilution (SD)
1205178586	591355012(PZ-51DS) Matrix Spike (MS)
1205178587	591355012(PZ-51DSD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. 591355014 (PZ-51S), 591355015 (FD-02), 591355017 (EB-06), 591355021 (FB-03), 591355022 (PZ-63I), 591355024 (BRGWC-32S), 591355025 (EB-07) and 591355026 (BRGWC-52I).

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 591355012 (PZ-51D), 591355013 (PZ-61I), 591355016 (PZ-50D), 591355018 (PZ-62I), 591355019 (PZ-59I), 591355020 (BRGWC-27I), 591355022 (PZ-63I), 591355023 (PZ-57I), 591355024 (BRGWC-32S) and 591355026 (BRGWC-52I) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument. Per the SOP, sample 591355019 (PZ-59I) was diluted due to internal standard recoveries outside the acceptable control limits.

Analyte	591355									
	012	013	016	018	019	020	022	023	024	026
Barium	1X	1X	1X	1X	5X	1X	1X	1X	1X	1X
Boron	1X	5X	5X	5X	1X	10X	10X	5X	10X	20X
Calcium	10X	5X	5X	5X	100X	10X	1X	5X	1X	1X
Cobalt	1X	1X	1X	1X	5X	1X	1X	1X	1X	1X
Iron	1X	1X	1X	1X	100X	1X	1X	1X	1X	1X
Lead	1X	1X	1X	1X	5X	1X	1X	1X	1X	1X
Magnesium	1X	5X	5X	5X	5X	1X	1X	1X	1X	1X
Manganese	10X	1000X	100X	100X	100X	1X	10X	20X	1X	1X
Sodium	1X	5X	5X	1X	5X	1X	1X	1X	1X	1X
Thallium	1X	1X	1X	1X	5X	1X	1X	1X	1X	1X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2310246

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2310245

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355001	FD-01
591355002	PZ-58I
591355003	PZ-60I
591355004	FB-02
591355005	BRGWC-29I
591355006	BRGWC-30I
591355007	BRGWC-50
591355008	FD-03
591355009	BRGWC-45
591355010	PZ-44
591355011	PZ-51I
591355012	PZ-51D
591355013	PZ-61I
591355014	PZ-51S
591355015	FD-02
591355016	PZ-50D
591355017	EB-06
591355018	PZ-62I
591355019	PZ-59I
591355020	BRGWC-27I
1205178776	Method Blank (MB)CVAA
1205178777	Laboratory Control Sample (LCS)
1205178780	591355002(PZ-58IL) Serial Dilution (SD)
1205178778	591355002(PZ-58ID) Sample Duplicate (DUP)
1205178779	591355002(PZ-58IS) Matrix Spike (MS)
1205178781	591355002(PZ-58IPS) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike also did not meet the required control limits; thus, confirming matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1205178779 (PZ-58IMS)	Mercury	57.7* (75%-125%)

Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the PS analyses are evaluated when the sample concentration is less

than four times (4X) the spike concentration added. The PS did not meet the recommended quality control acceptance criteria for percent recoveries for all applicable analytes and verifies the presence of matrix interferences.

Sample	Analyte	Value
1205178781 (PZ-58IPS)	Mercury	54.6* (80%-120%)

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2310248

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2310247

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355021	FB-03
591355022	PZ-63I
591355023	PZ-57I
591355024	BRGWC-32S
591355025	EB-07
591355026	BRGWC-52I
1205178782	Method Blank (MB)CVAA
1205178783	Laboratory Control Sample (LCS)
1205178786	590142001(NonSDGL) Serial Dilution (SD)
1205178784	590142001(NonSDGD) Sample Duplicate (DUP)
1205178785	590142001(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2310523

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355001	FD-01
591355002	PZ-58I
591355003	PZ-60I
591355004	FB-02
1205179258	Method Blank (MB)
1205179259	Laboratory Control Sample (LCS)
1205179260	591351001(BRGWC-17S) Sample Duplicate (DUP)
1205179261	591351001(BRGWC-17S) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205179260 (BRGWC-17SDUP), 1205179261 (BRGWC-17SPS), 591355001 (FD-01), 591355002 (PZ-58I) and 591355003 (PZ-60I) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	591355		
	001	002	003
Chloride	5X	5X	5X
Sulfate	100X	100X	200X

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2310658

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355005	BRGWC-29I
591355006	BRGWC-30I
591355007	BRGWC-50
591355008	FD-03
591355009	BRGWC-45
591355010	PZ-44
591355011	PZ-51I
591355012	PZ-51D
591355013	PZ-61I
591355014	PZ-51S
1205179523	Method Blank (MB)

1205179524	Laboratory Control Sample (LCS)
1205179525	591355005(BRGWC-29I) Sample Duplicate (DUP)
1205179526	591355005(BRGWC-29I) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205179526 (BRGWC-29IPS)	131* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205179525 (BRGWC-29IDUP), 1205179526 (BRGWC-29IPS), 591355005 (BRGWC-29I), 591355006 (BRGWC-30I), 591355007 (BRGWC-50), 591355008 (FD-03), 591355009 (BRGWC-45), 591355010 (PZ-44), 591355011 (PZ-51I), 591355012 (PZ-51D) and 591355013 (PZ-61I) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	591355								
	005	006	007	008	009	010	011	012	013
Chloride	1X	1X	5X	10X	10X	1X	2X	50X	10X
Sulfate	100X	100X	100X	10X	10X	10X	100X	50X	200X

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2310688

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355015	FD-02
591355016	PZ-50D
591355017	EB-06
591355018	PZ-62I
591355019	PZ-59I
591355020	BRGWC-27I

591355021	FB-03
591355022	PZ-63I
591355023	PZ-57I
591355024	BRGWC-32S
591355025	EB-07
591355026	BRGWC-52I
1205179577	Method Blank (MB)
1205179578	Laboratory Control Sample (LCS)
1205179579	591355015(FD-02) Sample Duplicate (DUP)
1205179580	591355015(FD-02) Post Spike (PS)
1205179581	591355026(BRGWC-52I) Sample Duplicate (DUP)
1205179582	591355026(BRGWC-52I) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205179580 (FD-02PS)	111* (90%-110%)
	1205179582 (BRGWC-52IPS)	117* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205179581 (BRGWC-52IDUP), 1205179582 (BRGWC-52IPS), 591355016 (PZ-50D), 591355018 (PZ-62I), 591355019 (PZ-59I), 591355020 (BRGWC-27I), 591355022 (PZ-63I), 591355023 (PZ-57I), 591355024 (BRGWC-32S) and 591355026 (BRGWC-52I) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	591355							
	016	018	019	020	022	023	024	026
Chloride	100X	1X	200X	1X	1X	1X	1X	1X
Sulfate	100X	50X	200X	20X	20X	40X	20X	10X

Miscellaneous Information

Manual Integrations

Samples 591355018 (PZ-62I) and 591355019 (PZ-59I) were manually integrated to correctly position the

baseline as set in the calibration standards.

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2310249

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355001	FD-01
591355002	PZ-58I
591355003	PZ-60I
591355004	FB-02
591355005	BRGWC-29I
591355006	BRGWC-30I
591355007	BRGWC-50
591355011	PZ-51I
591355012	PZ-51D
591355013	PZ-61I
591355014	PZ-51S
591355015	FD-02
1205178788	Method Blank (MB)
1205178789	Laboratory Control Sample (LCS)
1205178791	591355007(BRGWC-50) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2310760

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355008	FD-03
591355009	BRGWC-45
591355010	PZ-44
591355016	PZ-50D
591355017	EB-06
591355018	PZ-62I
591355019	PZ-59I
591355020	BRGWC-27I
591355021	FB-03
591355022	PZ-63I

591355023	PZ-57I
591355024	BRGWC-32S
591355025	EB-07
591355026	BRGWC-52I
1205179714	Method Blank (MB)
1205179715	Laboratory Control Sample (LCS)
1205179716	591355024(BRGWC-32S) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2310459

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355001	FD-01
591355002	PZ-58I
591355003	PZ-60I
591355004	FB-02
591355005	BRGWC-29I
591355006	BRGWC-30I
591355007	BRGWC-50
591355011	PZ-51I
591355012	PZ-51D
591355013	PZ-61I
591355014	PZ-51S
591355015	FD-02
1205179131	Laboratory Control Sample (LCS)
1205179134	591355012(PZ-51D) Sample Duplicate (DUP)
1205179135	591355012(PZ-51D) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2310460

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591355008	FD-03
591355009	BRGWC-45
591355010	PZ-44
591355016	PZ-50D
591355017	EB-06
591355018	PZ-62I
591355019	PZ-59I
591355020	BRGWC-27I
591355021	FB-03
591355022	PZ-63I
591355023	PZ-57I
591355024	BRGWC-32S
591355025	EB-07
591355026	BRGWC-52I
1205179136	Laboratory Control Sample (LCS)
1205179137	591355008(FD-03) Sample Duplicate (DUP)
1205179138	591355008(FD-03) Matrix Spike (MS)
1205179139	591355026(BRGWC-52I) Sample Duplicate (DUP)
1205179140	591355026(BRGWC-52I) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Technical Case Narrative
Georgia Power Company
SDG #: 590855**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2308385

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2308382

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590855001	BRGWA-12I
590855002	FB-01
590855003	BRGWA-12S
590855004	BRGWC-25I
1205174765	Method Blank (MB) ICP-MS
1205174766	Laboratory Control Sample (LCS)
1205174769	590838001(BRGWA-2SL) Serial Dilution (SD)
1205174767	590838001(BRGWA-2SS) Matrix Spike (MS)
1205174768	590838001(BRGWA-2SSD) Matrix Spike Duplicate (MSD)
1205182314	590838001(BRGWA-2SPS) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or

non-homogeneity.

Sample	Analyte	Value
1205174767 (BRGWA-2SMS)	Magnesium	127* (75%-125%)

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 590855004 (BRGWC-25I) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

Analyte	590855
	004
Boron	20X
Calcium	20X
Manganese	20X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2308549

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2308547

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590855001	BRGWA-12I
590855002	FB-01
590855003	BRGWA-12S
590855004	BRGWC-25I
1205175101	Method Blank (MB)CVAA
1205175102	Laboratory Control Sample (LCS)
1205175105	590719007(NonSDGL) Serial Dilution (SD)
1205175103	590719007(NonSDGD) Sample Duplicate (DUP)
1205175104	590719007(NonSDGS) Matrix Spike (MS)
1205175106	590719007(NonSDGPS) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike also did not meet the required control limits; thus, confirming matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1205175104 (Non SDG 590719007MS)	Mercury	73.9* (75%-125%)

Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the PS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The PS did not meet the recommended quality control acceptance criteria for percent recoveries for all applicable analytes and verifies the presence of matrix interferences.

Sample	Analyte	Value
1205175106 (Non SDG 590719007PS)	Mercury	73.5* (80%-120%)

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2308691

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590855001	BRGWA-12I
590855002	FB-01
590855003	BRGWA-12S
590855004	BRGWC-25I
1205175343	Method Blank (MB)
1205175344	Laboratory Control Sample (LCS)
1205175345	590838001(BRGWA-2S) Sample Duplicate (DUP)
1205175346	590838001(BRGWA-2S) Post Spike (PS)
1205175347	590857001(BRGWC-33S) Sample Duplicate (DUP)
1205175348	590857001(BRGWC-33S) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Sulfate	1205175346 (BRGWA-2SPS)	111* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205175347 (BRGWC-33SDUP), 1205175348 (BRGWC-33SPS) and 590855004 (BRGWC-25I) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	590855
	004
Sulfate	20X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2309029

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590855001	BRGWA-12I
590855002	FB-01
590855003	BRGWA-12S
590855004	BRGWC-25I
1205176098	Method Blank (MB)
1205176099	Laboratory Control Sample (LCS)
1205176100	590857001(BRGWC-33S) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2309339

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590855001	BRGWA-12I
590855002	FB-01
590855003	BRGWA-12S
590855004	BRGWC-25I
1205176798	Laboratory Control Sample (LCS)
1205176799	590838001(BRGWA-2S) Sample Duplicate (DUP)
1205176800	590838001(BRGWA-2S) Matrix Spike (MS)
1205176801	590857001(BRGWC-33S) Sample Duplicate (DUP)
1205176802	590857001(BRGWC-33S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Technical Case Narrative
Georgia Power Company
SDG #: 590845**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2308385

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2308382

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590845001	BRGWA-23S
590845002	BRGWC-47
590845003	EB-05
1205174765	Method Blank (MB)ICP-MS
1205174766	Laboratory Control Sample (LCS)
1205174769	590838001(BRGWA-2SL) Serial Dilution (SD)
1205174767	590838001(BRGWA-2SS) Matrix Spike (MS)
1205174768	590838001(BRGWA-2SSD) Matrix Spike Duplicate (MSD)
1205182314	590838001(BRGWA-2SPS) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1205174767 (BRGWA-2SMS)	Magnesium	127* (75%-125%)

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 590845002 (BRGWC-47) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

Analyte	590845
	002
Boron	10X
Calcium	10X
Magnesium	10X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2308555

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2308553

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590845001	BRGWA-23S
590845002	BRGWC-47
590845003	EB-05
1205175116	Method Blank (MB)CVAA
1205175117	Laboratory Control Sample (LCS)
1205175120	589727024(NonSDGL) Serial Dilution (SD)
1205175118	589727024(NonSDGD) Sample Duplicate (DUP)
1205175119	589727024(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2308691

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590845001	BRGWA-23S
590845002	BRGWC-47
590845003	EB-05
1205175343	Method Blank (MB)
1205175344	Laboratory Control Sample (LCS)
1205175345	590838001(BRGWA-2S) Sample Duplicate (DUP)
1205175346	590838001(BRGWA-2S) Post Spike (PS)
1205175347	590857001(BRGWC-33S) Sample Duplicate (DUP)
1205175348	590857001(BRGWC-33S) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Sulfate	1205175346 (BRGWA-2SPS)	111* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205175347 (BRGWC-33SDUP), 1205175348 (BRGWC-33SPS), 590845001 (BRGWA-23S) and 590845002 (BRGWC-47) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	590845	
	001	002
Sulfate	2X	200X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2309029

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590845001	BRGWA-23S
590845002	BRGWC-47
590845003	EB-05
1205176098	Method Blank (MB)
1205176099	Laboratory Control Sample (LCS)
1205176100	590857001(BRGWC-33S) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2309339

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590845001	BRGWA-23S
590845002	BRGWC-47
590845003	EB-05
1205176798	Laboratory Control Sample (LCS)
1205176799	590838001(BRGWA-2S) Sample Duplicate (DUP)
1205176800	590838001(BRGWA-2S) Matrix Spike (MS)
1205176801	590857001(BRGWC-33S) Sample Duplicate (DUP)
1205176802	590857001(BRGWC-33S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Page: _____ of _____
 Project # _____
 GEL Quote #: **591355**
 COC Number (1): _____
 PO Number: _____



GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics
Chain of Custody and Analytical Request
 GEL Project Manager: *Erin Trent*

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Client Name: GA Power
 Project/Site Name: Plant Branch Ash Ponds ~ BCD
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Phone # 404-506-7116
 Fax # _____

Collected By: *Jordan Bonstorf* * Send Results To: SCS & Geosyntec Contacts
Anna Schwab

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (hh:mm)	QC Code (3)	Field Filtered (4)	Sample Matrix (4)	Radioactive (if yes, please supply isotopic info)	(7) Known or possible Hazards	Total number of containers	EPA 300, SM 2540C	Total & Breath Air	Metals * SM 2320B	EPA 6020B, 6010D	Radium 226 & 228 SW-846 9315, 9320	Preservative Type (6)	Comments
FD-01	08/24/22	1030	G	N	WG			7	✓	✓	✓	✓		field pH = NA	Note: extra sample is required for sample specific QC
PZ-58I	08/24/22	1030	G	N	WG			7	✓	✓	✓	✓		field pH = 3.81	
PZ-60I	08/24/22	1220	G	N	WG			7	✓	✓	✓	✓		field pH = 4.55	
FB-02	08/24/22	1555	G	N	WG			7	✓	✓	✓	✓		field pH = NA	
BR6WC-29I	08/24/22	1710	G	N	WG			7	✓	✓	✓	✓		field pH = 4.39	
BR6WC-30I	08/24/22	1609	G	N	WG			7	✓	✓	✓	✓		field pH = 6.38	
BR6WC-50	08/24/22	1451	G	N	WG			7	✓	✓	✓	✓		field pH = 5.07	
FD-03	08/25/22	1010	G	N	WG			7	✓	✓	✓	✓		field pH = NA	
BR6WC-45	08/25/22	1010	G	N	WG			7	✓	✓	✓	✓		field pH = 5.74	
PZ-44	08/25/22	1131	G	N	WG			7	✓	✓	✓	✓		field pH = 6.06	

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) *Theresa Adams* Date *8/29/22* Time *1515*
 1. _____
 2. _____
 3. _____

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

- Chain of Custody Number = Client Determined
- QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
- Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered
- Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix
- Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
- Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
- KNOWN OR POSSIBLE HAZARDS

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW = Listed Waste (F, K, P and U-listed wastes.) Waste code(s): _____	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)



GEL Laboratories LLC
Chemistry | Radiochemistry | Radioassay | Specialty Analytics

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Chain of Custody and Analytical Request

GEL Work Order Number: *404-506-7116* **GEL Project Manager:** *Erin Trent*

Client Name: GA Power
Project/Site Name: Plant Branch Ash Ponds *BCD*
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Phone #: 404-506-7116
Fax #: *BCD*

Collected By: *Hunter Auld + Angie Schnitzler* Send Results To: SCS & Geosyntec Contacts

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (hh:mm)	QC Code (e)	Field Filtered (d)	Sample Matrix (e)	Radiactive (f) yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	Sample Analysis Requested (g) (Fill in the number of containers for each test)	Preservative Type (h)	Comments
<i>PZ-51I</i>	<i>08/24/22</i>	<i>1234</i>	<i>G</i>	<i>N</i>	<i>WG</i>		(7) Known or possible Hazards	7	EPA 300, SM 254C Cl, F, SO4, TDS SM 2320B Total & Bicarb Alk Metals * EPA 6020B, 6010D Radium 226 & 228 SW-846 9315, 9320		Note: extra sample is required for sample specific QC field pH = <i>5.49</i>
<i>PZ-51D</i>	<i>08/24/22</i>	<i>1049</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>7.15</i>
<i>PZ-60I</i>	<i>08/24/22</i>	<i>1402</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>5.14</i>
<i>PZ-51S</i>	<i>08/24/22</i>	<i>1609</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>6.12</i>
<i>FD-0Z</i>	<i>08/24/22</i>	<i>---</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>---</i>
<i>PZ-50D</i>	<i>08/25/22</i>	<i>0951</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>6.11</i>
<i>EB-06</i>	<i>08/25/22</i>	<i>0942</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>---</i>
<i>PZ-60I</i>	<i>08/25/22</i>	<i>1121</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>5.50</i>
<i>PZ-59I</i>	<i>08/25/22</i>	<i>1316</i>	<i>G</i>	<i>N</i>	<i>WG</i>			7			field pH = <i>3.72</i>

Chain of Custody Signatures
Relinquished By (Signed) _____ Date _____ Received by (signed) _____ Date _____
Time _____ Time _____

1. *[Signature]* *8/24/22 1515*
2. *[Signature]* *8/24/22 1515*
3. *[Signature]* *8/24/22 1515*

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: * Metals: B,Ca,Sb,As,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

1.) Chain of Custody Number = Client Determined
2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
7.) **KNOWN OR POSSIBLE HAZARDS**
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive
TSCA Regulated
PCB = Polychlorinated biphenyls
RCRA Metals
As = Arsenic
Ba = Barium
Cd = Cadmium
Cr = Chromium
Hg = Mercury
Se = Selenium
Ag = Silver
MIR = Misc. RCRA metals
Pb = Lead
Listed Waste
LW = Listed Waste
Waste code(s):
Other
OT = Other / Unknown
OT = High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

GEL Work Order Number: _____
 Phone # 404-506-7116
 Fax # _____

Client Name: GA Power
Project/Site Name: Plant Branch Ash Ponds B/C/D
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308

Collected By: Taylor Coble / Anna Schmittke
 Send Results To: SCS & Geosyntec Contacts

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	OC Code (a)	Field Filtered (b)	Sample Matrix (c)	Radioreactive (If Yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	EPA 300, SM 2540C Cl, F, SO4, TDS	Total & Biocarb Alk SM 2320B	Metals * EPA 6020B, 6010D	Radium 226 & 228 SW-846 9315, 9320	Preservative Type (6)	Comments
BRGWC-27I	08/25/22	1012	G	N	WG			7	✓	✓	✓	✓		field pH = 6.03
FB-03	08/25/22	1045	G	N	WG			7	✓	✓	✓	✓		field pH = —
PZ-63I	08/25/22	1220	G	N	WG			7	✓	✓	✓	✓		field pH = 5.65
PZ-57I	08/25/22	1055	G	N	WG			7	✓	✓	✓	✓		field pH = 5.91
BRGWC-325	08/25/22	1235	G	N	WG			7	✓	✓	✓	✓		field pH = 6.06
EB-07	08/25/22	1245	G	N	WG			7	✓	✓	✓	✓		field pH = —
BRGWC-52I	08/25/22	1255	G	N	WG			7	✓	✓	✓	✓		field pH = 6.21
														field pH =
														field pH =
														field pH =

Chain of Custody Signatures

Relinquished By (Signed) _____ Date 8/29/22 1515 Received by (signed) _____ Date _____ Time _____

2. _____ 8/29/22 1515 _____
 3. _____

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Ti,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other: _____

For sample shipping and delivery details, see Sample Receipt & Review form (SRR)

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FB = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
 As = Arsenic Hg= Mercury
 Ba = Barium Se= Selenium
 Cd = Cadmium Ag= Silver
 Cr = Chromium MR= Misc. RCRA metals
 Pb = Lead

Characteristic Hazards
 FL = Flammable/Ignitable
 CO = Corrosive
 RE = Reactive

Listed Waste
 LW = Listed Waste
 (F, K, P and U-listed wastes.)
 Waste code(s): _____

TSCA Regulated
 PCB = Polychlorinated biphenyls

Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

Client: <u>CPCC</u>		SDG/AR/COC/Work Order: <u>591355</u>		<u>ET</u>	
Received By: <u>Thyasia Tatum</u>		Date Received: <u>8/29/20</u>			
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier <u>Other</u>			
Suspected Hazard Information		Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___	
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below: PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____	
Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures recorded in Celsius TEMP: <u>1C</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____ If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and tests affected: _____
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and containers affected: _____
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials AM Date 8/31/20 Page 1 of 7

590855, 590856

Page: _____ of _____
 Project # _____
 GEL Quote #: _____
 COC Number: _____
 PO Number: _____



Laboratories LLC
 Chemistry | Radiochemistry | Radioassay | Specialty Analytics

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent

Client Name: GA Power
 Project/Site Name: Plant Branch Ash Ponds
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Phone # 404-506-7116
 Fax # _____

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (0)	Sample Matrix (0)	Radioactive (If yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
BRGWA-12I	08/23/22	1143	G	N	WG		(7) Known or possible Hazards	7	EPA 300, SM 2540C CI, F, SO4, TDS		Note: extra sample is required for sample specific QC
FB-01	08/23/22	1315	G	N	WQ			7	Total & Bleach Alk SM 2320B		field pH = 6.39
BRGWA-12S	08/23/22	1338	G	N	WG			7	EPA 6020B, 6010D Radium 226 & 228 SW-846 9315, 9320		field pH = NA
BRGW-25 I	08/23/22	1541	G	N	WG			7	Metals * Total & Bleach Alk		field pH = 5.90
											field pH = 6.11
											field pH =
											field pH =
											field pH =
											field pH =
											field pH =
											field pH =

Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1:27
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1:27
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1:27

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: * Metals: B,Ca,Sh,As,Ba,Be,Cd,Cr,Co,Ph,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Lachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B, 7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B 7470A - 1).
 6.) Preservative Type: BA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated PCB = Polychlorinated biphenyls	LW = Listed Waste (F, K, P and U-listed wastes.) Waste code(s): _____	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

590851, 590855, 590856, 590857, 59085

Client: GPOC SDG/AR/COC/Work Order: 590838, 590840, 590845
 Received By: Thyasia Tatum Date Received: 8/24/22
 Carrier and Tracking Number: _____
 FedEx Express FedEx Ground UPS Field Services **Courier** Other

Suspected Hazard Information

Yes No
 *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
 A) Shipped as a DOT Hazardous? Hazard Class Shipped: _____ UN#: _____
 If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
 B) Did the client designate the samples to be received as radioactive? COC notation or radioactive stickers on containers equal client designation.
 C) Did the RSO classify the samples as radioactive? Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr
 Classified as: Rad 1 Rad 2 Rad 3
 D) Did the client designate samples are hazardous? COC notation or hazard labels on containers equal client designation.
 E) Did the RSO identify possible hazards? If D or E is yes, select Hazards below:
 PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
					Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected: _____
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected: _____
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

590845, 590851

Page: _____ of _____
 Project # _____
 GEL Quote #: _____
 COC Number (1): _____
 PO Number: _____
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent
 GEL Work Order Number: _____
 Phone # 404-506-7116
 Fax # _____
 Project/Site Name: Plant Branch Ash Ponds
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Collected By: *Jordan Berisford*
 Send Results To: SCS & Geosyntec Contacts

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (Military (hhmm))	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (6) (Fill in the number of containers for each test)		<-- Preservative Type (6)	Comments
						Radioactive (If yes, please supply isotopic info)	(7) Known or possible Hazards		EPA 300, SM 2540C Cl, F, SO4, TDS	Metals * SM 220B Total & Bicarb Alk		
BR6WA-255	08/25/22	1345	G	N	WG			7	✓	✓		field pH = 5.66
BR6WA-47	08/23/22	1520	G	N	WG			7	✓	✓		field pH = 5.61
EB-05	08/23/22	1455	G	N	WG			7	✓	✓		field pH = N/A
												field pH =
												field pH =
												field pH =
												field pH =
												field pH =
												field pH =
												field pH =
												field pH =
												field pH =

Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	0845
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1327

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered

Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix

Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)

Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

KNOWN OR POSSIBLE HAZARDS

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated PCB = Polychlorinated biphenyls	LW = Listed Waste (F, K, P and U-listed wastes) Waste code(s): _____	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description: _____

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

Chain of Custody Number = Client Determined

QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered

Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix

Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)

Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

KNOWN OR POSSIBLE HAZARDS

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated PCB = Polychlorinated biphenyls	LW = Listed Waste (F, K, P and U-listed wastes) Waste code(s): _____	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

590851, 590855, 590856, 590857, 590858

Client: GPEC SDG/AR/COC/Work Order: 590838, 590840, 590845,
 Received By: Thyasia Tatum Date Received: 8/24/22

Carrier and Tracking Number

Circle Applicable:
 FedEx Express FedEx Ground UPS Field Services **Courier** Other

Suspected Hazard Information

*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous? Yes No
 Hazard Class Shipped: _____ UN#: _____
 If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___

B) Did the client designate the samples to be received as radioactive? Yes No
 COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive? Yes No
 Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Φ CPM / mR/Hr
 Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous? Yes No
 COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards? Yes No
 If D or E is yes, select Hazards below.
 PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures recorded in Celsius TEMP: <u>2C</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials _____ Date _____ Page _____ of _____

List of current GEL Certifications as of 03 October 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-137
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



November 09, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Branch CCR Groundwater Compliance APB
Work Order: 599840

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 08, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

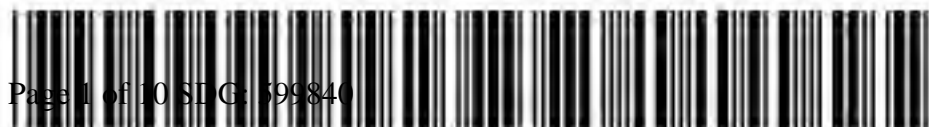
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Anna Johnson for
Erin Trent
Project Manager

Purchase Order: GPC82177-0003
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 599840 GEL Work Order: 599840

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: November 9, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID:	PZ-64I	Project:	GPCC00101
Sample ID:	599840001	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	07-NOV-22 12:59		
Receive Date:	08-NOV-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Cobalt		8.97	0.00600	0.0200	mg/L	1.00	20	PRB	11/09/22	0828	2339502	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	11/08/22	0900	2339501

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: November 9, 2022

Page 1 of 2

Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 599840

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2339502										
QC1205238973		LCS									
Cobalt	0.0500			0.0473	mg/L		94.7	(80%-120%)	PRB	11/09/22	08:25
QC1205238972		MB									
Cobalt			U	ND	mg/L					11/09/22	08:22
QC1205238974		599840001 MS									
Cobalt	0.0500		8.97	9.01	mg/L		N/A	(75%-125%)		11/09/22	08:30
QC1205238975		599840001 MSD									
Cobalt	0.0500		8.97	8.87	mg/L	1.51	N/A	(0%-20%)		11/09/22	08:33
QC1205238976		599840001 SDILT									
Cobalt			448	86.9	ug/L	3.13		(0%-20%)		11/09/22	08:36

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 599840

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
U											
X											
Y											
^											
h											

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Metals
Technical Case Narrative
Georgia Power Company
SDG #: 599840

Product: Determination of Metals by ICP-MS
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2339502

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2339501

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
599840001	PZ-64I
1205238972	Method Blank (MB)ICP-MS
1205238973	Laboratory Control Sample (LCS)
1205238976	599840001(PZ-64IL) Serial Dilution (SD)
1205238974	599840001(PZ-64IS) Matrix Spike (MS)
1205238975	599840001(PZ-64ISD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 599840001 (PZ-64I) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

	599840
Analyte	001
Cobalt	20X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

SAMPLE RECEIPT & REVIEW FORM

ET 599840

Client: <u>CIPCC</u>		SDG/AR/COC/Work Order:	
Received By: <u>MVH</u>		Date Received: <u>11.8.2022</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services <u>Courier</u> Other	
Suspected Hazard Information		Yes	No
*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.			
A) Shipped as a DOT Hazardous?		Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___	
B) Did the client designate the samples are to be received as radioactive?		COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM/mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____	
Sample Receipt Criteria		Yes	NA
		No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice None Other: _____ *all temperatures are recorded in Celsius TEMP: <u>3</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR2-21</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: _____ If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)	
		Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)	
		Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___	
		Sample ID's and containers affected: _____	
8	Samples received within holding time?	<input checked="" type="checkbox"/>	ID's and tests affected: _____
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	ID's and containers affected: _____
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials AE Date 11/10/22 Page ___ of ___

List of current GEL Certifications as of 09 November 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 08, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Branch CCR Groundwater Compliance APBCD
Work Orders: 591358,590851 and 590856

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 24, 2022 and August 29, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The data package has been revised to report new MDC values for the Ra-226+228 Sum results.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Edith Kent for
Erin Trent
Project Manager

Purchase Order: GPC82177-0003
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 591358 GEL Work Order: 591358

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 590856 GEL Work Order: 590856

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 590851 GEL Work Order: 590851

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-01
Sample ID: 591358001
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.32	+/-1.07	1.71	+/-1.12	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		1.89	+/-1.12	1.71	+/-1.17		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.571	+/-0.336	0.461	+/-0.347	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	83.2	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration

Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-58I
 Sample ID: 591358002
 Matrix: WG
 Collect Date: 24-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.837	+/-0.837	1.38	+/-0.864	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.16	+/-0.867	1.38	+/-0.893		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.322	+/-0.223	0.305	+/-0.228	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82.1	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-60I
 Sample ID: 591358003
 Matrix: WG
 Collect Date: 24-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.80	+/-1.34	1.99	+/-1.52	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.50	+/-1.38	1.99	+/-1.55		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.704	+/-0.307	0.245	+/-0.325	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-02

Project: GPCC00101

Sample ID: 591358004

Client ID: GPCC001

Matrix: WQ

Collect Date: 24-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.996	+/-1.07	1.78	+/-1.10	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.996	+/-1.08	1.78	+/-1.11		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	-0.0256	+/-0.194	0.413	+/-0.194	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82.3	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-29I

Project: GPCC00101

Sample ID: 591358005

Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.60	+/-1.10	1.71	+/-1.17	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		1.97	+/-1.13	1.71	+/-1.20		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.368	+/-0.231	0.291	+/-0.246	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	83	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-30I

Project: GPCC00101

Sample ID: 591358006

Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.72	+/-1.28	1.88	+/-1.46	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.26	+/-1.31	1.88	+/-1.48		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.542	+/-0.260	0.260	+/-0.279	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82.9	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-50
 Sample ID: 591358007
 Matrix: WG
 Collect Date: 24-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.22	+/-1.15	1.89	+/-1.19	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.87	+/-1.18	1.89	+/-1.22		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.649	+/-0.257	0.222	+/-0.289	1.00	pCi/L			LXP1	09/15/22	0953	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	78.6	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-03
 Sample ID: 591358008
 Matrix: WG
 Collect Date: 25-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.88	+/-1.60	2.60	+/-1.67	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	2.44	+/-1.62	2.60	+/-1.69		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.561	+/-0.277	0.283	+/-0.289	1.00	pCi/L			LXP1	09/15/22	1027	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	66.3	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-45

Project: GPCC00101

Sample ID: 591358009

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.15	+/-1.41	2.39	+/-1.44	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.65	+/-1.44	2.39	+/-1.47		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.491	+/-0.281	0.376	+/-0.292	1.00	pCi/L			LXP1	09/15/22	1025	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	76.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-44
 Sample ID: 591358010
 Matrix: WG
 Collect Date: 25-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.31	+/-1.13	1.83	+/-1.18	3.00	pCi/L			JXC9	09/20/22	1003	2310792	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.60	+/-1.15	1.83	+/-1.20		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.287	+/-0.211	0.275	+/-0.221	1.00	pCi/L			LXP1	09/15/22	1025	2310752	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	84.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-511
Sample ID: 591358011
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-3.03	+/-0.946	2.33	+/-0.946	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.625	+/-0.995	2.33	+/-1.00		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.625	+/-0.309	0.315	+/-0.331	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	81.5	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51D
 Sample ID: 591358012
 Matrix: WG
 Collect Date: 24-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.51	+/-1.25	1.83	+/-1.40	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.33	+/-1.30	1.83	+/-1.45		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.823	+/-0.355	0.394	+/-0.385	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	82.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-611

Project: GPCC00101

Sample ID: 591358013

Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.42	+/-1.20	1.73	+/-1.35	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.91	+/-1.24	1.73	+/-1.39		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.488	+/-0.331	0.468	+/-0.344	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	79.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-51S
 Sample ID: 591358014
 Matrix: WG
 Collect Date: 24-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.318	+/-0.956	1.72	+/-0.959	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.20	+/-1.02	1.72	+/-1.03		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.878	+/-0.354	0.360	+/-0.387	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	83.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FD-02
 Sample ID: 591358015
 Matrix: WG
 Collect Date: 24-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.799	+/-1.14	1.96	+/-1.16	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.20	+/-1.17	1.96	+/-1.19		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.403	+/-0.250	0.297	+/-0.262	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	83.7	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-50D
 Sample ID: 591358016
 Matrix: WG
 Collect Date: 25-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.62	+/-1.12	1.75	+/-1.20	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.26	+/-1.17	1.75	+/-1.25		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.640	+/-0.343	0.439	+/-0.363	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	83.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-06

Project: GPCC00101

Sample ID: 591358017

Client ID: GPCC001

Matrix: WQ

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.47	+/-1.13	1.79	+/-1.19	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.76	+/-1.15	1.79	+/-1.21		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.286	+/-0.198	0.249	+/-0.206	1.00	pCi/L			LXP1	09/21/22	0740	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	78.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-62I

Project: GPCC00101

Sample ID: 591358018

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.21	+/-1.17	1.94	+/-1.21	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.88	+/-1.22	1.94	+/-1.26		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.674	+/-0.329	0.377	+/-0.347	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	80.7	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-59I

Project: GPCC00101

Sample ID: 591358019

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.655	+/-1.10	1.91	+/-1.11	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.02	+/-1.13	1.91	+/-1.14		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.366	+/-0.253	0.347	+/-0.261	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	77.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

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 Address : Company
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-271

Project: GPCC00101

Sample ID: 591358020

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.30	+/-1.37	2.28	+/-1.41	3.00	pCi/L			JE1	09/20/22	1130	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.79	+/-1.39	2.28	+/-1.43		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.488	+/-0.278	0.312	+/-0.287	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	76.9	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-03
 Sample ID: 591358021
 Matrix: WQ
 Collect Date: 25-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.0825	+/-1.17	2.15	+/-1.17	3.00	pCi/L			JE1	09/20/22	1131	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.0568	+/-1.19	2.15	+/-1.19		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.0568	+/-0.222	0.434	+/-0.223	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	85.1	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-63I

Project: GPCC00101

Sample ID: 591358022

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.634	+/-1.14	1.98	+/-1.15	3.00	pCi/L			JE1	09/20/22	1131	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.52	+/-1.20	1.98	+/-1.22		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.882	+/-0.373	0.423	+/-0.426	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	78.1	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: PZ-571

Project: GPCC00101

Sample ID: 591358023

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.378	+/-0.850	1.52	+/-0.855	3.00	pCi/L			JE1	09/20/22	1131	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.773	+/-0.888	1.52	+/-0.896		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.395	+/-0.260	0.336	+/-0.267	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	81	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPBCD

Client Sample ID: BRGWC-32S

Project: GPCC00101

Sample ID: 591358024

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.857	+/-1.07	1.82	+/-1.09	3.00	pCi/L			JE1	09/20/22	1131	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.32	+/-1.11	1.82	+/-1.13		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.462	+/-0.277	0.365	+/-0.299	1.00	pCi/L			LXP1	09/21/22	0812	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	81.4	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-07
 Sample ID: 591358025
 Matrix: WQ
 Collect Date: 25-AUG-22
 Receive Date: 29-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.0250	+/-0.735	1.43	+/-0.735	3.00	pCi/L			JE1	09/20/22	1131	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.238	+/-0.767	1.43	+/-0.768		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.238	+/-0.221	0.326	+/-0.225	1.00	pCi/L			LXP1	09/21/22	0844	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	79.7	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-52I

Project: GPCC00101

Sample ID: 591358026

Client ID: GPCC001

Matrix: WG

Collect Date: 25-AUG-22

Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		3.40	+/-1.40	2.01	+/-1.64	3.00	pCi/L			JE1	09/20/22	1131	2310793	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		4.97	+/-1.46	2.01	+/-1.71		pCi/L		1	NXL1	09/23/22	0954	2310791	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.57	+/-0.415	0.211	+/-0.481	1.00	pCi/L			LXP1	09/21/22	0844	2310764	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310793	84.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-12I
 Sample ID: 590856001
 Matrix: WG
 Collect Date: 23-AUG-22
 Receive Date: 24-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.0959	+/-1.26	2.34	+/-1.26	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.558	+/-1.30	2.34	+/-1.31		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.558	+/-0.321	0.415	+/-0.343	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	75	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: FB-01
 Sample ID: 590856002
 Matrix: WQ
 Collect Date: 23-AUG-22
 Receive Date: 24-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.28	+/-1.07	1.72	+/-1.12	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.60	+/-1.09	1.72	+/-1.13		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.320	+/-0.196	0.204	+/-0.206	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	90.9	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-12S
 Sample ID: 590856003
 Matrix: WG
 Collect Date: 23-AUG-22
 Receive Date: 24-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	1.33	+/-1.12	1.80	+/-1.17	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.69	+/-1.14	1.80	+/-1.19		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.360	+/-0.231	0.250	+/-0.237	1.00	pCi/L			LXP1	09/16/22	1006	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	77.8	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-251

Project: GPCC00101

Sample ID: 590856004

Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22

Receive Date: 24-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-1.62	+/-1.14	2.35	+/-1.14	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.90	+/-1.22	2.35	+/-1.26		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.90	+/-0.454	0.210	+/-0.540	1.00	pCi/L			LXP1	09/16/22	1006	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	86.5	(15%-125%)

Notes:
The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWA-23S
 Sample ID: 590851001
 Matrix: WG
 Collect Date: 23-AUG-22
 Receive Date: 24-AUG-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	-4.51	+/-0.901	2.59	+/-0.901	3.00	pCi/L			JXC9	09/16/22	1054	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.59	+/-1.02	2.59	+/-1.09		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.59	+/-0.476	0.392	+/-0.609	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	80.1	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: BRGWC-47

Project: GPCC00101

Sample ID: 590851002

Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22

Receive Date: 24-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		2.45	+/-1.32	1.96	+/-1.45	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		3.74	+/-1.37	1.96	+/-1.51		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		1.29	+/-0.384	0.219	+/-0.427	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	80.7	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater Compliance APBCD

Client Sample ID: EB-05

Project: GPCC00101

Sample ID: 590851003

Client ID: GPCC001

Matrix: WQ

Collect Date: 23-AUG-22

Receive Date: 24-AUG-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.747	+/-0.883	1.49	+/-0.903	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.11	+/-0.925	1.49	+/-0.946		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226	U	0.367	+/-0.277	0.407	+/-0.283	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	77.2	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

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QC Summary

Report Date: December 7, 2022
Page 1 of 3

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 591358

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2310792										
QC1205179815	591353001 DUP										
Radium-228	U	-2.32	U	0.746	pCi/L	0		N/A	JXC9	09/20/22	10:02
	Uncert:	+/-1.31		+/-1.05							
	TPU:	+/-1.31		+/-1.07							
QC1205179816	LCS										
Radium-228	44.1			40.7	pCi/L		92.4	(75%-125%)	JXC9	09/20/22	10:02
	Uncert:			+/-3.20							
	TPU:			+/-10.7							
QC1205179814	MB										
Radium-228			U	0.428	pCi/L				JXC9	09/20/22	10:02
	Uncert:			+/-0.992							
	TPU:			+/-0.998							
Batch	2310793										
QC1205179818	591358011 DUP										
Radium-228	U	-3.03	U	0.997	pCi/L	0		N/A	JE1	09/20/22	11:29
	Uncert:	+/-0.946		+/-0.944							
	TPU:	+/-0.946		+/-0.976							
QC1205179819	LCS										
Radium-228	43.9			44.7	pCi/L		102	(75%-125%)	JE1	09/20/22	11:30
	Uncert:			+/-3.35							
	TPU:			+/-11.7							
QC1205179817	MB										
Radium-228			U	0.278	pCi/L				JE1	09/20/22	11:29
	Uncert:			+/-1.23							
	TPU:			+/-1.24							
Rad Ra-226											
Batch	2310752										
QC1205179719	591353001 DUP										
Radium-226	U	0.152		0.436	pCi/L	96.4		(0% - 100%)	LXP1	09/15/22	10:25
	Uncert:	+/-0.211		+/-0.289							
	TPU:	+/-0.213		+/-0.297							
QC1205179721	LCS										
Radium-226	26.5			20.8	pCi/L		78.2	(75%-125%)	LXP1	09/15/22	10:25
	Uncert:			+/-1.40							
	TPU:			+/-4.47							
QC1205179718	MB										
Radium-226			U	0.312	pCi/L				LXP1	09/15/22	10:25
	Uncert:			+/-0.270							
	TPU:			+/-0.276							
QC1205179720	591353001 MS										
Radium-226	132	U	0.152	103	pCi/L		77.8	(75%-125%)	LXP1	09/15/22	10:25

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QC Summary

Workorder: 591358

Page 2 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226										
Batch	2310752									
		Uncert:	+/-0.211							+/-7.31
		TPU:	+/-0.213							+/-17.6
Batch	2310764									
QC1205179723	591358011 DUP									
Radium-226		0.625	0.629	pCi/L	.666		(0% - 100%)	LXP1	09/21/2208:44	
		Uncert:	+/-0.309							+/-0.307
		TPU:	+/-0.331							+/-0.326
QC1205179725	LCS									
Radium-226		26.6	20.1	pCi/L		75.6	(75%-125%)	LXP1	09/21/2208:44	
		Uncert:								+/-1.53
		TPU:								+/-3.83
QC1205179722	MB									
Radium-226			U 0.214	pCi/L				LXP1	09/21/2208:44	
		Uncert:								+/-0.261
		TPU:								+/-0.263
QC1205179724	591358011 MS									
Radium-226		132	0.625	117	pCi/L	87.8	(75%-125%)	LXP1	09/21/2208:44	
		Uncert:	+/-0.309							+/-8.03
		TPU:	+/-0.331							+/-20.3

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification

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QC Summary

Workorder: 591358

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
UJ	Gamma Spectroscopy--Uncertain identification									
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
h	Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: December 7, 2022
Page 1 of 2

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 590856

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2309177										
QC1205176411	590840001 DUP										
Radium-228	U	0.281	U	0.509	pCi/L	0		N/A	JXC9	09/16/22	10:54
	Uncert:	+/-1.08		+/-0.796							
	TPU:	+/-1.08		+/-0.806							
QC1205176412	LCS										
Radium-228	44.1			39.6	pCi/L		89.9	(75%-125%)	JXC9	09/16/22	10:54
	Uncert:			+/-3.28							
	TPU:			+/-10.4							
QC1205176410	MB										
Radium-228			U	-0.160	pCi/L				JXC9	09/16/22	10:54
	Uncert:			+/-1.37							
	TPU:			+/-1.37							
Rad Ra-226											
Batch	2309179										
QC1205176418	590840001 DUP										
Radium-226	U	0.250	U	0.114	pCi/L	0		N/A	LXP1	09/16/22	10:41
	Uncert:	+/-0.237		+/-0.177							
	TPU:	+/-0.242		+/-0.178							
QC1205176420	LCS										
Radium-226	26.6			20.1	pCi/L		75.8	(75%-125%)	LXP1	09/16/22	10:41
	Uncert:			+/-1.38							
	TPU:			+/-4.51							
QC1205176417	MB										
Radium-226				0.319	pCi/L				LXP1	09/16/22	10:41
	Uncert:			+/-0.220							
	TPU:			+/-0.227							
QC1205176419	590840001 MS										
Radium-226	132 U	0.250		103	pCi/L		78	(75%-125%)	LXP1	09/16/22	10:41
	Uncert:	+/-0.237		+/-7.73							
	TPU:	+/-0.242		+/-17.8							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded

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QC Summary

Workorder: 590856

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J										
J										
K										
L										
M										
M										
N/A										
N1										
ND										
NJ										
Q										
R										
U										
UI										
UJ										
UL										
X										
Y										
^										
h										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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QC Summary

Report Date: December 7, 2022

Page 1 of 2

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 590851

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2309177										
QC1205176411	590840001 DUP										
Radium-228	U	0.281	U	0.509	pCi/L	0		N/A	JXC9	09/16/22	10:54
	Uncert:	+/-1.08		+/-0.796							
	TPU:	+/-1.08		+/-0.806							
QC1205176412	LCS										
Radium-228	44.1			39.6	pCi/L		89.9	(75%-125%)	JXC9	09/16/22	10:54
	Uncert:			+/-3.28							
	TPU:			+/-10.4							
QC1205176410	MB										
Radium-228			U	-0.160	pCi/L				JXC9	09/16/22	10:54
	Uncert:			+/-1.37							
	TPU:			+/-1.37							
Rad Ra-226											
Batch	2309179										
QC1205176418	590840001 DUP										
Radium-226	U	0.250	U	0.114	pCi/L	0		N/A	LXP1	09/16/22	10:41
	Uncert:	+/-0.237		+/-0.177							
	TPU:	+/-0.242		+/-0.178							
QC1205176420	LCS										
Radium-226	26.6			20.1	pCi/L		75.8	(75%-125%)	LXP1	09/16/22	10:41
	Uncert:			+/-1.38							
	TPU:			+/-4.51							
QC1205176417	MB										
Radium-226				0.319	pCi/L				LXP1	09/16/22	10:41
	Uncert:			+/-0.220							
	TPU:			+/-0.227							
QC1205176419	590840001 MS										
Radium-226	132 U	0.250		103	pCi/L		78	(75%-125%)	LXP1	09/16/22	10:41
	Uncert:	+/-0.237		+/-7.73							
	TPU:	+/-0.242		+/-17.8							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded

GEL LABORATORIES LLC

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QC Summary

Workorder: 590851

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
J										
J										
K										
L										
M										
M										
N/A										
N1										
ND										
NJ										
Q										
R										
U										
UI										
UJ										
UL										
X										
Y										
^										
h										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 591358**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2310789

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591358001	FD-01
591358002	PZ-58I
591358003	PZ-60I
591358004	FB-02
591358005	BRGWC-29I
591358006	BRGWC-30I
591358007	BRGWC-50
591358008	FD-03
591358009	BRGWC-45
591358010	PZ-44

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2310791

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591358011	PZ-51I
591358012	PZ-51D
591358013	PZ-61I
591358014	PZ-51S
591358015	FD-02
591358016	PZ-50D
591358017	EB-06
591358018	PZ-62I
591358019	PZ-59I
591358020	BRGWC-27I

591358021	FB-03
591358022	PZ-63I
591358023	PZ-57I
591358024	BRGWC-32S
591358025	EB-07
591358026	BRGWC-52I

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2310792

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591358001	FD-01
591358002	PZ-58I
591358003	PZ-60I
591358004	FB-02
591358005	BRGWC-29I
591358006	BRGWC-30I
591358007	BRGWC-50
591358008	FD-03
591358009	BRGWC-45
591358010	PZ-44
1205179814	Method Blank (MB)
1205179815	591353001(BRGWC-17S) Sample Duplicate (DUP)
1205179816	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2310793

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591358011	PZ-51I
591358012	PZ-51D
591358013	PZ-61I
591358014	PZ-51S
591358015	FD-02
591358016	PZ-50D
591358017	EB-06
591358018	PZ-62I
591358019	PZ-59I
591358020	BRGWC-27I
591358021	FB-03
591358022	PZ-63I
591358023	PZ-57I
591358024	BRGWC-32S
591358025	EB-07
591358026	BRGWC-52I
1205179817	Method Blank (MB)
1205179818	591358011(PZ-51I) Sample Duplicate (DUP)
1205179819	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Negative > 3 sigma TPU

Sample result was more negative than the three sigma TPU. The background control chart was examined and the detector was determined to be fully functional.

Sample	Analyte	Value
591358011 (PZ-51I)	Radium-228	Negative Result > 3 sigma value

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2310752

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591358001	FD-01

591358002	PZ-58I
591358003	PZ-60I
591358004	FB-02
591358005	BRGWC-29I
591358006	BRGWC-30I
591358007	BRGWC-50
591358008	FD-03
591358009	BRGWC-45
591358010	PZ-44
1205179718	Method Blank (MB)
1205179719	591353001(BRGWC-17S) Sample Duplicate (DUP)
1205179720	591353001(BRGWC-17S) Matrix Spike (MS)
1205179721	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Samples were degassed and recounted to verify sample results. The second counts are reported.

Miscellaneous Information

Additional Comments

The matrix spike, 1205179720 (BRGWC-17SMS), aliquot was reduced to conserve sample volume.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2310764

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
591358011	PZ-51I
591358012	PZ-51D
591358013	PZ-61I
591358014	PZ-51S
591358015	FD-02
591358016	PZ-50D
591358017	EB-06
591358018	PZ-62I
591358019	PZ-59I
591358020	BRGWC-27I
591358021	FB-03
591358022	PZ-63I

591358023	PZ-57I
591358024	BRGWC-32S
591358025	EB-07
591358026	BRGWC-52I
1205179722	Method Blank (MB)
1205179723	591358011(PZ-51I) Sample Duplicate (DUP)
1205179724	591358011(PZ-51I) Matrix Spike (MS)
1205179725	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1205179724 (PZ-51IMS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 590856**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2309181

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590856001	BRGWA-12I
590856002	FB-01
590856003	BRGWA-12S
590856004	BRGWC-25I

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2309177

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590856001	BRGWA-12I
590856002	FB-01
590856003	BRGWA-12S
590856004	BRGWC-25I
1205176410	Method Blank (MB)
1205176411	590840001(BRGWA-2S) Sample Duplicate (DUP)
1205176412	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2309179

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590856001	BRGWA-12I
590856002	FB-01
590856003	BRGWA-12S
590856004	BRGWC-25I
1205176417	Method Blank (MB)
1205176418	590840001(BRGWA-2S) Sample Duplicate (DUP)
1205176419	590840001(BRGWA-2S) Matrix Spike (MS)
1205176420	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Method Blank Criteria

The blank result (See Below) is greater than the MDC but less than the required detection limit.

Sample	Analyte	Value
1205176417 (MB)	Radium-226	Result: 0.319 pCi/L > MDA: 0.278 pCi/L <= RDL: 1.00 pCi/L

Miscellaneous Information

Additional Comments

The matrix spike, 1205176419 (BRGWA-2SMS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 590851**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2309181

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590851001	BRGWA-23S
590851002	BRGWC-47
590851003	EB-05

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2309177

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590851001	BRGWA-23S
590851002	BRGWC-47
590851003	EB-05
1205176410	Method Blank (MB)
1205176411	590840001(BRGWA-2S) Sample Duplicate (DUP)
1205176412	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Negative > 3 sigma TPU

Sample result was more negative than the three sigma TPU. The background control chart was examined and the detector was determined to be fully functional.

Sample	Analyte	Value
590851001 (BRGWA-23S)	Radium-228	Negative Result > 3 sigma value

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2309179

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
590851001	BRGWA-23S
590851002	BRGWC-47
590851003	EB-05
1205176417	Method Blank (MB)
1205176418	590840001(BRGWA-2S) Sample Duplicate (DUP)
1205176419	590840001(BRGWA-2S) Matrix Spike (MS)
1205176420	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Method Blank Criteria

The blank result (See Below) is greater than the MDC but less than the required detection limit.

Sample	Analyte	Value
1205176417 (MB)	Radium-226	Result: 0.319 pCi/L > MDA: 0.278 pCi/L <= RDL: 1.00 pCi/L

Miscellaneous Information

Additional Comments

The matrix spike, 1205176419 (BRGWA-2SMS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager: *Erin Trent*

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Client Name: GA Power
 Project/Site Name: Plant Branch Ash Ponds ~ BCD
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Collected By: *Jordan Bonstorf* * Send Results To: SCS & Geosyntec Contacts
Anna Schwab

Phone # 404-506-7116
 Fax # _____

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (hh:mm)	QC Code (3)	Field Filtered (2)	Sample Matrix (4)	Radioactive (if yes, please supply isotopic info)	(7) Known or possible Hazards	Total number of containers	EPA 300, SM 2540C	Total & Breath Air	Metals * SM 2320B	EPA 6020B, 6010D	Radium 226 & 228 SW-846 9315, 9320	Preservative Type (6)	Comments
FD-01	08/24/22	1030	G	N	WG			7	✓	✓	✓	✓	NA	field pH = NA	Note: extra sample is required for sample specific QC
PZ-58I	08/24/22	1220	G	N	WG			7	✓	✓	✓	✓	3.81	field pH = 3.81	
PZ-60J	08/24/22	1555	G	N	WG			7	✓	✓	✓	✓	4.55	field pH = 4.55	
FB-02	08/24/22	1710	G	N	WG			7	✓	✓	✓	✓	N/A	field pH = N/A	
BR6WC-29I	08/24/22	1604	G	N	WG			7	✓	✓	✓	✓	4.39	field pH = 4.39	
BR6WC-30I	08/24/22	1451	G	N	WG			7	✓	✓	✓	✓	6.38	field pH = 6.38	
BR6WC-50	08/24/22	1010	G	N	WG			7	✓	✓	✓	✓	5.07	field pH = 5.07	
FD-03	08/25/22	1131	G	N	WG			7	✓	✓	✓	✓	N/A	field pH = N/A	
BR6WC-45	08/25/22	1010	G	N	WG			7	✓	✓	✓	✓	5.74	field pH = 5.74	
PZ-44	08/25/22	1131	G	N	WG			7	✓	✓	✓	✓	6.06	field pH = 6.06	

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Relinquished By (Signed) _____ Date _____ Time _____
 Received by (signed) _____ Date _____ Time _____
 1. *[Signature]* 8/29/22 1515
 2. *[Signature]* 8/29/22 1515
 3. _____

Chain of Custody Signatures

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

- Chain of Custody Number = Client Determined
- QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
- Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered
- Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix
- Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
- Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank
- KNOWN OR POSSIBLE HAZARDS

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW = Listed Waste (F, K, P and U-listed wastes.) Waste code(s): _____	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)



GEL Laboratories LLC
Chemistry | Radiochemistry | Radioassay | Specialty Analytics

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Chain of Custody and Analytical Request

GEL Work Order Number: _____ **GEL Project Manager:** *Erin Trent*

Phone # 404-506-7116

Fax # _____

Client Name: GA Power

Project/Site Name: Plant Branch Ash Ponds *BCD*

Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308

Collected By: *Hunter Auld + Angie Schnitzler* Send Results To: SCS & Geosyntec Contacts

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm/dd/yy)	*Time Collected (Military (hhmm))	QC Code (e)	Field Filtered (d)	Sample Matrix (e)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (e) (Fill in the number of containers for each test)				Comments
						Radioactive (if yes, please supply isotopic info)	(7) Known or Possible Hazards		Z	Z	Z	Z	
<i>PZ-51I</i>	<i>08/24/22</i>	<i>1234</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>5.49</i>
<i>PZ-51D</i>	<i>08/24/22</i>	<i>1049</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>7.15</i> <i>7.15</i>
<i>PZ-60I</i>	<i>08/24/22</i>	<i>1402</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>5.14</i>
<i>PZ-51S</i>	<i>08/24/22</i>	<i>1609</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>6.12</i>
<i>FD-0Z</i>	<i>08/24/22</i>	<i>---</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>---</i>
<i>PZ-50D</i>	<i>08/25/22</i>	<i>0951</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>6.11</i>
<i>EB-06</i>	<i>08/25/22</i>	<i>0942</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>---</i>
<i>PZ-60I</i>	<i>08/25/22</i>	<i>1121</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>5.50</i>
<i>PZ-59I</i>	<i>08/25/22</i>	<i>1316</i>	<i>G</i>	<i>N</i>	<i>WG</i>			<i>7</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	field pH = <i>3.72</i>

Chain of Custody Signatures

Relinquished By (Signed) _____ Date _____ Received by (signed) _____ Date _____ Time _____

1. *[Signature]* *8/24/22 1515* *[Signature]* *8/24/22 1515*

2. _____

3. _____

TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: * Metals: B,Ca,Sb,As,Pa,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a -Y- for yes the sample was field filtered or -N- for sample was not field filtered.

4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic Hg = Mercury
Ba = Barium Se = Selenium
Cd = Cadmium Ag = Silver
Cr = Chromium MIR = Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW = Listed Waste
Waste code(s): _____

Other
OT = Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Client Name: GA Power
 Project/Site Name: Plant Branch Ash Ponds **B/C/D**
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Phone # 404-506-7116
 Fax # _____

Collected By: **Taylor Coble / Anna Schmittke** Send Results To: SCS & Geosyntec Contacts

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (Military (hhmm))	OC Code (a)	Field Filtered (b)	Sample Matrix (c)	Radiactive (If Yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	EPA 300, SM 2540C Cl, F, SO4, TDS	Total & Biocarb Alk SM 2320B	EPA 6020B, 6010D Metals *	Radium 226 & 228 SW-846 9315, 9320	Preservative Type (6)	Comments
BRGWC-27I	08/25/22	1012	G	N	WG		(7) Known or possible Hazards	7	✓	✓	✓	✓	<-- Preservative Type (6)	Note: extra sample is required for sample specific QC
FB-03	08/25/22	1045	G	N	WG			7	✓	✓	✓	✓	field pH = 6.03	
PZ-63I	08/25/22	1220	G	N	WG			7	✓	✓	✓	✓	field pH = 5.65	
PZ-57I	08/25/22	1055	G	N	WG			7	✓	✓	✓	✓	field pH = 5.91	
BRGWC-325	08/25/22	1235	G	N	WG			7	✓	✓	✓	✓	field pH = 6.06	
EB-07	08/25/22	1245	G	N	WG			7	✓	✓	✓	✓	field pH = 6.21	
BRGWC-52I	08/25/22	1255	G	N	WG			7	✓	✓	✓	✓	field pH = 6.21	

Chain of Custody Signatures

Relinquished By (Signed) _____ Date **8/29/22 1515** Received by (signed) **Durgesha Satam Spajz** Time **1515**

2. _____ Date _____ Received by (signed) _____ Time _____

3. _____ Date _____ Received by (signed) _____ Time _____

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR)

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Ti,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FB = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
 As = Arsenic Hg= Mercury
 Ba = Barium Se= Selenium
 Cd = Cadmium Ag= Silver
 Cr = Chromium MR= Misc. RCRA metals
 Pb = Lead

Characteristic Hazards
 FL = Flammable/Ignitable
 CO = Corrosive
 RE = Reactive

Listed Waste
 LW = Listed Waste
 (F, K, P and U-listed wastes.)
 Waste code(s): _____

TSCA Regulated
 PCB = Polychlorinated biphenyls

Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

Client: <u>CPCC</u>		SDG/AR/COC/Work Order: <u>591355</u>		<u>ET</u>	
Received By: <u>Thyasia Tatum</u>		Date Received: <u>8/29/20</u>			
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier <u>Other</u>			
Suspected Hazard Information		Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___	
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below: PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____	
Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures recorded in Celsius TEMP: <u>1C</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
					Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials AM Date 8/31/20 Page 1 of 7

590855, 590856

Page: _____ of _____
 Project # _____
 GEL Quote #: _____
 COC Number (1): _____
 PO Number: _____



Laboratories LLC
 Chemistry | Radiochemistry | Radioassay | Specialty Analytics

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Chain of Custody and Analytical Request

GEL Work Order Number: _____ GEL Project Manager: *Erin Trent*

Client Name: GA Power
 Project/Site Name: Plant Branch Ash Ponds
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308

Sample ID: _____
 *For composites - indicate start and stop date/time

Sample ID	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive (If yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
BRGWA-12I	08/23/22	1143	G	N	WG		(7) Known or possible Hazards	7	NI		Note: extra sample is required for sample specific QC
FB-01	08/23/22	1315	G	N	WQ			7	NI		field pH = 6.39
BRGWA-12S	08/23/22	1338	G	N	WG			7	NI		field pH = NA
BRGWL-25I	08/23/22	1541	G	N	WG			7	NI		field pH = 5.90
											field pH = 6.11
											field pH =
											field pH =
											field pH =
											field pH =
											field pH =
											field pH =

Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1:27
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1:27
<i>[Signature]</i>	8/24/22	<i>[Signature]</i>	8/24/22	1:27

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)

Fax Results: Yes No

Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4

Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C

Sample Collection Time Zone: Eastern Pacific Central Mountain Other:

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered

4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Lachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, AX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals	As = Arsenic	Hg = Mercury	Se = Selenium	Ag = Silver
Ba = Barium	Cd = Cadmium	Cr = Chromium	MIR = Misc. RCRA metals	Pb = Lead

Characteristic Hazards

FL = Flammable/Ignitable
 CO = Corrosive
 RE = Reactive

Listed Waste

LW = Listed Waste
 (F,K,P and U-listed wastes.)
 Waste code(s): _____

TSCA Regulated

PCB = Polychlorinated biphenyls

Other

OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)

Description: _____

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

590851, 590855, 590856, 590857, 590858

Client: GPOC	SDG/AR/COC/Work Order: 590838, 590840, 590845
Received By: Thyasia Tatum	Date Received: 8/24/22
Carrier and Tracking Number	Circle Applicable: <input type="checkbox"/> FedEx Express <input type="checkbox"/> FedEx Ground <input type="checkbox"/> UPS <input type="checkbox"/> Field Services <input checked="" type="checkbox"/> Courier <input type="checkbox"/> Other

Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Φ CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

590845, 590851

Page: _____ of _____
 Project # _____
 GEL Quote #: _____
 COC Number (1): _____
 PO Number: _____

GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Client Name: GA Power
 Project/Site Name: Plant Branch Ash Ponds
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Collected By: *Jordan Perinford*

Phone # 404-506-7116
 Fax # _____
 Send Results To: SCS & Geosyntec Contacts

Sample ID	*Date Collected (mm/dd/yyyy)	*Time Collected (Military) (hh:mm)	QC Code (3)	Field Filtered (2)	Sample Matrix (4)
<i>BR6WA-255</i>	<i>08/25/22</i>	<i>1345</i>	<i>G</i>	<i>N</i>	<i>WG</i>
<i>BR6WC-47</i>	<i>08/23/22</i>	<i>1520</i>	<i>G</i>	<i>N</i>	<i>WG</i>
<i>EB-05</i>	<i>08/23/22</i>	<i>1455</i>	<i>G</i>	<i>N</i>	<i>WG</i>

* For composites - indicate start and stop date/time
 Total number of containers: _____
 Should this sample be considered: (If yes, please supply isotopic info) _____
 Possible Hazards (7) Known or _____
 Radiactive (If _____
 (7) Known or _____

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	<i>8/24/22</i>	<i>0845</i>	<i>[Signature]</i>	<i>8/24/22</i>	<i>0845</i>
<i>[Signature]</i>	<i>10/1/22</i>	<i>1327</i>	<i>[Signature]</i>	<i>8/24/22</i>	<i>1327</i>

Chain of Custody Signatures
 TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge)
 Fax Results: Yes No
 Select Deliverable: C of A QC Summary Level 1 Level 2 Level 3 Level 4
 Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Ti,Fe,Mg,Mn,K,Na,Hg
 For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: _____ °C
 Sample Collection Time Zone: Eastern Pacific Central Mountain Other: _____

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR).
 1.) Chain of Custody Number = Client Determined
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
 4.) Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WO=Water Quality Control Matrix
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, BX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) KNOWN OR POSSIBLE HAZARDS
 Characteristic Hazards
 FL = Flammable/Ignitable
 CO = Corrosive
 RE = Reactive
 Listed Waste
 LW = Listed Waste
 (F,K,P and U-listed wastes.)
 Waste code(s): _____
 Other
 OT = Other / Unknown
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____

RCRA Metals	Hg=Mercury	Se=Selenium
As = Arsenic		
Ba = Barium		
Cd = Cadmium		
Cr = Chromium		
Pb = Lead		

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

590851, 590855,
ET 590856
590857
590858

Client: GPCC

SDG/AR/COC/Work Order: 590838, 590840, 590845,

Received By: Thyasia Tatum

Date Received: 8/24/22

Carrier and Tracking Number

Circle Applicable:
FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>2°C</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>			If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>			
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials _____ Date _____ Page _____ of _____

List of current GEL Certifications as of 07 December 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



October 26, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Branch CCR Groundwater Compliance APB
Work Order: 596812

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 13, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Erin Trent
Project Manager

Purchase Order: GPC82177-0003
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556–8171 – www.gel.com

**Certificate of Analysis Report
for**

**GPCC001 Georgia Power Company
Client SDG: 596812 GEL Work Order: 596812**

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 26, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-64I	Project: GPCC00101
Sample ID: 596812001	Client ID: GPCC001
Matrix: WG	
Collect Date: 12-OCT-22 10:00	
Receive Date: 13-OCT-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.53			SU			EOS1	10/12/22	1000	2328940	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride	J	0.0781	0.0330	0.100	mg/L		1	HXC1	10/19/22	1619	2331124	2
Chloride		55.3	13.4	40.0	mg/L		200	HXC1	10/20/22	0845	2331124	3
Sulfate		2440	26.6	80.0	mg/L		200					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/17/22	1007	2329101	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	10/17/22	2136	2328994	5
Arsenic		0.00896	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0543	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.000600	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0181	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000432	0.000200	0.00100	mg/L	1.00	1					
Potassium		14.6	0.0800	0.300	mg/L	1.00	1					
Selenium		0.0171	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Iron		1.98	0.0330	0.100	mg/L	1.00	1	SKJ	10/18/22	2307	2328994	6
Manganese		399	0.500	2.50	mg/L	1.00	500	SKJ	10/18/22	2223	2328994	7
Calcium		320	0.800	2.00	mg/L	1.00	10	SKJ	10/18/22	2243	2328994	8
Cobalt		9.05	0.00300	0.0100	mg/L	1.00	10					
Sodium		61.7	0.800	2.50	mg/L	1.00	10					
Boron		0.0152	0.00520	0.0150	mg/L	1.00	1	SKJ	10/20/22	0830	2328994	9
Magnesium		254	0.100	0.300	mg/L	1.00	10	SKJ	10/21/22	1031	2328994	10
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3780	2.38	10.0	mg/L			CH6	10/14/22	1445	2329094	11
Titration and Ion Analysis												

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 26, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-64I Project: GPCC00101
Sample ID: 596812001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		48.0	1.45	4.00	mg/L			VH1	10/25/22	1724	2330275	12
Bicarbonate alkalinity (CaCO ₃)		48.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	10/14/22	0950	2328993
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	10/14/22	1140	2329100

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SW846 3005A/6020B	
11	SM 2540C	
12	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: October 26, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-65I	Project: GPCC00101
Sample ID: 596812002	Client ID: GPCC001
Matrix: WG	
Collect Date: 11-OCT-22 14:30	
Receive Date: 13-OCT-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		4.16			SU			EOS1	10/11/22	1430	2328940	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		1.51	0.0330	0.100	mg/L		1	HXC1	10/19/22	1649	2331124	2
Chloride		48.7	13.4	40.0	mg/L		200	HXC1	10/20/22	0915	2331124	3
Sulfate		2520	26.6	80.0	mg/L		200					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	J	0.0000880	0.0000670	0.000200	mg/L	1.00	1	JP2	10/17/22	1012	2329101	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	10/17/22	2153	2328994	5
Arsenic		0.0201	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0260	0.000670	0.00400	mg/L	1.00	1					
Beryllium		0.0159	0.000200	0.000500	mg/L	1.00	1					
Cadmium	J	0.000606	0.000300	0.00100	mg/L	1.00	1					
Chromium	J	0.00405	0.00300	0.0100	mg/L	1.00	1					
Lead	J	0.00132	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.102	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		14.1	0.0800	0.300	mg/L	1.00	1					
Selenium		0.0377	0.00150	0.00500	mg/L	1.00	1					
Thallium	J	0.00139	0.000600	0.00200	mg/L	1.00	1					
Manganese		37.1	0.100	0.500	mg/L	1.00	100	SKJ	10/18/22	2233	2328994	6
Calcium		230	0.800	2.00	mg/L	1.00	10	SKJ	10/18/22	2252	2328994	7
Iron		445	0.330	1.00	mg/L	1.00	10					
Sodium		81.3	0.800	2.50	mg/L	1.00	10					
Cobalt		0.481	0.00150	0.00500	mg/L	1.00	5	SKJ	10/18/22	2257	2328994	8
Boron		0.0299	0.00520	0.0150	mg/L	1.00	1	SKJ	10/20/22	0840	2328994	9
Magnesium		185	0.100	0.300	mg/L	1.00	10	SKJ	10/21/22	1039	2328994	10
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		3790	2.38	10.0	mg/L			CH6	10/14/22	1445	2329094	11
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 26, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-65I Project: GPCC00101
Sample ID: 596812002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃	U	ND	1.45	4.00	mg/L			VH1	10/25/22	1725	2330275	12
Bicarbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	10/14/22	0950	2328993
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	10/14/22	1140	2329100

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SW846 3005A/6020B	
11	SM 2540C	
12	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: October 26, 2022

Company : Georgia Power Company, Southern Company
 Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
 Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-66I	Project: GPCC00101
Sample ID: 596812003	Client ID: GPCC001
Matrix: WG	
Collect Date: 11-OCT-22 14:20	
Receive Date: 13-OCT-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.81			SU			EOS1	10/11/22	1420	2328940	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride	J	0.0601	0.0330	0.100	mg/L		1	HXC1	10/19/22	1719	2331124	2
Sulfate		1770	26.6	80.0	mg/L		200	HXC1	10/20/22	1315	2331124	3
Chloride		10.8	0.670	2.00	mg/L		10	HXC1	10/20/22	1345	2331124	4
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	10/17/22	1014	2329101	5
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	10/17/22	2157	2328994	6
Arsenic	J	0.00489	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0597	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0193	0.00300	0.0100	mg/L	1.00	1					
Molybdenum	J	0.000918	0.000200	0.00100	mg/L	1.00	1					
Potassium		11.0	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00393	0.00150	0.00500	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Manganese		107	0.500	2.50	mg/L	1.00	500	SKJ	10/19/22	1326	2328994	7
Calcium		200	0.800	2.00	mg/L	1.00	10	SKJ	10/18/22	2255	2328994	8
Sodium		55.6	0.800	2.50	mg/L	1.00	10					
Cobalt		0.364	0.00150	0.00500	mg/L	1.00	5	SKJ	10/18/22	2300	2328994	9
Iron		25.0	0.165	0.500	mg/L	1.00	5					
Boron		0.115	0.00520	0.0150	mg/L	1.00	1	SKJ	10/20/22	0842	2328994	10
Magnesium		285	0.100	0.300	mg/L	1.00	10	SKJ	10/21/22	1041	2328994	11
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		2800	2.38	10.0	mg/L			CH6	10/14/22	1445	2329094	12
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 26, 2022

Company : Georgia Power Company, Southern Company
Address : 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-66I Project: GPCC00101
Sample ID: 596812003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO ₃		68.0	1.45	4.00	mg/L			VH1	10/25/22	1727	2330275	13
Bicarbonate alkalinity (CaCO ₃)		68.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO ₃)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	10/14/22	0950	2328993
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	10/14/22	1140	2329100

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SM 4500-H B/SW846 9040C, SM 2550B	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 300.0	
5	SW846 7470A	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3005A/6020B	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SM 2540C	
13	SM 2320B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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QC Summary

Report Date: October 26, 2022

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Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia

Contact: Joju Abraham

Workorder: 596812

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	2331124										
QC1205221481	595549002	DUP									
Chloride		38.1		38.5	mg/L	0.81 ^		(+/-20.0)	HXC1	10/20/22	06:16
Fluoride	J	0.453	J	0.491	mg/L	7.95 ^		(+/-0.500)		10/20/22	12:15
Sulfate		1180		1190	mg/L	0.695		(0%-20%)		10/20/22	06:16
QC1205221480	LCS										
Chloride	5.00			4.65	mg/L		92.9	(90%-110%)		10/20/22	01:17
Fluoride	2.50			2.46	mg/L		98.3	(90%-110%)			
Sulfate	10.0			9.41	mg/L		94.1	(90%-110%)			
QC1205221479	MB										
Chloride			U	ND	mg/L					10/20/22	00:47
Fluoride			U	ND	mg/L						
Sulfate			U	ND	mg/L						
QC1205221484	595549002	PS									
Chloride	5.00	0.381		5.03	mg/L		93	(90%-110%)		10/20/22	06:45
Fluoride	2.50	J 0.0906		2.59	mg/L		99.9	(90%-110%)		10/20/22	12:45
Sulfate	10.0	11.8		22.1	mg/L		103	(90%-110%)		10/20/22	06:45

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QC Summary

Workorder: 596812

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
QC1205216844	LCS										
Antimony	0.0500			0.0495	mg/L		99	(80%-120%)	SKJ	10/17/22	21:33
Arsenic	0.0500			0.0499	mg/L		99.8	(80%-120%)			
Barium	0.0500			0.0491	mg/L		98.3	(80%-120%)			
Beryllium	0.0500			0.0575	mg/L		115	(80%-120%)			
Boron	0.100			0.119	mg/L		119	(80%-120%)		10/20/22	08:28
Cadmium	0.0500			0.0511	mg/L		102	(80%-120%)		10/17/22	21:33
Calcium	2.00			2.14	mg/L		107	(80%-120%)		10/18/22	22:21
Chromium	0.0500			0.0497	mg/L		99.3	(80%-120%)		10/17/22	21:33
Cobalt	0.0500			0.0513	mg/L		103	(80%-120%)		10/18/22	22:21
Iron	2.00			2.03	mg/L		101	(80%-120%)			
Lead	0.0500			0.0500	mg/L		99.9	(80%-120%)		10/17/22	21:33
Lithium	0.0500			0.0551	mg/L		110	(80%-120%)			
Magnesium	2.00			2.38	mg/L		119	(80%-120%)		10/21/22	10:29
Manganese	0.0500			0.0508	mg/L		102	(80%-120%)		10/18/22	22:21
Molybdenum	0.0500			0.0521	mg/L		104	(80%-120%)		10/17/22	21:33

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QC Summary

Workorder: 596812

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
Potassium	2.00			2.19	mg/L		109	(80%-120%)	SKJ	10/17/22	21:33
Selenium	0.0500			0.0500	mg/L		100	(80%-120%)			
Sodium	2.00			2.18	mg/L		109	(80%-120%)		10/18/22	22:21
Thallium	0.0500			0.0489	mg/L		97.8	(80%-120%)		10/17/22	21:33
QC1205216843	MB										
Antimony			U	ND	mg/L					10/17/22	21:30
Arsenic			U	ND	mg/L						
Barium			U	ND	mg/L						
Beryllium			U	ND	mg/L						
Boron			U	ND	mg/L					10/20/22	08:26
Cadmium			U	ND	mg/L					10/17/22	21:30
Calcium			U	ND	mg/L					10/18/22	22:19
Chromium			U	ND	mg/L					10/17/22	21:30
Cobalt			U	ND	mg/L					10/18/22	22:19
Iron			U	ND	mg/L						
Lead			U	ND	mg/L					10/17/22	21:30

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QC Summary

Workorder: 596812

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
Lithium			U	ND	mg/L				SKJ	10/17/22	21:30
Magnesium			U	ND	mg/L					10/21/22	10:27
Manganese			U	ND	mg/L					10/18/22	22:19
Molybdenum			U	ND	mg/L					10/17/22	21:30
Potassium			U	ND	mg/L						
Selenium			U	ND	mg/L						
Sodium			U	ND	mg/L					10/18/22	22:19
Thallium			U	ND	mg/L					10/17/22	21:30
QC1205216845 596812001 MS											
Antimony	0.0500	U	ND	0.0451	mg/L		89.9	(75%-125%)		10/17/22	21:40
Arsenic	0.0500		0.00896	0.0572	mg/L		96.5	(75%-125%)			
Barium	0.0500		0.0543	0.102	mg/L		96.1	(75%-125%)			
Beryllium	0.0500		0.000600	0.0509	mg/L		101	(75%-125%)			
Boron	0.100		0.0152	0.124	mg/L		109	(75%-125%)		10/20/22	08:32
Cadmium	0.0500	U	ND	0.0440	mg/L		87.7	(75%-125%)		10/17/22	21:40
Calcium	2.00		320	323	mg/L		N/A	(75%-125%)		10/18/22	22:45

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QC Summary

Workorder: 596812

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
Chromium	0.0500	U	ND	0.0480	mg/L		95.2	(75%-125%)	SKJ	10/17/22	21:40
Cobalt	0.0500		9.05	8.97	mg/L		N/A	(75%-125%)		10/18/22	22:45
Iron	2.00		1.98	3.93	mg/L		97.5	(75%-125%)		10/18/22	23:09
Lead	0.0500	U	ND	0.0427	mg/L		85.2	(75%-125%)		10/17/22	21:40
Lithium	0.0500		0.0181	0.0747	mg/L		113	(75%-125%)			
Magnesium	2.00		254	257	mg/L		N/A	(75%-125%)		10/21/22	10:33
Manganese	0.0500		399	388	mg/L		N/A	(75%-125%)		10/18/22	22:26
Molybdenum	0.0500	J	0.000432	0.0543	mg/L		108	(75%-125%)		10/17/22	21:40
Potassium	2.00		14.6	16.4	mg/L		N/A	(75%-125%)			
Selenium	0.0500		0.0171	0.0669	mg/L		99.6	(75%-125%)			
Sodium	2.00		61.7	63.0	mg/L		N/A	(75%-125%)		10/18/22	22:45
Thallium	0.0500	U	ND	0.0445	mg/L		88.9	(75%-125%)		10/17/22	21:40
QC1205216846 596812001 MSD											
Antimony	0.0500	U	ND	0.0465	mg/L	2.98	92.7	(0%-20%)		10/17/22	21:43
Arsenic	0.0500		0.00896	0.0573	mg/L	0.192	96.7	(0%-20%)			
Barium	0.0500		0.0543	0.102	mg/L	0.199	95.7	(0%-20%)			

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QC Summary

Workorder: 596812

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
Beryllium	0.0500	0.000600		0.0511	mg/L	0.437	101	(0%-20%)	SKJ	10/17/22	21:43
Boron	0.100	0.0152		0.124	mg/L	0.0655	108	(0%-20%)		10/20/22	08:34
Cadmium	0.0500	U	ND	0.0451	mg/L	2.46	89.9	(0%-20%)		10/17/22	21:43
Calcium	2.00		320	309	mg/L	4.19	N/A	(0%-20%)		10/18/22	22:47
Chromium	0.0500	U	ND	0.0483	mg/L	0.725	95.9	(0%-20%)		10/17/22	21:43
Cobalt	0.0500		9.05	8.81	mg/L	1.88	N/A	(0%-20%)		10/18/22	22:47
Iron	2.00		1.98	3.90	mg/L	0.853	95.8	(0%-20%)		10/18/22	23:12
Lead	0.0500	U	ND	0.0426	mg/L	0.0961	85.1	(0%-20%)		10/17/22	21:43
Lithium	0.0500		0.0181	0.0752	mg/L	0.663	114	(0%-20%)			
Magnesium	2.00		254	247	mg/L	3.96	N/A	(0%-20%)		10/21/22	10:35
Manganese	0.0500		399	379	mg/L	2.41	N/A	(0%-20%)		10/18/22	22:28
Molybdenum	0.0500	J	0.000432	0.0554	mg/L	2.13	110	(0%-20%)		10/17/22	21:43
Potassium	2.00		14.6	16.5	mg/L	0.274	N/A	(0%-20%)			
Selenium	0.0500		0.0171	0.0664	mg/L	0.617	98.8	(0%-20%)			
Sodium	2.00		61.7	62.2	mg/L	1.26	N/A	(0%-20%)		10/18/22	22:47

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QC Summary

Workorder: 596812

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
Thallium	0.0500	U	ND	0.0438	mg/L	1.44	87.6	(0%-20%)	SKJ	10/17/22	21:43
QC1205216847 596812001 SDILT											
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/17/22	21:50
Arsenic			8.96	U	ND	ug/L	N/A	(0%-20%)			
Barium			54.3		10.6	ug/L	1.98	(0%-20%)			
Beryllium			0.600	U	ND	ug/L	N/A	(0%-20%)			
Boron			15.2	J	5.22	ug/L	71.3	(0%-20%)		10/20/22	08:38
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/17/22	21:50
Calcium			32000		6490	ug/L	1.27	(0%-20%)		10/18/22	22:50
Chromium		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/17/22	21:50
Cobalt			905		180	ug/L	.319	(0%-20%)		10/18/22	22:50
Iron			1980		413	ug/L	4.16	(0%-20%)		10/18/22	23:16
Lead		U	ND	U	ND	ug/L	N/A	(0%-20%)		10/17/22	21:50
Lithium			18.1	J	3.45	ug/L	4.53	(0%-20%)			
Magnesium			25400		5060	ug/L	.174	(0%-20%)		10/21/22	10:37
Manganese			799		158	ug/L	1.06	(0%-20%)		10/18/22	22:31

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QC Summary

Workorder: **596812**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	2328994										
Molybdenum	J	0.432	U	ND	ug/L	N/A		(0%-20%)	SKJ	10/17/22	21:50
Potassium		14600		2870	ug/L	1.65		(0%-20%)			
Selenium		17.1	J	4.03	ug/L	17.9		(0%-20%)			
Sodium		6170		1240	ug/L	.35		(0%-20%)		10/18/22	22:50
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		10/17/22	21:50
Metals Analysis-Mercury											
Batch	2329101										
QC1205217057	595440001	DUP									
Mercury	U	ND	U	ND	mg/L	N/A			JP2	10/17/22	09:32
QC1205217056	LCS										
Mercury	0.00200			0.00217	mg/L		109	(80%-120%)		10/17/22	09:25
QC1205217055	MB										
Mercury			U	ND	mg/L					10/17/22	09:23
QC1205217058	595440001	MS									
Mercury	0.00200	U	ND	0.00228	mg/L		114	(75%-125%)		10/17/22	09:34
QC1205217059	595440001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		10/17/22	09:35
Solids Analysis											
Batch	2329094										
QC1205217039	596535001	DUP									
Total Dissolved Solids		229		221	mg/L	3.56		(0%-5%)	CH6	10/14/22	14:45

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QC Summary

Workorder: **596812**

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch	2329094										
QC1205217037	LCS										
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)	CH6	10/14/22	14:45
QC1205217036	MB										
Total Dissolved Solids			U	ND	mg/L					10/14/22	14:45
Titration and Ion Analysis											
Batch	2330275										
QC1205219646	596535001 DUP										
Alkalinity, Total as CaCO3		162		162	mg/L	0.247		(0%-20%)	VH1	10/25/22	16:54
Bicarbonate alkalinity (CaCO3)		162		162	mg/L	0.247		(0%-20%)			
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A				
QC1205219645	LCS										
Alkalinity, Total as CaCO3	100			106	mg/L		106	(90%-110%)		10/25/22	16:54
QC1205219647	596535001 MS										
Alkalinity, Total as CaCO3	100	162		260	mg/L		98.2	(80%-120%)		10/25/22	17:01

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.

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QC Summary

Workorder: 596812

Page 10 of 10

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative
Georgia Power Company
SDG #: 596812**

Metals

Product: Determination of Metals by ICP-MS

Analytical Method: SW846 3005A/6020B

Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2328994

Preparation Method: SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

Preparation Batch: 2328993

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596812001	PZ-64I
596812002	PZ-65I
596812003	PZ-66I
1205216843	Method Blank (MB)ICP-MS
1205216844	Laboratory Control Sample (LCS)
1205216847	596812001(PZ-64IL) Serial Dilution (SD)
1205216845	596812001(PZ-64IS) Matrix Spike (MS)
1205216846	596812001(PZ-64ISD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements

The CRDL standard recoveries for SW846 6020A/6020B met the advisory control limits with the exception of calcium. Client sample concentrations were greater than two times the CRDL; therefore the data were not adversely affected.

ICSA/ICSAB Statement

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Technical Information

Sample Dilutions

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples 596812001 (PZ-64I), 596812002

(PZ-65I) and 596812003 (PZ-66I) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	596812		
	001	002	003
Calcium	10X	10X	10X
Cobalt	10X	5X	5X
Iron	1X	10X	5X
Magnesium	10X	10X	10X
Manganese	500X	100X	500X
Sodium	10X	10X	10X

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Analytical Method: SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 38

Analytical Batch: 2329101

Preparation Method: SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

Preparation Batch: 2329100

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596812001	PZ-64I
596812002	PZ-65I
596812003	PZ-66I
1205217055	Method Blank (MB)CVAA
1205217056	Laboratory Control Sample (LCS)
1205217059	595440001(NonSDGL) Serial Dilution (SD)
1205217057	595440001(NonSDGD) Sample Duplicate (DUP)
1205217058	595440001(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

General Chemistry

Product: Ion Chromatography

Analytical Method: EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

Analytical Batch: 2331124

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596812001	PZ-64I
596812002	PZ-65I
596812003	PZ-66I
1205221479	Method Blank (MB)
1205221480	Laboratory Control Sample (LCS)
1205221481	595549002(NonSDG) Sample Duplicate (DUP)
1205221484	595549002(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Sample Dilutions

The following samples 1205221481 (Non SDG 595549002DUP), 1205221484 (Non SDG 595549002PS), 596812001 (PZ-64I), 596812002 (PZ-65I) and 596812003 (PZ-66I) were diluted because target analyte concentrations exceeded the calibration range. Samples 1205221481 (Non SDG 595549002DUP) and 1205221484 (Non SDG 595549002PS) were diluted to minimize matrix effects on instrument performance. Samples 1205221481 (Non SDG 595549002DUP) and 1205221484 (Non SDG 595549002PS) were diluted based on historical data. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	596812		
	001	002	003
Chloride	200X	200X	10X
Sulfate	200X	200X	200X

Product: Solids, Total Dissolved

Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

Analytical Batch: 2329094

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596812001	PZ-64I
596812002	PZ-65I
596812003	PZ-66I
1205217036	Method Blank (MB)
1205217037	Laboratory Control Sample (LCS)
1205217039	596535001(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Consecutive Weight Checks

In order to meet consecutive weight check criteria, weight events must be within 0.0005g of each other. After initial weight checks failed this criteria, the analyst performed two additional weight events. After four weight events, the analyst was unable to get the samples to conform to the criteria. The failure to meet weigh back criteria is attributed to the matrix of the samples. 1205217039 (Non SDG 596535001DUP) and 596812001 (PZ-64I).

Product: Alkalinity

Analytical Method: SM 2320B

Analytical Procedure: GL-GC-E-033 REV# 14

Analytical Batch: 2330275

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596812001	PZ-64I
596812002	PZ-65I
596812003	PZ-66I
1205219645	Laboratory Control Sample (LCS)
1205219646	596535001(NonSDG) Sample Duplicate (DUP)
1205219647	596535001(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

596812 / 596814

Pages: _____ of _____
 Project # _____
 GEL Quote # _____
 COC Number 01 _____
 PO Number _____
 Client Name: GA Power
 Project/Site Name: Plant Branch A-P-B Additional
 Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent
 GEL Work Order Number: _____
 Phone # 404-506-7116
 Fax # _____



Labo...ries LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Trent

GEL Laboratories, LLC
 2040 Seaverg Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	Date Collected (mm/dd/yy)	Time Collected (M/Min)	QC Code(s)	Field Filtered (Y/N)	Sample Matrix (WG)	Should this sample be considered:		Sample Analysis Requested (3) (Fill in the number of containers for each test)					Comments	
						Known or possible (Y/N)	Radioactive (if yes, please supply isotopes)	As	Se	Co	Cr	Other		Preservative Type (6)
PZ-64 I	10/12/22	1000	G	N	WG	N	N	0	0	0	0	0	0	field pH = 5.53
PZ-65 I	10/11/22	1430	G	N	WG	N	N	0	0	0	0	0	0	field pH = 4.16
PZ-66 I	10/11/22	1420	G	N	WG	N	N	0	0	0	0	0	0	field pH = 5.41
ISRLS														
10-48422														

Chain of Custody Signatures			
Refiniquished By (Signed)	Date	Time	Date
T. Goble	10-13-22	1025	10/13/22

TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharges)

For Lab Receiving Use Only: Custody Seal Intact? Yes No Cooler Temp: 16 °C

Sample Collection Time Zone: Eastern Central Mountain Other:

Additional Remarks: * Metals: B, Ca, Si, Al, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mn, Se, Tl, Hg

Select Deliverable: C of A I OC Summary Level 1 Level 2 Level 3 Level 4

For Liquid Matrixes, Indicate with a - Y - For yes the sample was field filtered or - N - For sample was not field filtered.

Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WY=Waste Water, WL=Leachate, SOW=Soil, SED=Sediment, SL=Sludge, WQ=Water Quality Control Matrix

Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B -3, 6010B/7470A - 1).

Preservative Type: EA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Acetic Acid, BX = Hexane, ST = Sodium Thiosulfate. If no preservative is added - leave field blank.

KNOWN OR POSSIBLE HAZARDS

Characteristic Hazards: _____
 FL = Flammable/ignitable
 CO = Corrosive
 RE = Reactive
 TSCA Registered
 PCB = Polychlorinated biphenyls

Other: _____
 OT = Other / Unknown
 (i.e.: High/Low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
 Description: _____

Please provide any additional details below regarding handling and/or disposal concerns (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

SAMPLE RECEIPT & REVIEW FORM

Client: <u>GPEC</u>		SDG/AR/COC/Work Order: <u>596814/596812</u>		
Received By: <u>PL</u>		Date Received: <u>10/13/00</u> <u>10/13/02</u>		
Carrier and Tracking Number		Circle Applicable:		
		FedEx Express FedEx Ground UPS Field Services <u>Courier</u> Other		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___	
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> <u>0</u> <u>0</u> mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____	
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>1</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>RS-21</u> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?			<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>			
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):				

PM (or PMA) review: Initials [Signature] Date 10/17/00 Page 1 of 1

List of current GEL Certifications as of 26 October 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



November 10, 2022

Joju Abraham
Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Branch CCR Groundwater Compliance APB
Work Order: 596814


Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 13, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

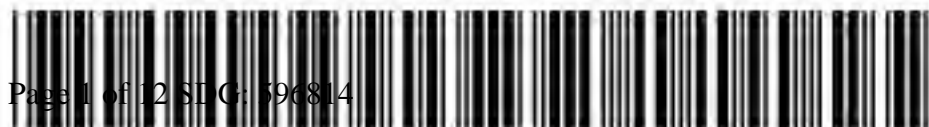
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,


Adrian Melendrez for
Erin Trent
Project Manager

Purchase Order: GPC82177-0003
Enclosures



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GPCC001 Georgia Power Company

Client SDG: 596814 GEL Work Order: 596814

The Qualifiers in this report are defined as follows:

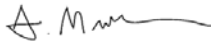
- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Erin Trent.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: November 10, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-64I
 Sample ID: 596814001
 Matrix: WG
 Collect Date: 12-OCT-22
 Receive Date: 13-OCT-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228		1.66	+/-0.938	1.32	+/-1.03	3.00	pCi/L			JE1	11/01/22	0940	2331101	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum		2.14	+/-0.959	1.32	+/-1.05		pCi/L		1	NXL1	11/10/22	0808	2331108	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.478	+/-0.201	0.210	+/-0.218	1.00	pCi/L			LXP1	11/09/22	0901	2331063	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2331101	75.6	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

- | | |
|---------------------------------------|-----------------------------------|
| DF: Dilution Factor | Mtd.: Method |
| DL: Detection Limit | PF: Prep Factor |
| Lc/LC: Critical Level | RL: Reporting Limit |
| MDA: Minimum Detectable Activity | TPU: Total Propagated Uncertainty |
| MDC: Minimum Detectable Concentration | |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: November 10, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-651

Project: GPCC00101

Sample ID: 596814002

Client ID: GPCC001

Matrix: WG

Collect Date: 11-OCT-22

Receive Date: 13-OCT-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.270	+/-1.15	2.08	+/-1.15	3.00	pCi/L			JE1	11/01/22	0940	2331101	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	0.451	+/-1.15	2.08	+/-1.16		pCi/L		1	NXL1	11/10/22	0808	2331108	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.181	+/-0.123	0.139	+/-0.126	1.00	pCi/L			LXP1	11/09/22	0951	2331063	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2331101	76.5	(15%-125%)

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
 Address : Company
 241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: November 10, 2022

Contact: Joju Abraham
 Project: Branch CCR Groundwater ComplianceAPB

Client Sample ID: PZ-66I
 Sample ID: 596814003
 Matrix: WG
 Collect Date: 11-OCT-22
 Receive Date: 13-OCT-22
 Collector: Client

Project: GPCC00101
 Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC Ra228, Liquid "As Received"</i>														
Radium-228	U	0.950	+/-1.29	2.21	+/-1.31	3.00	pCi/L			JE1	11/01/22	0940	2331101	1
<i>Radium-226+Radium-228 Calculation "See Parent Products"</i>														
Radium-226+228 Sum	U	1.36	+/-1.30	2.21	+/-1.33		pCi/L		1	NXL1	11/10/22	0808	2331108	2
Rad Radium-226														
<i>Lucas Cell, Ra226, Liquid "As Received"</i>														
Radium-226		0.407	+/-0.174	0.173	+/-0.185	1.00	pCi/L			LXP1	11/09/22	0951	2331063	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2331101	73.3	(15%-125%)

Notes:
 The MDC is a sample specific MDC.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

**Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 596814**

Product: Radium-226+Radium-228 Calculation

Analytical Method: Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

Analytical Batch: 2331108

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596814001	PZ-64I
596814002	PZ-65I
596814003	PZ-66I

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC Ra228, Liquid

Analytical Method: EPA 904.0/SW846 9320 Modified

Analytical Procedure: GL-RAD-A-063 REV# 5

Analytical Batch: 2331101

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596814001	PZ-64I
596814002	PZ-65I
596814003	PZ-66I
1205221429	Method Blank (MB)
1205221430	596535001(NonSDG) Sample Duplicate (DUP)
1205221431	596535001(NonSDG) Matrix Spike (MS)
1205221432	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1205221431 (Non SDG 596535001MS), aliquot was reduced to conserve sample volume.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2331063

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
596814001	PZ-64I
596814002	PZ-65I
596814003	PZ-66I
1205221327	Method Blank (MB)
1205221328	596686001(NonSDG) Sample Duplicate (DUP)
1205221329	596686001(NonSDG) Matrix Spike (MS)
1205221330	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information**Additional Comments**

The matrix spike, 1205221329 (Non SDG 596686001MS), aliquot was reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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QC Summary

Report Date: November 10, 2022
Page 1 of 2

Client : Georgia Power Company, Southern Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 596814

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2331101										
QC1205221430	596535001 DUP										
Radium-228	U	-0.665	U	0.522	pCi/L	0		N/A	JE1	11/01/22	09:39
	Uncert:	+/-1.09		+/-0.997							
	TPU:	+/-1.09		+/-1.01							
QC1205221432	LCS										
Radium-228	65.5			63.9	pCi/L		97.6	(75%-125%)	JE1	11/01/22	09:40
	Uncert:			+/-4.11							
	TPU:			+/-16.6							
QC1205221429	MB										
Radium-228			U	0.810	pCi/L				JE1	11/01/22	09:39
	Uncert:			+/-1.57							
	TPU:			+/-1.58							
QC1205221431	596535001 MS										
Radium-228	384	U	-0.665	349	pCi/L		90.7	(75%-125%)	JE1	11/01/22	09:39
	Uncert:		+/-1.09	+/-23.2							
	TPU:		+/-1.09	+/-90.3							
Rad Ra-226											
Batch	2331063										
QC1205221328	596686001 DUP										
Radium-226		0.241		0.371	pCi/L	42.6		(0% - 100%)	LXP1	11/09/22	09:51
	Uncert:	+/-0.143		+/-0.154							
	TPU:	+/-0.153		+/-0.172							
QC1205221330	LCS										
Radium-226	16.6			13.7	pCi/L		82.5	(75%-125%)	LXP1	11/09/22	09:51
	Uncert:			+/-0.904							
	TPU:			+/-3.44							
QC1205221327	MB										
Radium-226			U	0.126	pCi/L				LXP1	11/09/22	09:51
	Uncert:			+/-0.144							
	TPU:			+/-0.146							
QC1205221329	596686001 MS										
Radium-226	130	0.241		116	pCi/L		89.2	(75%-125%)	LXP1	11/09/22	09:51
	Uncert:	+/-0.143		+/-7.94							
	TPU:	+/-0.153		+/-27.7							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported

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QC Summary

Workorder: 596814

Page 2 of 2

Parname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>	Result is greater than value reported									
BD	Results are either below the MDC or tracer recovery is low									
FA	Failed analysis.									
H	Analytical holding time was exceeded									
J	See case narrative for an explanation									
J	Value is estimated									
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.									
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.									
M	M if above MDC and less than LLD									
M	REMP Result > MDC/CL and < RDL									
N/A	RPD or %Recovery limits do not apply.									
N1	See case narrative									
ND	Analyte concentration is not detected above the detection limit									
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.									
R	Sample results are rejected									
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
UI	Gamma Spectroscopy--Uncertain identification									
UJ	Gamma Spectroscopy--Uncertain identification									
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
h	Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

596812/596814

Page: _____ of _____
 Project # _____
 GEL Quote #: _____
 COC Number: _____
 PO Number: _____
 Client Name: GA Power
 Project Name: Plant Bunch AP-B Additional
 Address: 241 Ralph McGill Blvd SE, Atlanta GA, 30308
 Collected By: T. Gobler / S. Denisford
 * For composites - indicate start and stop date/time



GEL Laboratories LLC
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics
 Chain of Custody and Analytical Request
 GEL Project Manager: Erin Irent

GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

Sample ID	Date Collected (mm/dd/yyyy)	Time Collected (hh:mm)	QC Code (if any)	Field Filtered (Y/N)	Sample Matrix (e.g., WG)	Is Radioactive (if yes, please supply isotopes)	Is it Known or Suspect (Y/N)	Should this sample be considered (Y/N)	Sample Analysis Requested (6)				Comments
									As	Se	Th	U	
PZ-64I	10/12/22	1000	G	N	WG		N	N	☑	☑	☑	☑	Note: extra sample is required for sample specific QC field pH = 5.53 field pH = 4.16 field pH = 5.91
PZ-65I	10/11/22	1430	G	N	WG		N	N	☑	☑	☑	☑	
PZ-66I	10/11/22	1420	G	N	WG		N	N	☑	☑	☑	☑	
Blank													

Chain of Custody Signatures		
Requisitioned By (Signed)	Date	Time
<i>[Signature]</i>	10-13-22	1025
<i>[Signature]</i>	10/13/22	1625

TAT Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharge)

For Lab Receiving Use Only: Custody Seal Intact? Yes No Other: _____

Sample Collection Time Zone: Eastern Pacific Central Mountain Other: _____

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

1.) Chain of Custody Number = Client Determined

2.) QC Codes: N = Normal Sample, TB = Trip Blank, ED = Field Duplicate, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or a N - for no sample was not field filtered.

4.) Matrix Codes: WD=Drinking Water, WC=Groundwater, WS=Surface Water, WY=Waste Water, WL=Lachete, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. 8200B, 6010B/7470A) and number of containers provided for each (i.e. 8200B - 3, 6010B/7470A - 1).

6.) Preservative Type: EA = Hydrochloric Acid, NI = Nitric Acid, SE = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, EX = Hexane, ST = Sodium Thiosulfate, if no preservative is added = leave field blank

7.) KNOWN OR POSSIBLE HAZARDS

RCRA Metals	Hg=Mercury
As=Arsonic	Se=Selenium
Ba=Barium	Ag=Silver
Cd=Cadmium	MIR=Misc. RCRA metals
Cr=Chromium	
Pb=Lead	

Characteristics Hazards: _____
 Listed Waste: _____
 LW=Listed Waste
 (F, K, P and L-listed wastes, etc.)
 Waste code(s): _____
 Description: _____

Other: _____
 OT=Other / Unknown
 (i.e.: Highway pH, asbestos, beryllium, bromines, other misc. health hazards, etc.)

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd marriages, etc.)

SAMPLE RECEIPT & REVIEW FORM

Client: GPEL SDG/AR/COC/Work Order: 596814/596812
 Received By: PL Date Received: 10/19/08 10/13/08
 Carrier and Tracking Number: _____
 FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information

Yes No *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous? Yes No Hazard Class Shipped: _____ UN#: _____
 If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___

B) Did the client designate the samples are to be received as radioactive? Yes No COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive? Yes No Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 OPM mR/Hr
 Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous? Yes No COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards? Yes No If D or E is yes, select Hazards below.
 PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>1</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>RS-21</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials [Signature] Date 10/17/08 Page 1 of 1

List of current GEL Certifications as of 10 November 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

VALIDATION REPORTS

Fall 2022

Memorandum

Date: 31 October 2022
To: Max Cange
From: Ashley Wilson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – GEL Laboratories, LLC Work Orders 590838, 590845, 590855, 590857, 591351, 591355, 591881 and 591887**

SITE: Plant Branch CCR Groundwater Compliance AP-BCD and AP-E

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of forty groundwater samples, four equipment blanks, four field blanks and four field duplicate samples, collected 23-25 August 2022, as part of the Plant Branch on-site sampling event.

The samples were analyzed at GEL Laboratories LLC, Charleston, SC, for the following analytical tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3005A/6020B
- Mercury by US EPA Method 7470A
- Anions (Chloride, Fluoride and Sulfate) by US EPA Method 300.0
- Total Dissolved Solids (TDS) by Standard Method (SM) 2540C
- Alkalinity by SM 2320B

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. Qualified data should be used within the limitations of the qualifications.

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

US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011); and

the USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006).

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

Laboratory IDs	Client IDs
590838001	BRGWA-2S
590838002	BRGWA-2I
590838003	BRGWA-5S
590838004	BRGWA-5I
590838005	BRGWA-6S
590845001	BRGWA-23S
590845002	BRGWC-47
590845003	EB-05
590855001	BRGWA-12I
590855002	FB-01
590855003	BRGWA-12S
590855004	BRGWC-25I
590857001	BRGWC-33S
590857002	BRGWC-37S
590857003	BRGWC-38S
590857004	PZ-53D
590857005	PZ-13S
590857006	FB-04
591351001	BRGWC-17S
591351002	BRGWC-35S
591351003	BRGWC-36S
591351004	FD-04
591351005	BRGWC-34S
591351006	EB-08
591355001	FD-01
591355002	PZ-58I

Laboratory IDs	Client IDs
591355003	PZ-60I
591355004	FB-02
591355005	BRGWC-29I
591355006	BRGWC-30I
591355007	BRGWC-50
591355008	FD-03
591355009	BRGWC-45
591355010	PZ-44
591355011	PZ-51I
591355012	PZ-51D
591355013	PZ-61I
591355014	PZ-51S
591355015	FD-02
591355016	PZ-50D
591355017	EB-06
591355018	PZ-62I
591355019	PZ-59I
591355020	BRGWC-27I
591355021	FB-03
591355022	PZ-63I
591355023	PZ-57I
591355024	BRGWC-32S
591355025	EB-07
591355026	BRGWC-52I
591881001	PZ-70
591887001	PZ-52D

The samples were received at 1.0, 2.0 and 5.0 degrees Celsius (°C), both within and outside of the EPA Region 4 criteria of 4°C ± 2°C. Since the samples were received between 0-6°C and based on professional judgment, no qualifications were applied to the data. No sample preservation issues were noted by the laboratory.

The sample collection times were not listed on the chain of custody (COC) for field duplicate samples, FD-01, FD-02, FD-03 and FD-04. The laboratory logged the samples in with the collection time of 12:00.

591355 and 590855: Incorrect error corrections were observed on the COCs, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

590838 and 590845: The year was not documented on the COC for the relinquished by date for the second sample transfer.

591881 and 591887: The relinquished by signature, date and time and the received by time for the second sample transfer were not documented on the COC.

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

1.0 METALS

The samples were analyzed for metals by US EPA 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 or not applicable. 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
- ⊗ Field Blank
- ⊗ Equipment Blank
- ✓ Field Duplicate
- ⊗ Serial Dilution
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this laboratory report are considered usable for supporting 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.

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 2308385, 2310153, 2310155 and 2312380). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

591881: Molybdenum was detected in the method blank in batch 2312380 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the molybdenum concentration in sample PZ-70 was J+ qualified as estimated with a high bias.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
PZ-70	Molybdenum	0.00142	NA	0.00142	J+	3

mg/L- milligram per liter

NA-not applicable

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.4 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). Four sample set specific MS/MSD pairs were reported, using samples BRGWA-2S, PZ-51D, PZ-70 and BRGWC-17S. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exception.

590838: The magnesium recovery in the MS using sample BRGWA-2S was high and outside the laboratory specified acceptance criteria and the magnesium recovery in the post digestion spike (PDS) was within the laboratory specified acceptance criteria. Therefore, the magnesium concentration in sample BRGWA-2S was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2S	Magnesium	4.86	NA	4.86	J	4

mg/L- milligram per liter

NA-not applicable

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 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Sodium (0.565 mg/L) and calcium (0.25 mg/L) were detected in FB-01 at concentrations greater than the RLs and magnesium was detected in FB-01 at an estimated concentration greater than the MDL and less than the RL. Iron was detected in FB-04 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated magnesium and iron concentrations in the associated samples were U qualified as not detected at the RLs and based on professional and technical judgment the iron concentrations in samples BRGWA-23S, BRGWC-47 and BRGWC-25I, and sodium and calcium concentrations in the associated samples greater than the RLs and less than ten times the field blank concentration were J+ qualified as estimated with high biases.

Manganese (0.00513 mg/L) was detected in FB-03 at a concentration greater than the RL and sodium and boron were detected in FB-03 at estimated concentrations greater than the MDLs and less than the RLs. Based on the concentration of sodium in the associated samples and professional and technical judgment, no qualifications were applied to the sodium data. However, the estimated manganese concentration in the associated samples were U qualified as not detected at the RL, based on professional and technical judgment the boron concentration in samples EB-07, EB-06 and BRGWC-32S and the manganese concentrations greater than the RLs and less than the times the RLs were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2I	Iron	0.183	NA	0.183	J+	3
BRGWA-2S	Iron	0.0763	J	0.100	U	3
BRGWA-2S	Sodium	3.36	NA	3.36	J+	3
BRGWA-5I	Sodium	4.93	NA	4.93	J+	3
BRGWA-5S	Iron	0.151	NA	0.151	J+	3
BRGWA-5S	Sodium	4.03	NA	4.03	J+	3
BRGWA-6S	Iron	0.0701	J	0.100	U	3
BRGWA-6S	Sodium	2.44	NA	2.44	J+	3
EB-05	Sodium	0.703	NA	0.703	J+	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
EB-05	Magnesium	0.0152	J	0.0300	U	3
EB-05	Calcium	0.313	NA	0.313	J+	3
BRGWA-23S	Iron	0.114	NA	0.114	J+	3
BRGWC-47	Iron	0.101	NA	0.101	J+	3
BRGWA-12S	Sodium	5.41	NA	5.41	J+	3
BRGWC-25I	Iron	0.193	NA	0.193	J+	3
BRGWC-33S	Iron	0.0381	J	0.100	U	3
BRGWC-37S	Sodium	4.51	NA	4.51	J+	3
EB-06	Manganese	0.00523	NA	0.00523	J+	3
EB-07	Manganese	0.00387	J	0.00500	U	3
EB-07	Boron	0.0159	NA	0.0159	J+	3
BRGWC-32S	Manganese	0.0107	NA	0.0107	J+	3

mg/L- milligram per liter

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

NA-not applicable

1.7 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Barium and magnesium were detected in EB-05 at estimated concentrations greater than the MDLs and less than the RLs and sodium (0.703 mg/L) and calcium (0.313 mg/L) were detected in EB-05 at concentrations greater than the RLs. Since the magnesium concentration in EB-05 was U qualified due to field blank contamination and based on the barium concentrations in the associated samples and professional and technical judgment, no additional qualifications were applied to the barium and magnesium data. Also, based on professional and technical judgment, no additional qualifications were applied to the sodium concentrations in the associated samples that were qualified based on field blank contamination. In addition, since the calcium concentrations in the associated samples were greater than ten times the equipment blank concentration, no qualifications were applied to the calcium data. However, the sodium concentration in sample BRGWA-2I was J+ qualified as estimated with high bias.

Manganese was detected in EB-08 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated manganese concentration in the associated sample was U qualified as not detected at the RL.

Manganese (0.00523 mg/L) was detected in EB-06 at a concentration greater than the RL. Manganese was detected in EB-07 at an estimated concentration greater than the MDL and less

than the RL and boron (0.0159 mg/L) was detected in EB-07 at a concentration greater than the RL. Since the associated manganese and boron results were qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2I	Sodium	5.73	NA	5.73	J+	3
BRGWC-36S	Manganese	0.00295	J	0.00500	U	3
FD-04	Manganese	0.00286	J	0.00500	U	3

mg/L- milligram per liter

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

NA-not applicable

1.8 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision ($RPD \leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively.

1.9 Serial Dilution

Two sample set specific serial dilutions were reported for metals using samples PZ-70, BRGWC-17S, BRGWC-33S, BRGWA-2S and PZ-51D. The percent difference (%D) results were within the method specified acceptance criteria, with the following exception.

590838: The %D of magnesium in the serial dilution using sample BRGWA-2S was greater than 10% and the sample concentration was greater than 50 times the MDL. Therefore, the magnesium concentration in sample BRGWA-2S was J qualified as estimated.

Two batch serial dilutions were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2S	Magnesium	4.86	NA	4.86	J	8

mg/L- milligram per liter

NA-not applicable

1.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.11 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by US EPA 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 or not applicable. 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
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Serial Dilution
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

2.1 Overall Assessment

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

2.2 Holding Time

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met.

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 2308549, 2308555, 2310246, 2310248 and 2312733). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike

MSs 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 was reported using sample PZ-58I.

591355: The mercury recovery in the MS was low and outside laboratory specified acceptance criteria and the recovery of mercury in the PDS was also low and outside of laboratory specified acceptance criteria. Therefore, the mercury result in sample PZ-58I was UJ qualified as estimated below the RL.

Four batch MSs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
PZ-58I	Mercury	0.000067	U	0.000067	UJ	4

mg/L- milligram per liter

U-not detected at or above the MDL

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 Laboratory Duplicate

One sample set specific MS was reported using sample PZ-58I. The RPD result was within the laboratory specified acceptance criteria.

Four batch laboratory duplicates were reported for mercury. 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 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. Mercury was not detected in the field blanks above the MDL.

2.8 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. Mercury was not detected in the equipment blanks above the MDL.

2.9 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision ($RPD < 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively.

2.10 Serial Dilution

One sample set specific serial dilution was performed on sample PZ-58I. The %D results were within the method specified acceptance criteria. Four batch serial dilutions were also reported for mercury. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.11 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.12 Electronic Data Deliverable Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

3.0 WET CHEMISTRY

The samples were analyzed for anions by US EPA method 300.0, TDS by SM 2540C and alkalinity by SM 2320B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. 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
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ⊗ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this laboratory report are considered usable for supporting 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 time for the anion (fluoride, chloride, sulfate) analyses of a water sample are 28 days from sample collection to analysis. The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding times were met.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five method blanks were reported for anions (batches 2310523, 2310658, 2310688, 2308691 and 2312366). Six method blanks were reported for TDS (batches 2308573, 2309029, 2309058, 2310249, 2313724 and 2310760). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike

Six sample set specific MSs were reported for anions, using samples BRGWA-2S, BRGWC-17S, BRGWC-29I, FD-02, BRGWC-52I, and BRGWC-33S. Six sample set specific MSs were reported for total alkalinity, using samples BRGWA-2S, BRGWC-17S, BRGWC-52I, PZ-51D and FD-03, BRGWC-33S. The recovery results were within the laboratory specified acceptance criteria, with the following exceptions

590838: The recovery of sulfate in the MS using sample BRGWA-2S was high and outside the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample BRGWA-2S was J+ qualified as estimated with a high bias.

591355: The recoveries of chloride in the MSs using samples BRGWC-29I, FD-02 and BRGWC-52I were high and outside the laboratory specified acceptance criteria. Therefore, the chloride concentrations in samples BRGWC-29I, FD-02 and BRGWC-52I were J+ qualified as estimated with high biases.

Batch MSs were also reported for alkalinity and anions. Since the batch QC results do not affect the samples in this data set, qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2S	Sulfate	0.452	NA	0.452	J+	4
BRGWC-29I	Chloride	5.84	NA	5.84	J+	4
BRGWC-52I	Chloride	6.27	NA	6.27	J+	4
FD-02	Chloride	4.20	NA	4.20	J+	4

mg/L- milligram per liter

NA-not applicable

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). An LCS was reported for each analytical batch per analysis. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Six sample set specific laboratory duplicates were reported for anions, using samples BRGWA-2S, BRGWC-29I, FD-02, BRGWC-17S, BRGWC-33S and BRGWC-52I. Six sample set specific laboratory duplicates were reported for alkalinity, using samples BRGWA-2S, PZ-51D, FD-03, BRGWC-52I, BRGWC-17S and BRGWC-33S. Three sample set specific laboratory duplicates were reported for TDS using samples BRGWC-50, BRGWC-32S and BRGWC-33S.

Batch laboratory duplicates were reported for TDS, alkalinity and anions. Since the batch QC results do not affect the samples in this data set, qualifications were not applied to the data. The RPD results were within the laboratory specified acceptance criteria.

3.7 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs with the following exceptions.

Chloride was detected in FB-01 at an estimated concentration greater than the MDL and less than the RL and alkalinity (31.0 mg/L) was detected in FB-01 at a concentration greater than the RL. Chloride (0.329 mg/L) and alkalinity (33.2 mg/L) were detected in FB-04 at concentrations greater than the RLs. Therefore, the estimated total alkalinity and bicarbonate alkalinity concentrations in the associated sample were U qualified as not detected at the RLs, the total alkalinity and bicarbonate alkalinity concentrations in the associated samples greater than the RLs and less than the field blank concentrations were U qualified as not detected at the reported concentrations and the chloride, total alkalinity and bicarbonate alkalinity concentrations in the associated samples greater than the RLs and less than ten times the RLs were J+ qualified as estimated with high biases.

Chloride (0.207 mg/L) was detected in FB-02 at a concentration greater than the RL and alkalinity was detected in FB-02 at an estimated concentration greater than the MDL and less than the RL. Since the chloride concentrations in the associated samples were greater than ten times the field blank concentration, no qualifications were applied to the chloride data. However, the estimated total alkalinity and bicarbonate alkalinity concentrations in the associated sample were U qualified as not detected at the RL.

Fluoride and alkalinity were detected in FB-03 at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the estimated chloride, total alkalinity and bicarbonate alkalinity concentrations in the associated samples were U qualified as not detected at the RLs and based on professional and technical judgment the fluoride concentrations in samples BRGWC-27I,

BRGWC-32S, BRGWC-45, BRGWC-52I, FD-03, PZ-44, PZ-50D, PZ-57I and PZ-63I were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-23S	Chloride	3.16	NA	3.16	J+	3
BRGWC-37S	Chloride	1.97	NA	1.97	J+	3
EB-07	Fluoride	0.0758	J	0.100	U	3
BRGWC-27I	Fluoride	0.234	NA	0.234	J+	3
BRGWC-32S	Fluoride	0.138	NA	0.138	J+	3
BRGWC-45	Fluoride	0.166	NA	0.166	J+	3
RGWC-52I	Fluoride	0.157	NA	0.157	J+	3
FD-03	Fluoride	0.163	NA	0.163	J+	3
PZ-44	Fluoride	0.184	NA	0.184	J+	3
PZ-50D	Fluoride	0.106	NA	0.106	J+	3
PZ-57I	Fluoride	0.235	NA	0.235	J+	3
PZ-63I	Fluoride	0.235	NA	0.235	J+	3
EB-05	Alkalinity, Total as CaCO ₃	20.6	NA	20.6	U	3
EB-05	Bicarbonate alkalinity (CaCO ₃)	20.6	NA	20.6	U	3
BRGWA-2I	Bicarbonate alkalinity (CaCO ₃)	62.4	NA	62.4	J+	3
BRGWA-2I	Alkalinity, Total as CaCO ₃	62.4	NA	62.4	J+	3
BRGWA-2S	Bicarbonate alkalinity (CaCO ₃)	32.6	NA	32.6	J+	3
BRGWA-2S	Alkalinity, Total as CaCO ₃	32.6	NA	32.6	J+	3
BRGWA-5I	Bicarbonate alkalinity (CaCO ₃)	72.8	NA	72.8	J+	3
BRGWA-5I	Alkalinity, Total as CaCO ₃	72.8	NA	72.8	J+	3
BRGWA-5S	Bicarbonate alkalinity (CaCO ₃)	73.8	NA	73.8	J+	3
BRGWA-5S	Alkalinity, Total as CaCO ₃	73.8	NA	73.8	J+	3
BRGWA-6S	Bicarbonate alkalinity (CaCO ₃)	58.2	NA	58.2	J+	3
BRGWA-6S	Alkalinity, Total as CaCO ₃	58.2	NA	58.2	J+	3
BRGWA-23S	Bicarbonate alkalinity (CaCO ₃)	30.4	NA	30.4	U	3
BRGWA-23S	Alkalinity, Total as CaCO ₃	30.4	NA	30.4	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWC-47	Bicarbonate alkalinity (CaCO ₃)	28.4	NA	28.4	U	3
BRGWC-47	Alkalinity, Total as CaCO ₃	28.4	NA	28.4	U	3
BRGWA-12I	Bicarbonate alkalinity (CaCO ₃)	65.8	NA	65.8	J+	3
BRGWA-12I	Alkalinity, Total as CaCO ₃	65.8	NA	65.8	J+	3
BRGWA-12S	Bicarbonate alkalinity (CaCO ₃)	32.0	NA	32.0	U	3
BRGWA-12S	Alkalinity, Total as CaCO ₃	32.0	NA	32.0	U	3
BRGWC-25I	Bicarbonate alkalinity (CaCO ₃)	75.6	NA	75.6	J+	3
BRGWC-25I	Alkalinity, Total as CaCO ₃	75.6	NA	75.6	J+	3
BRGWC-33S	Bicarbonate alkalinity (CaCO ₃)	3.40	J	4.00	U	3
BRGWC-33S	Alkalinity, Total as CaCO ₃	3.40	J	4.00	U	3
BRGWC-37S	Bicarbonate alkalinity (CaCO ₃)	21.2	NA	21.2	U	3
BRGWC-37S	Alkalinity, Total as CaCO ₃	21.2	NA	21.2	U	3
PZ-13S	Bicarbonate alkalinity (CaCO ₃)	21.4	NA	21.4	U	3
PZ-13S	Alkalinity, Total as CaCO ₃	21.4	NA	21.4	U	3
PZ-53D	Bicarbonate alkalinity (CaCO ₃)	82.8	NA	82.8	J+	3
PZ-53D	Alkalinity, Total as CaCO ₃	82.8	NA	82.8	J+	3
EB-08	Bicarbonate alkalinity (CaCO ₃)	2.40	J	4.00	U	3
EB-08	Alkalinity, Total as CaCO ₃	2.40	J	4.00	U	3
EB-06	Bicarbonate alkalinity (CaCO ₃)	3.00	J	4.00	U	3
EB-06	Alkalinity, Total as CaCO ₃	3.00	J	4.00	U	3
EB-07	Bicarbonate alkalinity (CaCO ₃)	2.80	J	4.00	U	3
EB-07	Alkalinity, Total as CaCO ₃	2.80	J	4.00	U	3
PZ-60I	Bicarbonate alkalinity (CaCO ₃)	2.00	J	4.00	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
PZ-60I	Alkalinity, Total as CaCO ₃	2.00	J	4.00	U	3

mg/L- milligram per liter

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

NA-not applicable

3.8 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks above the MDLs, with the following exceptions.

Chloride was detected in EB-05 at an estimated concentration greater than the MDL and less than the RL and alkalinity (20.6 mg/L) was detected in EB-05 at a concentration greater than the RL. Since the chloride and alkalinity concentrations in EB-05 were U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

Fluoride and alkalinity were detected in EB-08 at estimated concentrations greater than the MDLs and less than the RLs. Since the alkalinity concentration in EB-08 was U qualified due to field blank contamination and based on the fluoride concentrations in the associated samples and professional and technical judgment, no additional qualifications were applied to the data.

Alkalinity was detected in EB-06 at an estimated concentration greater than the MDL and less than the RL. Fluoride and alkalinity were detected in EB-07 at estimated concentrations greater than the MDLs and less than the RLs. Since the alkalinity concentrations in EB-06 and EB-07 and fluoride concentration in EB-07 were U qualified due to field blank contamination and the fluoride concentrations in the associated samples were qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

3.9 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision (RPD < 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively.

3.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

**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

Memorandum

Date: November 7, 2022
To: Adria Reimer
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – GEL Laboratories, LLC Work Orders 590840, 590851, 590856, 590859, 591353 and 591358**

SITE: Plant Branch CCR Groundwater Compliance Upgradient, APBCD and AP-E

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of thirty-eight groundwater samples, four equipment blanks, four field blanks and four field duplicate samples, collected 23-25 August 2022 and 1 September 2022, as part of the Plant Branch on-site sampling event.

The samples were analyzed at GEL Laboratories LLC, Charleston, SC, for the following analytical tests:

- Radium-226 by Modified United States (US) Environmental Protection Agency (EPA) Method 9315
- Radium-228 by Modified US EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. Qualified data should be used within the limitations of the qualifications.

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

- American Nuclear Society Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation (ANSI/ANS-41.5-2012), February 15, 2012.

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

Laboratory ID	Client ID
590840001	BRGWA-2S
590840002	BRGWA-2I
590840003	BRGWA-5S
590840004	BRGWA-5I
590840005	BRGWA-6S
590851001	BRGWA-23S
590851002	BRGWC-47
590851003	EB-05
590856001	BRGWA-12I
590856002	FB-01
590856003	BRGWA-12S
590856004	BRGWC-25I
590859001	BRGWC-33S
590859002	BRGWC-37S
590859003	BRGWC-38S
590859004	PZ-53D
590859005	PZ-13S
590859006	FB-04
591353001	BRGWC-17S
591353002	BRGWC-35S
591353003	BRGWC-36S
591353004	FD-04
591353005	BRGWC-34S
591353006	EB-08
591358001	FD-01

Laboratory ID	Client ID
591358002	PZ-58I
591358003	PZ-60I
591358004	FB-02
591358005	BRGWC-29I
591358006	BRGWC-30I
591358007	BRGWC-50
591358008	FD-03
591358009	BRGWC-45
591358010	PZ-44
591358011	PZ-51I
591358012	PZ-51D
591358013	PZ-61I
591358014	PZ-51S
591358015	FD-02
591358016	PZ-50D
591358017	EB-06
591358018	PZ-62I
591358019	PZ-59I
591358020	BRGWC-27I
591358021	FB-03
591358022	PZ-63I
591358023	PZ-57I
591358024	BRGWC-32S
591358025	EB-07
591358026	BRGWC-52I

No sample preservation issues were noted by the laboratory.

The sample collection times were not listed on the chain of custody (COC) for field duplicate samples, FD-01, FD-02, FD-03 and FD-04. Collection times were not documented in the laboratory reports.

591358: : Incorrect error corrections were observed on the COC, instead of the proper procedure of a single strike through, correction, and date and initials of person making the corrections.

590840 and 590851: The year was not documented on the COCs for the relinquished by date for the second sample transfer.

1.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by modified US EPA method 9315, modified 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
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ⊗ Equipment Blank
- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

1.1.1 Completeness

The radiochemistry data reported in this data set are considered usable for supporting 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%.

1.1.2 Analysis Anomaly

590851: The radium-228 result in sample BRGWA-23S was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample BRGWA-23S was UJ qualified as estimated less than the minimum detectable concentration (MDC).

590856: The radium-228 result in sample BRGWC-25I was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample BRGWC-25I was UJ qualified as estimated less than the MDC.

591353: The radium-228 result in sample BRGWC-17S was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample BRGWC-17S was UJ qualified as estimated less than the MDC.

591358: The radium-228 result in sample PZ-51I was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample PZ-51I was UJ qualified as estimated less than the MDC.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
BRGWA-23S	Radium-228	-4.51	U	-4.51	UJ	13
BRGWC-25I	Radium-228	-1.62	U	-1.62	UJ	13
BRGWC-17S	Radium-228	-2.32	U	-2.32	UJ	13
PZ-51I	Radium-228	-3.03	U	-3.03	UJ	13

pCi/L-picocuries per liter

U-not detected at or above the MDC

* 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

1.2 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.

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 for the radium-226 data (batches 2309179, 2310752 and 2310764). Three method blanks were reported for the radium-228 data (batches 2309177, 2310792 and 2310793). Radium-226 and radium-228 were not detected in the method blanks above the MDCs.

590840, 590851, 590856 and 590859: Radium-226 (0.319 pCi/L) was detected in the method blank in batch 2309179 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentrations in samples BRGWA-5S, BRGWA-23S, BRGWC-47, BRGWA-12I, BRGWA-12S, BRGWC-25I, FB-04, BRGWC-33S, BRGWC-37S, BRGWC-38S, PZ-13S and PZ-53D were J+ qualified as estimated with high biases and the radium-226 and total radium concentrations in FB-01 were U qualified as not detected at the MDCs.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRGWA-5S	Radium-226	0.735	NA	0.735	J+	3

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRGWA-5S	Radium-226+228 Sum	0.735	NA	0.735	J+	3
BRGWA-23S	Radium-226	1.59	NA	1.59	J+	3
BRGWA-23S	Radium-226+228 Sum	1.59	NA	1.59	J+	3
BRGWC-47	Radium-226	1.29	NA	1.29	J+	3
BRGWC-47	Radium-226+228 Sum	3.74	NA	3.74	J+	3
BRGWA-12I	Radium-226	0.558	NA	0.558	J+	3
BRGWA-12I	Radium-226+228 Sum	0.558	NA	0.558	J+	3
BRGWA-12S	Radium-226	0.360	NA	0.360	J+	3
BRGWA-12S	Radium-226+228 Sum	1.69	NA	1.69	J+	3
BRGWC-25I	Radium-226	1.90	NA	1.90	J+	3
BRGWC-25I	Radium-226+228 Sum	1.90	NA	1.90	J+	3
FB-04	Radium-226	0.458	NA	0.458	J+	3
FB-04	Radium-226+228 Sum	2.10	NA	2.10	J+	3
BRGWC-33S	Radium-226	1.10	NA	1.10	J+	3
BRGWC-33S	Radium-226+228 Sum	1.94	NA	1.94	J+	3
BRGWC-37S	Radium-226	1.29	NA	1.29	J+	3
BRGWC-37S	Radium-226+228 Sum	2.37	NA	2.37	J+	3
BRGWC-38S	Radium-226	0.407	NA	0.407	J+	3
BRGWC-38S	Radium-226+228 Sum	3.12	NA	3.12	J+	3
PZ-13S	Radium-226	0.956	NA	0.956	J+	3
PZ-13S	Radium-226+228 Sum	1.83	NA	1.83	J+	3
PZ-53D	Radium-226	0.695	NA	0.695	J+	3
PZ-53D	Radium-226+228 Sum	3.04	NA	3.04	J+	3
FB-01	Radium-226	0.320	NA	0.320	U	3
FB-01	Radium-226+228 Sum	1.60	NA	1.60	U	3

pCi/L-picocuries per liter

NA-not applicable

1.4 Matrix Spike

Three sample set specific MSs were reported for radium-226 using samples BRGWA-2S, BRGWC-17S and FD-01 . The recovery results were within the laboratory specified acceptance criteria.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported for radium-226 and three LCSs were reported for radium-228. The recovery results were within the laboratory specified acceptance criteria.

1.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for radium-228 using samples BRGWA-2S and BRGWC-17S and three sample set specific laboratory duplicates were reported for radium-226 using samples BRGWA-2S, BRGWC-17S and FD-01. The relative error ratio (RER) results were within the laboratory specified acceptance criteria.

1.7 Tracers and Carriers

Tracers were reported for radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

1.8 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs, with the following exceptions.

Radium-226 (0.286 pCi/L) was detected in EB-06 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentrations in samples FD-03, BRGWC-27I, BRGWC-32S, BRGWC-45, BRGWC-52I, PZ-44, PZ-50D, PZ-57I, PZ-59I, PZ-62I and PZ-63I were J+ qualified as estimated with high biases.

Radium-226 (0.556 pCi/L) was detected in EB-08 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentrations in samples FD-04, BRGWC-35S, BRGWC-36S, FD-01, BRGWC-50, PZ-51D, PZ-51I, PZ-51S and PZ-60I and total radium concentrations in samples BRGWC-30I and PZ-61I were J+ qualified as estimated with high biases and the radium-226 and total radium concentrations in samples FD-02, BRGWC-29I and PZ-58I and radium-226 concentrations in samples BRGWC-30I and PZ-61I 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
FD-03	Radium-226	0.561	NA	0.561	J+	3
FD-03	Radium-226+228 Sum	2.44	NA	2.44	J+	3
BRGWC-27I	Radium-226	0.488	NA	0.488	J+	3
BRGWC-27I	Radium-226+228 Sum	1.79	NA	1.79	J+	3
BRGWC-32S	Radium-226	0.462	NA	0.462	J+	3
BRGWC-32S	Radium-226+228 Sum	1.32	NA	1.32	J+	3
BRGWC-45	Radium-226	0.491	NA	0.491	J+	3
BRGWC-45	Radium-226+228 Sum	1.65	NA	1.65	J+	3
BRGWC-52I	Radium-226	1.57	NA	1.57	J+	3

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Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRGWC-52I	Radium-226+228 Sum	4.97	NA	4.97	J+	3
PZ-44	Radium-226	0.287	NA	0.287	J+	3
PZ-44	Radium-226+228 Sum	1.60	NA	1.60	J+	3
PZ-50D	Radium-226	0.640	NA	0.640	J+	3
PZ-50D	Radium-226+228 Sum	2.26	NA	2.26	J+	3
PZ-57I	Radium-226	0.395	NA	0.395	J+	3
PZ-57I	Radium-226+228 Sum	0.773	NA	0.773	J+	3
PZ-59I	Radium-226	0.366	NA	0.366	J+	3
PZ-59I	Radium-226+228 Sum	1.02	NA	1.02	J+	3
PZ-62I	Radium-226	0.674	NA	0.674	J+	3
PZ-62I	Radium-226+228 Sum	1.88	NA	1.88	J+	3
PZ-63I	Radium-226	0.882	NA	0.882	J+	3
PZ-63I	Radium-226+228 Sum	1.52	NA	1.52	J+	3
FD-04	Radium-226	2.52	NA	2.52	J+	3
FD-04	Radium-226+228 Sum	3.24	NA	3.24	J+	3
BRGWC-35S	Radium-226	0.669	NA	0.669	J+	3
BRGWC-35S	Radium-226+228 Sum	3.10	NA	3.10	J+	3
BRGWC-36S	Radium-226	0.673	NA	0.673	J+	3
BRGWC-36S	Radium-226+228 Sum	1.38	NA	1.38	J+	3
FD-01	Radium-226	0.571	NA	0.571	J+	3
FD-01	Radium-226+228 Sum	1.89	NA	1.89	J+	3
FD-02	Radium-226	0.403	NA	0.403	U	3
FD-02	Radium-226+228 Sum	1.20	NA	1.20	U	3
BRGWC-29I	Radium-226	0.368	NA	0.368	U	3
BRGWC-29I	Radium-226+228 Sum	1.97	NA	1.97	U	3
BRGWC-30I	Radium-226	0.542	NA	0.542	U	3
BRGWC-30I	Radium-226+228 Sum	3.26	NA	3.26	J+	3
BRGWC-50	Radium-226	0.649	NA	0.649	J+	3
BRGWC-50	Radium-226+228 Sum	1.87	NA	1.87	J+	3
PZ-51D	Radium-226	0.823	NA	0.823	J+	3
PZ-51D	Radium-226+228 Sum	3.33	NA	3.33	J+	3
PZ-51I	Radium-226	0.625	NA	0.625	J+	3
PZ-51I	Radium-226+228 Sum	0.625	NA	0.625	J+	3
PZ-51S	Radium-226	0.878	NA	0.878	J+	3
PZ-51S	Radium-226+228 Sum	1.20	NA	1.20	J+	3
PZ-58I	Radium-226	0.322	NA	0.322	U	3
PZ-58I	Radium-226+228 Sum	1.16	NA	1.16	U	3
PZ-60I	Radium-226	0.704	NA	0.704	J+	3
PZ-60I	Radium-226+228 Sum	3.50	NA	3.50	J+	3
PZ-61I	Radium-226	0.488	NA	0.488	U	3
PZ-61I	Radium-226+228 Sum	2.91	NA	2.91	J+	3

pCi/L-picocuries per liter

NA-not applicable

1.9 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs, with the following exceptions.

Radium-226 (0.320 pCi/L) was detected in FB-01 at a concentration greater than the MDC. Since the radium-226 concentration in FB-01 was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

Radium-226 (0.458 pCi/L) was detected in FB-04 at a concentration greater than the MDC. Since the radium-226 concentrations in the associated samples were qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.10 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively, with the following exception.

The RER of radium-226 in field duplicate pair BRGWC-36S/FD-04 was greater than 3; therefore, the radium-226 and total radium concentrations in field duplicate pair BRGWC-36S/FD-04 were J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	RER	Validation Result (pCi/L)	Validation Qualifier	Reason Code
FD-04	Radium-226	2.52	NA	4.7	2.52	J	7
BRGWC-36S	Radium-226	0.673	NA		0.673	J	7
FD-04	Radium-226+228 Sum	3.24	NA	NA	3.24	J	7
BRGWC-36S	Radium-226+228 Sum	1.38	NA		1.38	J	7

pCi/L-picocuries per liter

RER-replicate error ratio

NA-not applicable

1.11 Sensitivity

The samples were reported to the MDCs. Elevated non-detect results were not reported.

1.12 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

**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

Memorandum

Date: 12 January 2023
To: Lauren Fitzgerald and Kendall Brome
From: Amani Royce
CC: K. Henderson and J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – GEL Laboratories, LLC Work Order 596812 and 599840**

SITE: Plant Branch CCR Groundwater Compliance AP-BCD and AP-E

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of four groundwater samples, collected 11-12 October 2022 and 7 November 2022, as part of the Plant Branch on-site sampling event.

The samples were analyzed at GEL Laboratories LLC, Charleston, SC, for the following analytical tests:

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3005A/6020B
- Mercury by US EPA Method 7470A
- Anions (Chloride, Fluoride and Sulfate) by US EPA Method 300.0
- Total Dissolved Solids (TDS) by Standard Method (SM) 2540C
- Alkalinity by SM 2320B

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. Qualified data should be used within the limitations of the qualifications. If there are results with two or more different qualifications due to multiple QC failures, the final qualification is reconciled in the electronic data deliverable (EDD) with qualifications.

The data were reviewed based on the pertinent methods referenced in the laboratory report, professional and technical judgment, and the following documents: US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011); and the USEPA

National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006).

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

Laboratory IDs	Client IDs
596812001	PZ-64I
596812002	PZ-65I

Laboratory IDs	Client IDs
596812003	PZ-66I
599840001	PZ-64I

The samples were received at 1.0 degree Celsius (°C) and 3.0 °C, both within and outside of the EPA Region 4 criteria of 4°C ± 2°C. Since the samples were received between 0-6°C and based on professional judgment, no qualifications were applied to the data. No sample preservation issues were noted by the laboratory.

An incorrect error correction was observed on the chain of custody (COC), instead of the proper procedure of a single strike through, correction, and initials and date of person making the correction.

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

1.0 METALS

The samples were analyzed for metals by US EPA 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 or not applicable. 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
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Serial Dilution
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this laboratory report are considered usable for supporting 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%.

According to the case narrative the contract required detection limit (CRDL) for calcium did not meet the laboratory specified acceptance criteria. Since the calcium results in the associated samples were significantly greater than the CRDL, based on professional and technical judgement, no qualifications were applied to the data.

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.

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 (batch 2328994 and 2339502). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using sample PZ-64I. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The recoveries and RPDs of calcium, cobalt, magnesium, manganese, potassium, and sodium in the MS/MSD pairs using sample PZ-64I collected on 12 October 2022 were not calculated in the laboratory report, due to sample concentrations greater than four times the spike concentrations; therefore, the recovery limits were not applicable. Therefore, no qualifications were applied to the calcium, cobalt, magnesium, manganese, potassium, and sodium data in sample PZ-64I collected on 12 October 2022.

The recoveries and RPD of cobalt in the MS/MSD pairs using sample PZ-64I collected on 7 November 2022 were not calculated in the laboratory report, due to the sample concentration greater than four times the spike concentrations; therefore, the recovery limits were not applicable.

Therefore, no qualifications were applied to the cobalt data in sample PZ-64I collected on 7 November 2022.

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 Field Blank

Field blanks were not collected with the sample set.

1.7 Equipment Blank

Equipment blanks were not collected with the sample set.

1.8 Field Duplicate

Field duplicate samples were not collected with the sample set.

1.9 Serial Dilution

Two sample set specific serial dilution was reported for metals using sample PZ-64I. The percent difference (%D) results were within the method specified acceptance criteria, with the following exception.

The %D of boron in the serial dilution using sample PZ-64I collected on 12 October 2022 was greater than 10% and since the sample concentration was less than 50 times the MDL, no qualifications were applied to the data.

1.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.11 Electronic Data Deliverable Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by US EPA 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 or not applicable. 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
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Serial Dilution
- ✓ Sensitivity
- ✓ Electronic Data Deliverable Review

2.1 Overall Assessment

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

2.2 Holding Time

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met.

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 2329101). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike

An MS was analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One batch MS was reported. Since this was a 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

An LCS was 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 Laboratory Duplicate

One batch laboratory duplicate was reported. Since this was a batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.7 Field Blank

Field blanks were not collected with the sample set.

2.8 Equipment Blank

Equipment blanks were not collected with the sample set.

2.9 Field Duplicate

Field duplicates were not collected with the sample set.

2.10 Serial Dilution

One batch serial dilution was reported for mercury. Since this was a batch QC, the result does not affect the samples in this data set and qualifications were not applied to the data.

2.11 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

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 WET CHEMISTRY

The samples were analyzed for anions by US EPA method 300.0, TDS by SM 2540C, and alkalinity by SM 2320B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. 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
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Field Blank
- ✓ Equipment Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this laboratory report are considered usable for supporting 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%.

According to the case narrative, sample PZ-64I did not meet the laboratory specified consecutive weight check acceptance criteria for TDS. Therefore, the TDS concentration in sample PZ-64I was J qualified as estimated.

Sample ID	Compound	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
PZ-64I	TDS	3780	NA	3780	J	13

mg/L- Milligrams per Liter

NA- Not Applicable

* Validation qualifiers are defined in Attachment 1 at the end of this report

** Reason codes are defined in Attachment 2 at the end of this report

3.2 Holding Times

The holding time for the anion (fluoride, chloride, sulfate) analyses of a water sample are 28 days from sample collection to analysis. The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding times were met.

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 anions (batch 2331124). One method blank was reported for TDS (batch 2329094). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike

A batch MS was reported for alkalinity and a post spike (PS) was reported for the anions. Since the batch QC results do not affect the samples in this data set, 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). An LCS was reported for each analytical batch per analysis. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

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

3.7 Field Blank

Field blanks were not collected with the sample set.

3.8 Equipment Blank

Equipment blanks were not collected with the sample set.

3.9 Field Duplicate

Field duplicate samples were not collected with the sample set.

3.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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 at or 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 at or 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

Fall 2022

Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:25:17 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWA-2I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56 ft Total Depth: 66.96 ft Initial Depth to Water: 12.55 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 59 ft Estimated Total Volume Pumped: 5.6 liter Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 12 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time-1010

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
8/23/2022 9:25 AM	00:00	7.27 pH	22.54 °C	11.00 µS/cm	8.44 mg/L	2.61 NTU	253.6 mV	12.55 ft	125.00 ml/min
8/23/2022 9:30 AM	05:00	6.75 pH	21.94 °C	120.34 µS/cm	1.91 mg/L	1.77 NTU	89.6 mV	13.10 ft	125.00 ml/min
8/23/2022 9:35 AM	10:00	6.55 pH	20.93 °C	116.96 µS/cm	1.58 mg/L	2.05 NTU	84.3 mV	13.50 ft	125.00 ml/min
8/23/2022 9:40 AM	15:00	6.61 pH	20.77 °C	117.42 µS/cm	1.37 mg/L	1.69 NTU	86.9 mV	13.50 ft	125.00 ml/min
8/23/2022 9:45 AM	20:00	6.64 pH	20.79 °C	117.44 µS/cm	1.33 mg/L	1.83 NTU	82.8 mV	13.50 ft	125.00 ml/min
8/23/2022 9:50 AM	25:00	6.64 pH	20.75 °C	117.74 µS/cm	1.26 mg/L	1.12 NTU	86.9 mV	13.50 ft	125.00 ml/min
8/23/2022 9:55 AM	30:00	6.65 pH	20.81 °C	117.27 µS/cm	1.16 mg/L	1.65 NTU	82.4 mV	13.50 ft	125.00 ml/min
8/23/2022 10:00 AM	35:00	6.66 pH	20.80 °C	117.44 µS/cm	1.05 mg/L	1.27 NTU	81.8 mV	13.50 ft	125.00 ml/min
8/23/2022 10:05 AM	40:00	6.66 pH	20.84 °C	118.00 µS/cm	0.97 mg/L	1.08 NTU	86.2 mV	13.50 ft	125.00 ml/min
8/23/2022 10:10 AM	45:00	6.67 pH	20.93 °C	118.47 µS/cm	0.91 mg/L	1.22 NTU	81.8 mV	13.50 ft	125.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 10:30:04 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWA-2S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37 ft Total Depth: 47.39 ft Initial Depth to Water: 12.72 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 5.6 liter Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 1 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time-1055

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
8/23/2022 10:30 AM	00:00	6.71 pH	22.32 °C	122.72 µS/cm	1.24 mg/L	1.11 NTU	82.0 mV	12.72 ft	225.00 ml/min
8/23/2022 10:35 AM	05:00	6.04 pH	20.71 °C	56.96 µS/cm	2.13 mg/L	0.89 NTU	61.3 mV	12.80 ft	225.00 ml/min
8/23/2022 10:40 AM	10:00	5.95 pH	20.40 °C	57.02 µS/cm	1.77 mg/L	0.64 NTU	58.6 mV	12.80 ft	225.00 ml/min
8/23/2022 10:45 AM	15:00	5.95 pH	20.53 °C	55.52 µS/cm	2.87 mg/L	0.55 NTU	65.0 mV	12.80 ft	225.00 ml/min
8/23/2022 10:50 AM	20:00	5.94 pH	20.57 °C	54.65 µS/cm	2.77 mg/L	0.83 NTU	66.6 mV	12.80 ft	225.00 ml/min
8/23/2022 10:55 AM	25:00	5.95 pH	20.61 °C	55.77 µS/cm	3.00 mg/L	0.48 NTU	68.3 mV	12.80 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:40:06 AM

Project: Plant Branch Ash Ponds

Operator Name: A. Schnittker

Location Name: BRGWA-5I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.82 ft Total Depth: 63.82 ft Initial Depth to Water: 12.08 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 58 ft Estimated Total Volume Pumped: 8.3 liter Flow Cell Volume: 90 ml Final Flow Rate: 275 ml/min Final Draw Down: 3 in	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Sample time 1015. Overcast 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/23/2022 9:40 AM	00:00	6.25 pH	19.62 °C	141.33 µS/cm	5.44 mg/L	5.23 NTU	81.6 mV	12.08 ft	275.00 ml/min
8/23/2022 9:45 AM	05:00	6.25 pH	19.61 °C	142.04 µS/cm	5.43 mg/L	5.19 NTU	71.4 mV	12.30 ft	275.00 ml/min
8/23/2022 9:50 AM	10:00	6.25 pH	19.55 °C	141.67 µS/cm	5.45 mg/L	5.11 NTU	67.6 mV	12.30 ft	275.00 ml/min
8/23/2022 9:55 AM	15:00	6.25 pH	19.59 °C	141.73 µS/cm	5.46 mg/L	4.10 NTU	66.5 mV	12.30 ft	275.00 ml/min
8/23/2022 10:00 AM	20:00	6.24 pH	19.14 °C	141.26 µS/cm	5.45 mg/L	4.05 NTU	65.7 mV	12.30 ft	275.00 ml/min
8/23/2022 10:05 AM	25:00	6.24 pH	18.97 °C	141.33 µS/cm	5.47 mg/L	2.77 NTU	65.2 mV	12.30 ft	275.00 ml/min
8/23/2022 10:10 AM	30:00	6.24 pH	18.97 °C	141.26 µS/cm	5.47 mg/L	3.75 NTU	64.7 mV	12.30 ft	275.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:26:43 AM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: BRGWA-5S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33 ft Total Depth: 43.01 ft Initial Depth to Water: 12.13 ft	Pump Type: Bladder pump Tubing Type: Poly Pump Intake From TOC: 38 ft Estimated Total Volume Pumped: 5.3 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 1.6 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1000 on 8-23-22. Cloudy 70s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/23/2022 9:26 AM	00:00	6.34 pH	21.42 °C	132.45 µS/cm	3.38 mg/L	10.00 NTU	84.2 mV	12.13 ft	150.00 ml/min
8/23/2022 9:31 AM	05:00	6.28 pH	20.31 °C	125.12 µS/cm	2.22 mg/L	3.50 NTU	75.2 mV	12.25 ft	150.00 ml/min
8/23/2022 9:36 AM	10:00	6.29 pH	20.13 °C	129.89 µS/cm	1.97 mg/L	3.90 NTU	76.2 mV	12.25 ft	150.00 ml/min
8/23/2022 9:41 AM	15:00	6.33 pH	20.14 °C	132.68 µS/cm	1.79 mg/L	3.80 NTU	73.3 mV	12.25 ft	150.00 ml/min
8/23/2022 9:46 AM	20:00	6.34 pH	20.10 °C	134.01 µS/cm	1.70 mg/L	2.70 NTU	74.4 mV	12.25 ft	150.00 ml/min
8/23/2022 9:51 AM	25:00	6.32 pH	20.06 °C	133.97 µS/cm	1.66 mg/L	3.10 NTU	84.7 mV	12.25 ft	150.00 ml/min
8/23/2022 9:56 AM	30:00	6.36 pH	20.09 °C	134.88 µS/cm	1.63 mg/L	3.00 NTU	74.7 mV	12.25 ft	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:20:13 AM

Project: Plant Branch Ash Ponds

Operator Name: Taylor Goble

Location Name: BRGWA-6S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 42.9 ft Total Depth: 52.9 ft Initial Depth to Water: 26.95 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 47 ft Estimated Total Volume Pumped: 6600 ml Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.57 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883536
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Test Notes:

Sampled at 0950. Mostly cloudy 75 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/23/2022 9:20 AM	00:00	6.49 pH	20.39 °C	57.64 µS/cm	6.90 mg/L	4.05 NTU	84.9 mV	26.95 ft	220.00 ml/min
8/23/2022 9:25 AM	05:00	6.46 pH	20.30 °C	56.89 µS/cm	6.94 mg/L	2.27 NTU	65.6 mV	27.33 ft	220.00 ml/min
8/23/2022 9:30 AM	10:00	6.50 pH	20.21 °C	56.29 µS/cm	6.92 mg/L	1.60 NTU	67.8 mV	27.50 ft	220.00 ml/min
8/23/2022 9:35 AM	15:00	6.52 pH	20.11 °C	56.40 µS/cm	6.94 mg/L	1.66 NTU	69.9 mV	27.52 ft	220.00 ml/min
8/23/2022 9:40 AM	20:00	6.49 pH	20.05 °C	56.54 µS/cm	6.86 mg/L	1.85 NTU	72.6 mV	27.52 ft	220.00 ml/min
8/23/2022 9:45 AM	25:00	6.51 pH	20.04 °C	56.73 µS/cm	6.95 mg/L	1.74 NTU	75.2 mV	27.52 ft	220.00 ml/min
8/23/2022 9:50 AM	30:00	6.51 pH	20.04 °C	56.92 µS/cm	7.04 mg/L	1.71 NTU	77.0 mV	27.52 ft	220.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 11:11:29 AM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: BRGWA-12I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70 ft Total Depth: 80.54 ft Initial Depth to Water: 48.87 ft	Pump Type: Bladder pump Tubing Type: Poly Pump Intake From TOC: 75 ft Estimated Total Volume Pumped: 4 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 40 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1143 on 8-23-22. Cloudy 70s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/23/2022 11:11 AM	00:00	6.98 pH	28.18 °C	0.25 µS/cm	7.09 mg/L	5.00 NTU	73.9 mV	48.87 ft	200.00 ml/min
8/23/2022 11:16 AM	05:00	6.57 pH	23.19 °C	129.28 µS/cm	4.08 mg/L	2.40 NTU	111.0 mV	50.10 ft	200.00 ml/min
8/23/2022 11:21 AM	10:00	6.34 pH	22.00 °C	137.83 µS/cm	2.53 mg/L	1.60 NTU	144.5 mV	51.20 ft	200.00 ml/min
8/23/2022 11:26 AM	15:00	6.41 pH	22.76 °C	135.17 µS/cm	2.67 mg/L	2.20 NTU	115.3 mV	51.60 ft	120.00 ml/min
8/23/2022 11:31 AM	20:00	6.39 pH	23.20 °C	134.45 µS/cm	2.55 mg/L	2.00 NTU	116.8 mV	52.00 ft	120.00 ml/min
8/23/2022 11:36 AM	25:00	6.39 pH	23.67 °C	132.75 µS/cm	2.60 mg/L	1.70 NTU	118.0 mV	52.10 ft	100.00 ml/min
8/23/2022 11:41 AM	30:00	6.39 pH	23.72 °C	131.58 µS/cm	2.56 mg/L	1.30 NTU	119.2 mV	52.20 ft	100.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 12:37:48 PM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: BRGWA-12S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51 ft Total Depth: 61.01 ft Initial Depth to Water: 49.1 ft	Pump Type: Bladder pump Tubing Type: Poly Pump Intake From TOC: 55 ft Estimated Total Volume Pumped: 18.3 liter Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1338 on 8-23-22. Cloudy 80s. FB-01 here at 1315.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/23/2022 12:37 PM	00:00	7.26 pH	32.85 °C	64.77 µS/cm	5.52 mg/L	10.00 NTU	68.1 mV	49.10 ft	300.00 ml/min
8/23/2022 12:42 PM	05:00	5.81 pH	21.83 °C	65.29 µS/cm	6.74 mg/L	2.70 NTU	123.5 mV	49.60 ft	300.00 ml/min
8/23/2022 12:47 PM	10:00	5.85 pH	21.22 °C	70.24 µS/cm	6.77 mg/L	2.70 NTU	131.0 mV	49.60 ft	300.00 ml/min
8/23/2022 12:52 PM	15:00	5.87 pH	21.07 °C	72.14 µS/cm	6.87 mg/L	1.60 NTU	134.6 mV	49.60 ft	300.00 ml/min
8/23/2022 12:57 PM	20:00	5.91 pH	20.97 °C	72.65 µS/cm	6.90 mg/L	1.65 NTU	134.8 mV	49.60 ft	300.00 ml/min
8/23/2022 1:02 PM	25:00	5.89 pH	20.98 °C	72.89 µS/cm	6.89 mg/L	1.70 NTU	137.4 mV	49.60 ft	300.00 ml/min
8/23/2022 1:07 PM	30:00	5.91 pH	20.92 °C	72.92 µS/cm	6.91 mg/L	2.30 NTU	136.5 mV	49.60 ft	300.00 ml/min
8/23/2022 1:12 PM	35:00	5.88 pH	20.94 °C	73.15 µS/cm	6.91 mg/L	1.60 NTU	138.8 mV	49.60 ft	300.00 ml/min
8/23/2022 1:17 PM	40:00	5.83 pH	20.90 °C	73.08 µS/cm	6.88 mg/L	1.70 NTU	141.1 mV	49.60 ft	300.00 ml/min
8/23/2022 1:22 PM	45:00	5.88 pH	20.93 °C	73.02 µS/cm	6.90 mg/L	0.80 NTU	139.1 mV	49.60 ft	300.00 ml/min
8/23/2022 1:27 PM	50:00	5.86 pH	20.98 °C	73.08 µS/cm	6.89 mg/L	0.80 NTU	174.9 mV	49.60 ft	300.00 ml/min
8/23/2022 1:32 PM	55:00	5.90 pH	21.28 °C	73.87 µS/cm	6.93 mg/L	1.10 NTU	138.9 mV	49.60 ft	300.00 ml/min
8/23/2022 1:37 PM	01:00:00	5.90 pH	21.51 °C	74.95 µS/cm	6.96 mg/L	1.00 NTU	140.6 mV	49.60 ft	300.00 ml/min

Samples

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/23/2022 12:36:53 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWA-23S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.8 ft Total Depth: 43.8 ft Initial Depth to Water: 39.18 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 40 ft Estimated Total Volume Pumped: 8.56 liter Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time-1345, WL in screen, 3 well volumes purged. Top of Pump-39.3, WL below top of pump

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
8/23/2022 12:36 PM	00:00	5.67 pH	33.83 °C	0.07 µS/cm	6.84 mg/L	6.93 NTU	92.4 mV	39.18 ft	125.00 ml/min
8/23/2022 12:39 PM	02:40	5.23 pH	34.15 °C	51.22 µS/cm	6.45 mg/L	4.11 NTU	107.3 mV	39.30 ft	125.00 ml/min
8/23/2022 12:42 PM	05:45	5.81 pH	27.21 °C	112.66 µS/cm	6.96 mg/L	2.59 NTU	80.2 mV	39.30 ft	125.00 ml/min
8/23/2022 12:45 PM	08:15	5.72 pH	25.99 °C	106.42 µS/cm	6.41 mg/L	2.61 NTU	81.2 mV	39.30 ft	125.00 ml/min
8/23/2022 12:50 PM	13:15	5.69 pH	25.74 °C	101.85 µS/cm	5.80 mg/L	2.07 NTU	81.0 mV	39.30 ft	125.00 ml/min
8/23/2022 12:55 PM	18:15	5.67 pH	25.43 °C	99.50 µS/cm	5.45 mg/L	1.89 NTU	84.7 mV	39.30 ft	125.00 ml/min
8/23/2022 1:00 PM	23:15	5.67 pH	25.44 °C	98.16 µS/cm	5.23 mg/L	3.78 NTU	83.6 mV	39.30 ft	125.00 ml/min
8/23/2022 1:05 PM	28:15	5.66 pH	25.29 °C	97.64 µS/cm	5.20 mg/L	3.92 NTU	85.0 mV	39.30 ft	125.00 ml/min
8/23/2022 1:10 PM	33:15	5.64 pH	25.31 °C	97.37 µS/cm	5.13 mg/L	4.04 NTU	86.8 mV	39.30 ft	125.00 ml/min
8/23/2022 1:15 PM	38:15	5.66 pH	25.14 °C	97.11 µS/cm	5.11 mg/L	4.33 NTU	87.3 mV	39.30 ft	125.00 ml/min
8/23/2022 1:20 PM	43:15	5.65 pH	25.21 °C	97.91 µS/cm	5.04 mg/L	3.21 NTU	90.8 mV	39.30 ft	125.00 ml/min
8/23/2022 1:25 PM	48:15	5.65 pH	25.51 °C	97.71 µS/cm	5.00 mg/L	3.58 NTU	88.4 mV	39.30 ft	125.00 ml/min
8/23/2022 1:30 PM	53:15	5.65 pH	25.69 °C	97.51 µS/cm	4.93 mg/L	3.21 NTU	89.2 mV	39.30 ft	125.00 ml/min
8/23/2022 1:35 PM	58:15	5.63 pH	25.80 °C	97.60 µS/cm	4.79 mg/L	3.33 NTU	91.0 mV	39.30 ft	125.00 ml/min
8/23/2022 1:40 PM	01:03:15	5.65 pH	26.08 °C	98.56 µS/cm	4.74 mg/L	3.68 NTU	90.2 mV	39.30 ft	125.00 ml/min

8/23/2022 1:45 PM	01:08:29	5.66 pH	26.28 °C	97.16 µS/cm	4.74 mg/L	3.25 NTU	89.4 mV	39.30 ft	125.00 ml/min
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Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 2:23:21 PM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: BRGWC-25I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 14 ft Total Depth: 24.41 ft Initial Depth to Water: 11.08 ft	Pump Type: Bladder pump Tubing Type: Poly Pump Intake From TOC: 19 ft Estimated Total Volume Pumped: 23.4 liter Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 1.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1541 on 8-23-22. Cloudy 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/23/2022 2:23 PM	00:00	6.60 pH	29.35 °C	338.75 µS/cm	7.13 mg/L	10.00 NTU	88.6 mV	11.08 ft	300.00 ml/min
8/23/2022 2:28 PM	05:00	6.10 pH	20.60 °C	397.01 µS/cm	0.97 mg/L	21.00 NTU	114.4 mV	11.20 ft	300.00 ml/min
8/23/2022 2:33 PM	10:00	6.08 pH	20.17 °C	415.46 µS/cm	0.18 mg/L	9.70 NTU	127.0 mV	11.20 ft	300.00 ml/min
8/23/2022 2:38 PM	15:00	6.10 pH	20.22 °C	415.88 µS/cm	0.12 mg/L	5.90 NTU	160.7 mV	11.20 ft	300.00 ml/min
8/23/2022 2:43 PM	20:00	6.10 pH	20.13 °C	419.81 µS/cm	0.09 mg/L	4.70 NTU	130.3 mV	11.20 ft	300.00 ml/min
8/23/2022 2:48 PM	25:00	6.11 pH	20.15 °C	419.92 µS/cm	0.09 mg/L	3.50 NTU	128.2 mV	11.20 ft	300.00 ml/min
8/23/2022 2:53 PM	30:00	6.10 pH	20.09 °C	417.91 µS/cm	0.08 mg/L	2.90 NTU	159.0 mV	11.20 ft	300.00 ml/min
8/23/2022 2:58 PM	35:00	6.09 pH	20.13 °C	418.35 µS/cm	0.07 mg/L	2.60 NTU	159.6 mV	11.20 ft	300.00 ml/min
8/23/2022 3:03 PM	40:00	6.11 pH	20.09 °C	418.44 µS/cm	0.07 mg/L	2.55 NTU	158.8 mV	11.20 ft	300.00 ml/min
8/23/2022 3:08 PM	45:00	6.11 pH	20.04 °C	421.83 µS/cm	0.07 mg/L	2.55 NTU	126.9 mV	11.20 ft	300.00 ml/min
8/23/2022 3:13 PM	50:00	6.12 pH	20.01 °C	418.78 µS/cm	0.06 mg/L	1.90 NTU	157.0 mV	11.20 ft	300.00 ml/min
8/23/2022 3:18 PM	55:00	6.11 pH	20.04 °C	418.77 µS/cm	0.06 mg/L	1.60 NTU	157.3 mV	11.20 ft	300.00 ml/min
8/23/2022 3:23 PM	01:00:00	6.10 pH	20.04 °C	422.33 µS/cm	0.06 mg/L	1.60 NTU	126.5 mV	11.20 ft	300.00 ml/min
8/23/2022 3:25 PM	01:02:15	6.12 pH	20.53 °C	394.43 µS/cm	0.29 mg/L	1.60 NTU	123.0 mV	11.20 ft	300.00 ml/min
8/23/2022 3:30 PM	01:07:15	6.10 pH	20.17 °C	404.39 µS/cm	0.06 mg/L	1.40 NTU	126.8 mV	11.20 ft	300.00 ml/min

8/23/2022 3:35 PM	01:12:15	6.12 pH	20.06 °C	419.50 µS/cm	0.07 mg/L	1.60 NTU	157.5 mV	11.20 ft	300.00 ml/min
8/23/2022 3:40 PM	01:17:15	6.11 pH	20.09 °C	422.59 µS/cm	0.07 mg/L	1.60 NTU	126.2 mV	11.20 ft	300.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 9:37:24 AM

Project: Plant Branch Ash Ponds

Operator Name: Taylor Goble

Location Name: BRGWC-271 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 14 ft Total Depth: 24 ft Initial Depth to Water: 10.45 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 19 ft Estimated Total Volume Pumped: 8750 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883536
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Test Notes:

Sampled at 1012. Mostly cloudy 74 degrees. FB-03 taken here.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/25/2022 9:37 AM	00:00	6.55 pH	22.13 °C	419.56 µS/cm	4.51 mg/L	6.08 NTU	135.2 mV	10.50 ft	250.00 ml/min
8/25/2022 9:42 AM	05:00	5.92 pH	20.57 °C	469.95 µS/cm	2.41 mg/L	2.97 NTU	116.7 mV	10.50 ft	250.00 ml/min
8/25/2022 9:47 AM	10:00	5.94 pH	20.45 °C	446.36 µS/cm	1.91 mg/L	2.55 NTU	114.2 mV	10.50 ft	250.00 ml/min
8/25/2022 9:52 AM	15:00	5.99 pH	20.39 °C	446.13 µS/cm	1.92 mg/L	1.90 NTU	111.0 mV	10.50 ft	250.00 ml/min
8/25/2022 9:57 AM	20:00	5.99 pH	20.34 °C	445.75 µS/cm	1.68 mg/L	1.81 NTU	109.2 mV	10.50 ft	250.00 ml/min
8/25/2022 10:02 AM	25:00	6.01 pH	20.30 °C	445.96 µS/cm	1.73 mg/L	1.66 NTU	108.3 mV	10.50 ft	250.00 ml/min
8/25/2022 10:07 AM	30:00	6.02 pH	20.33 °C	446.59 µS/cm	1.93 mg/L	1.58 NTU	106.8 mV	10.50 ft	250.00 ml/min
8/25/2022 10:12 AM	35:00	6.03 pH	20.30 °C	447.74 µS/cm	1.73 mg/L	1.45 NTU	111.1 mV	10.50 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 3:57:10 PM

Project: Plant Branch Ash Ponds

Operator Name: A. Schnittker

Location Name: BRGWC-29I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 13 ft Total Depth: 23.63 ft Initial Depth to Water: 10.68 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 18 ft Estimated Total Volume Pumped: 21 liter Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 3 in	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Sample time 1710. Sunny 90s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/24/2022 3:57 PM	00:00	4.31 pH	22.74 °C	476.02 µS/cm	0.22 mg/L	1.83 NTU	87.6 mV	10.68 ft	300.00 ml/min
8/24/2022 4:02 PM	05:00	4.38 pH	21.46 °C	486.92 µS/cm	0.11 mg/L	1.37 NTU	91.1 mV	10.90 ft	300.00 ml/min
8/24/2022 4:07 PM	10:00	4.39 pH	21.27 °C	488.65 µS/cm	0.10 mg/L	1.47 NTU	90.2 mV	10.90 ft	300.00 ml/min
8/24/2022 4:12 PM	15:00	4.39 pH	21.37 °C	487.61 µS/cm	0.09 mg/L	1.16 NTU	84.2 mV	10.90 ft	300.00 ml/min
8/24/2022 4:17 PM	20:00	4.39 pH	21.24 °C	485.60 µS/cm	0.09 mg/L	1.01 NTU	88.5 mV	10.90 ft	300.00 ml/min
8/24/2022 4:22 PM	25:00	4.39 pH	21.18 °C	484.10 µS/cm	0.09 mg/L	1.28 NTU	83.0 mV	10.90 ft	300.00 ml/min
8/24/2022 4:27 PM	30:00	4.39 pH	21.11 °C	483.39 µS/cm	0.09 mg/L	1.95 NTU	87.5 mV	10.90 ft	300.00 ml/min
8/24/2022 4:32 PM	35:00	4.39 pH	21.11 °C	482.18 µS/cm	0.08 mg/L	1.02 NTU	82.5 mV	10.90 ft	300.00 ml/min
8/24/2022 4:37 PM	40:00	4.39 pH	21.11 °C	481.52 µS/cm	0.08 mg/L	0.83 NTU	82.0 mV	10.90 ft	300.00 ml/min
8/24/2022 4:42 PM	45:00	4.39 pH	21.10 °C	480.62 µS/cm	0.08 mg/L	0.96 NTU	86.5 mV	10.90 ft	300.00 ml/min
8/24/2022 4:47 PM	50:00	4.39 pH	21.07 °C	480.17 µS/cm	0.08 mg/L	1.03 NTU	81.9 mV	10.90 ft	300.00 ml/min
8/24/2022 4:52 PM	55:00	4.39 pH	21.15 °C	479.62 µS/cm	0.08 mg/L	1.02 NTU	81.8 mV	10.90 ft	300.00 ml/min
8/24/2022 4:57 PM	01:00:00	4.39 pH	21.12 °C	479.19 µS/cm	0.09 mg/L	0.99 NTU	86.4 mV	10.90 ft	300.00 ml/min
8/24/2022 5:02 PM	01:05:00	4.39 pH	21.06 °C	478.58 µS/cm	0.09 mg/L	0.96 NTU	82.4 mV	10.90 ft	300.00 ml/min
8/24/2022 5:07 PM	01:10:00	4.39 pH	21.10 °C	479.00 µS/cm	0.09 mg/L	0.98 NTU	87.1 mV	10.90 ft	300.00 ml/min

Samples

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/24/2022 3:24:40 PM

Project: Plant Branch Ash Ponds

Operator Name: Taylor Goble

Location Name: BRGWC-30I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 12.3 ft Total Depth: 22.35 ft Initial Depth to Water: 4.82 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 17 ft Estimated Total Volume Pumped: 11250 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.17 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883536
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Test Notes:

Sampled at 1609. Partly cloudy 85 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/24/2022 3:24 PM	00:00	6.37 pH	25.98 °C	1,281.3 µS/cm	4.08 mg/L	248.00 NTU	88.0 mV	4.93 ft	250.00 ml/min
8/24/2022 3:29 PM	05:00	6.36 pH	22.97 °C	1,417.9 µS/cm	1.87 mg/L	122.00 NTU	91.6 mV	4.99 ft	250.00 ml/min
8/24/2022 3:34 PM	10:00	6.36 pH	24.01 °C	1,622.4 µS/cm	1.02 mg/L	107.00 NTU	96.8 mV	4.99 ft	250.00 ml/min
8/24/2022 3:39 PM	15:00	6.35 pH	24.33 °C	1,515.2 µS/cm	0.80 mg/L	80.40 NTU	96.0 mV	4.99 ft	250.00 ml/min
8/24/2022 3:44 PM	20:00	6.38 pH	22.04 °C	1,526.4 µS/cm	1.07 mg/L	50.90 NTU	98.9 mV	4.99 ft	250.00 ml/min
8/24/2022 3:49 PM	25:00	6.39 pH	21.46 °C	1,592.9 µS/cm	1.12 mg/L	33.80 NTU	99.8 mV	4.99 ft	250.00 ml/min
8/24/2022 3:54 PM	30:00	6.39 pH	21.37 °C	1,593.2 µS/cm	1.13 mg/L	24.20 NTU	101.0 mV	4.99 ft	250.00 ml/min
8/24/2022 3:59 PM	35:00	6.39 pH	21.32 °C	1,594.7 µS/cm	1.00 mg/L	14.50 NTU	101.6 mV	4.99 ft	250.00 ml/min
8/24/2022 4:04 PM	40:00	6.39 pH	21.24 °C	1,592.7 µS/cm	0.99 mg/L	9.33 NTU	102.5 mV	4.99 ft	250.00 ml/min
8/24/2022 4:09 PM	45:00	6.38 pH	21.24 °C	1,589.2 µS/cm	1.00 mg/L	4.27 NTU	102.6 mV	4.99 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 11:20:35 AM

Project: Plant Branch Ash Ponds

Operator Name: Taylor Goble

Location Name: BRGWC-32S Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 35 ft Total Depth: 45 ft Initial Depth to Water: 40.76 ft	Pump Type: Dedicated Bladder Pump Tubing Type: Poly Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 12750 ml Flow Cell Volume: 90 ml Final Flow Rate: 170 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883536
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Test Notes:

Sampled at 1235. Cloudy 79 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/25/2022 11:20 AM	00:00	6.08 pH	21.14 °C	541.62 µS/cm	5.78 mg/L	5.82 NTU	98.7 mV	40.76 ft	170.00 ml/min
8/25/2022 11:25 AM	05:00	6.04 pH	20.53 °C	543.87 µS/cm	3.97 mg/L	7.12 NTU	100.4 mV	40.76 ft	170.00 ml/min
8/25/2022 11:30 AM	10:00	6.08 pH	20.39 °C	562.30 µS/cm	4.03 mg/L	8.84 NTU	107.4 mV	40.76 ft	170.00 ml/min
8/25/2022 11:35 AM	15:00	6.09 pH	20.31 °C	565.64 µS/cm	3.92 mg/L	7.34 NTU	108.4 mV	40.76 ft	170.00 ml/min
8/25/2022 11:40 AM	20:00	6.08 pH	20.34 °C	568.46 µS/cm	3.68 mg/L	6.73 NTU	110.1 mV	40.76 ft	170.00 ml/min
8/25/2022 11:45 AM	25:00	6.10 pH	20.35 °C	572.39 µS/cm	3.65 mg/L	4.44 NTU	105.8 mV	40.76 ft	170.00 ml/min
8/25/2022 11:50 AM	30:00	6.10 pH	20.34 °C	574.19 µS/cm	3.63 mg/L	1.82 NTU	112.1 mV	40.76 ft	170.00 ml/min
8/25/2022 11:55 AM	35:00	6.11 pH	20.30 °C	574.15 µS/cm	3.65 mg/L	1.58 NTU	108.0 mV	40.76 ft	170.00 ml/min
8/25/2022 12:00 PM	40:00	6.11 pH	20.43 °C	575.80 µS/cm	3.63 mg/L	1.41 NTU	114.8 mV	40.76 ft	170.00 ml/min
8/25/2022 12:05 PM	45:00	6.10 pH	20.41 °C	375.87 µS/cm	3.65 mg/L	1.47 NTU	116.9 mV	40.76 ft	170.00 ml/min
8/25/2022 12:10 PM	50:00	6.11 pH	20.39 °C	576.53 µS/cm	3.62 mg/L	1.33 NTU	118.4 mV	40.76 ft	170.00 ml/min
8/25/2022 12:15 PM	55:00	6.11 pH	20.21 °C	581.26 µS/cm	3.54 mg/L	1.56 NTU	120.6 mV	40.76 ft	170.00 ml/min
8/25/2022 12:20 PM	01:00:00	6.13 pH	20.44 °C	578.97 µS/cm	4.14 mg/L	1.61 NTU	121.5 mV	40.76 ft	170.00 ml/min
8/25/2022 12:25 PM	01:05:00	6.06 pH	20.41 °C	575.66 µS/cm	2.62 mg/L	1.24 NTU	122.2 mV	40.76 ft	170.00 ml/min
8/25/2022 12:30 PM	01:10:00	6.06 pH	20.26 °C	575.60 µS/cm	2.57 mg/L	0.91 NTU	115.0 mV	40.76 ft	170.00 ml/min

8/25/2022 12:35 PM	01:15:00	6.06 pH	20.27 °C	574.39 µS/cm	2.79 mg/L	0.88 NTU	122.1 mV	40.76 ft	170.00 ml/min
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Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 9:40:35 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWC-45 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 50 ft Total Depth: 60.45 ft Initial Depth to Water: 15.17 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 55 ft Estimated Total Volume Pumped: 6.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 4 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time -1010, FD-03 here

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/25/2022 9:40 AM	00:00	7.05 pH	24.18 °C	13.73 µS/cm	8.36 mg/L	10.00 NTU	252.5 mV	15.17 ft	225.00 ml/min
8/25/2022 9:45 AM	05:00	5.79 pH	22.27 °C	273.11 µS/cm	0.75 mg/L	9.39 NTU	101.7 mV	15.50 ft	225.00 ml/min
8/25/2022 9:50 AM	10:00	5.72 pH	21.92 °C	275.09 µS/cm	0.46 mg/L	8.15 NTU	102.2 mV	15.50 ft	225.00 ml/min
8/25/2022 9:55 AM	15:00	5.74 pH	21.85 °C	272.73 µS/cm	0.38 mg/L	8.08 NTU	91.8 mV	15.50 ft	225.00 ml/min
8/25/2022 10:00 AM	20:00	5.73 pH	21.86 °C	275.34 µS/cm	0.28 mg/L	4.62 NTU	94.2 mV	15.50 ft	225.00 ml/min
8/25/2022 10:05 AM	25:00	5.74 pH	21.87 °C	272.52 µS/cm	0.25 mg/L	2.69 NTU	84.8 mV	15.50 ft	225.00 ml/min
8/25/2022 10:10 AM	30:00	5.74 pH	21.91 °C	272.83 µS/cm	0.24 mg/L	2.84 NTU	77.7 mV	15.50 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/23/2022 2:40:45 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWC-47 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 82 ft Total Depth: 92 ft Initial Depth to Water: 27.75 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 87 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 8 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Sunny, sample time-1520

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
8/23/2022 2:40 PM	00:00	6.15 pH	41.42 °C	0.20 µS/cm	5.90 mg/L	6.22 NTU	100.2 mV	27.75 ft	150.00 ml/min
8/23/2022 2:45 PM	05:00	5.82 pH	29.41 °C	1,539.2 µS/cm	2.08 mg/L	5.31 NTU	20.4 mV	28.00 ft	150.00 ml/min
8/23/2022 2:50 PM	10:00	5.64 pH	23.77 °C	1,608.1 µS/cm	0.45 mg/L	4.44 NTU	38.9 mV	28.30 ft	150.00 ml/min
8/23/2022 2:55 PM	15:00	5.63 pH	23.48 °C	1,630.8 µS/cm	0.34 mg/L	4.18 NTU	49.5 mV	28.30 ft	150.00 ml/min
8/23/2022 3:00 PM	20:00	5.62 pH	23.26 °C	1,628.6 µS/cm	0.30 mg/L	1.92 NTU	54.4 mV	28.40 ft	150.00 ml/min
8/23/2022 3:05 PM	25:00	5.61 pH	23.35 °C	1,637.8 µS/cm	0.28 mg/L	1.73 NTU	57.8 mV	28.40 ft	150.00 ml/min
8/23/2022 3:10 PM	30:00	5.61 pH	23.30 °C	1,639.2 µS/cm	0.28 mg/L	1.57 NTU	57.4 mV	28.40 ft	150.00 ml/min
8/23/2022 3:15 PM	35:00	5.61 pH	23.16 °C	1,642.1 µS/cm	0.29 mg/L	2.01 NTU	52.5 mV	28.40 ft	150.00 ml/min
8/23/2022 3:20 PM	40:00	5.61 pH	23.61 °C	1,647.4 µS/cm	0.30 mg/L	1.42 NTU	45.0 mV	28.40 ft	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 2:06:22 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWC-50 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 55 ft Total Depth: 65 ft Initial Depth to Water: 38.3 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 60 ft Estimated Total Volume Pumped: 11.2 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 2.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time -1451

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/24/2022 2:06 PM	00:00	4.49 pH	40.44 °C	2.08 µS/cm	6.17 mg/L	0.96 NTU	268.6 mV	38.30 ft	250.00 ml/min
8/24/2022 2:11 PM	05:00	5.06 pH	23.11 °C	1,490.6 µS/cm	0.89 mg/L	1.02 NTU	186.0 mV	38.50 ft	250.00 ml/min
8/24/2022 2:16 PM	10:00	5.04 pH	22.13 °C	1,530.5 µS/cm	0.37 mg/L	1.11 NTU	188.8 mV	38.50 ft	250.00 ml/min
8/24/2022 2:21 PM	15:00	5.04 pH	21.91 °C	1,533.8 µS/cm	0.25 mg/L	1.06 NTU	184.0 mV	38.50 ft	250.00 ml/min
8/24/2022 2:26 PM	20:00	5.04 pH	21.86 °C	1,540.8 µS/cm	0.23 mg/L	0.75 NTU	182.8 mV	38.50 ft	250.00 ml/min
8/24/2022 2:31 PM	25:00	5.03 pH	21.82 °C	1,545.3 µS/cm	0.22 mg/L	0.94 NTU	185.8 mV	38.50 ft	250.00 ml/min
8/24/2022 2:36 PM	30:00	5.02 pH	21.81 °C	1,541.9 µS/cm	0.23 mg/L	0.23 NTU	181.8 mV	38.50 ft	250.00 ml/min
8/24/2022 2:41 PM	35:00	5.02 pH	21.74 °C	1,544.3 µS/cm	0.23 mg/L	0.37 NTU	181.1 mV	38.50 ft	250.00 ml/min
8/24/2022 2:46 PM	40:00	5.01 pH	21.75 °C	1,542.8 µS/cm	0.23 mg/L	0.43 NTU	184.2 mV	38.50 ft	250.00 ml/min
8/24/2022 2:51 PM	45:00	5.01 pH	21.80 °C	1,552.8 µS/cm	0.23 mg/L	0.36 NTU	180.6 mV	38.50 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 12:05:11 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: BRGWC-52I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66 ft Total Depth: 76.6 ft Initial Depth to Water: 39.74 ft	Pump Type: QED Bladder Pump Tubing Type: Poly Pump Intake From TOC: 71 ft Estimated Total Volume Pumped: 12.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 12 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time-1255

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/25/2022 12:05 PM	00:00	6.23 pH	40.84 °C	0.21 µS/cm	5.82 mg/L	3.92 NTU	71.8 mV	39.74 ft	250.00 ml/min
8/25/2022 12:10 PM	05:00	6.58 pH	21.65 °C	357.37 µS/cm	1.07 mg/L	2.48 NTU	-20.4 mV	40.50 ft	250.00 ml/min
8/25/2022 12:15 PM	10:00	6.74 pH	20.75 °C	362.73 µS/cm	0.39 mg/L	1.62 NTU	-56.4 mV	40.70 ft	250.00 ml/min
8/25/2022 12:20 PM	15:00	6.94 pH	20.71 °C	354.90 µS/cm	0.30 mg/L	1.73 NTU	-84.1 mV	40.70 ft	250.00 ml/min
8/25/2022 12:25 PM	20:00	6.97 pH	20.66 °C	346.93 µS/cm	0.29 mg/L	2.06 NTU	-90.9 mV	40.70 ft	250.00 ml/min
8/25/2022 12:30 PM	25:00	6.75 pH	20.59 °C	342.23 µS/cm	0.29 mg/L	1.42 NTU	-77.3 mV	40.70 ft	250.00 ml/min
8/25/2022 12:35 PM	30:00	6.40 pH	20.49 °C	333.34 µS/cm	0.29 mg/L	0.94 NTU	-55.6 mV	40.70 ft	250.00 ml/min
8/25/2022 12:40 PM	35:00	6.29 pH	20.48 °C	328.54 µS/cm	0.29 mg/L	0.89 NTU	-40.0 mV	40.70 ft	250.00 ml/min
8/25/2022 12:45 PM	40:00	6.24 pH	20.48 °C	325.46 µS/cm	0.29 mg/L	0.75 NTU	-36.6 mV	40.70 ft	250.00 ml/min
8/25/2022 12:50 PM	45:00	6.18 pH	20.45 °C	322.70 µS/cm	0.29 mg/L	0.68 NTU	-28.5 mV	40.70 ft	250.00 ml/min
8/25/2022 12:55 PM	50:00	6.21 pH	20.51 °C	323.93 µS/cm	0.28 mg/L	0.52 NTU	-39.0 mV	40.70 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/6/2022 2:35:32 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-43 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 32.97 ft Total Depth: 42.97 ft Initial Depth to Water: 30.12 ft	Pump Type: Peri pump Tubing Type: Poly Pump Intake From TOC: 37 ft Estimated Total Volume Pumped: 11.2 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 3.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sunny, stop time-1550

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
10/6/2022 2:35 PM	00:00	3.84 pH	45.40 °C	2.43 µS/cm	5.74 mg/L	852.00 NTU	359.6 mV	30.12 ft	150.00 ml/min
10/6/2022 2:40 PM	05:00	5.76 pH	31.64 °C	2,150.1 µS/cm	0.46 mg/L	795.00 NTU	192.5 mV	30.40 ft	150.00 ml/min
10/6/2022 2:45 PM	10:00	5.35 pH	25.38 °C	2,394.5 µS/cm	0.24 mg/L	461.00 NTU	337.1 mV	30.40 ft	150.00 ml/min
10/6/2022 2:50 PM	15:00	5.41 pH	24.98 °C	2,380.0 µS/cm	0.13 mg/L	287.00 NTU	223.4 mV	30.40 ft	150.00 ml/min
10/6/2022 2:55 PM	20:00	5.36 pH	24.91 °C	2,383.5 µS/cm	0.10 mg/L	142.00 NTU	301.5 mV	30.40 ft	150.00 ml/min
10/6/2022 3:00 PM	25:00	5.31 pH	24.71 °C	2,347.0 µS/cm	0.07 mg/L	120.00 NTU	250.2 mV	30.40 ft	150.00 ml/min
10/6/2022 3:05 PM	30:00	5.28 pH	24.47 °C	2,390.6 µS/cm	0.06 mg/L	81.00 NTU	342.9 mV	30.40 ft	150.00 ml/min
10/6/2022 3:10 PM	35:00	5.27 pH	24.61 °C	2,386.3 µS/cm	0.05 mg/L	57.00 NTU	266.5 mV	30.40 ft	150.00 ml/min
10/6/2022 3:15 PM	40:00	5.25 pH	24.56 °C	2,397.6 µS/cm	0.05 mg/L	44.00 NTU	362.7 mV	30.40 ft	150.00 ml/min
10/6/2022 3:20 PM	45:00	5.25 pH	24.61 °C	2,392.3 µS/cm	0.04 mg/L	13.00 NTU	278.6 mV	30.40 ft	150.00 ml/min
10/6/2022 3:25 PM	50:00	5.24 pH	24.65 °C	2,390.6 µS/cm	0.04 mg/L	13.00 NTU	285.9 mV	30.40 ft	150.00 ml/min
10/6/2022 3:30 PM	55:00	5.24 pH	24.63 °C	2,396.3 µS/cm	0.04 mg/L	11.00 NTU	387.2 mV	30.40 ft	150.00 ml/min
10/6/2022 3:35 PM	01:00:00	5.24 pH	24.67 °C	2,408.7 µS/cm	0.04 mg/L	10.00 NTU	393.8 mV	30.40 ft	150.00 ml/min
10/6/2022 3:40 PM	01:05:00	5.24 pH	24.54 °C	2,383.4 µS/cm	0.03 mg/L	7.08 NTU	295.7 mV	30.40 ft	150.00 ml/min
10/6/2022 3:45 PM	01:10:00	5.25 pH	24.50 °C	2,408.7 µS/cm	0.03 mg/L	5.73 NTU	297.2 mV	30.40 ft	150.00 ml/min

10/6/2022 3:50 PM	01:15:00	5.24 pH	24.47 °C	2,410.8 µS/cm	0.03 mg/L	4.41 NTU	296.3 mV	30.40 ft	150.00 ml/min
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Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 11:01:04 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-44 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49.58 ft Total Depth: 59.58 ft Initial Depth to Water: 28.08 ft	Pump Type: Peri pump Tubing Type: Poly Pump Intake From TOC: 54 ft Estimated Total Volume Pumped: 7.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time-1131

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/25/2022 11:01 AM	00:00	6.13 pH	32.22 °C	0.27 µS/cm	7.30 mg/L	0.86 NTU	88.4 mV	28.08 ft	250.00 ml/min
8/25/2022 11:06 AM	05:00	6.07 pH	24.52 °C	187.89 µS/cm	0.40 mg/L	0.88 NTU	86.0 mV	28.50 ft	250.00 ml/min
8/25/2022 11:11 AM	10:00	6.06 pH	22.95 °C	195.30 µS/cm	0.25 mg/L	0.94 NTU	92.4 mV	28.50 ft	250.00 ml/min
8/25/2022 11:16 AM	15:00	6.05 pH	22.85 °C	194.84 µS/cm	0.21 mg/L	0.58 NTU	91.8 mV	28.50 ft	250.00 ml/min
8/25/2022 11:21 AM	20:00	6.06 pH	22.85 °C	195.94 µS/cm	0.18 mg/L	0.77 NTU	85.1 mV	28.50 ft	250.00 ml/min
8/25/2022 11:26 AM	25:00	6.06 pH	23.14 °C	197.67 µS/cm	0.16 mg/L	0.49 NTU	87.6 mV	28.50 ft	250.00 ml/min
8/25/2022 11:31 AM	30:00	6.06 pH	22.72 °C	196.67 µS/cm	0.13 mg/L	0.52 NTU	90.3 mV	28.50 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 9:29:24 AM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-50D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 99 ft Total Depth: 109.9 ft Initial Depth to Water: 52.32 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 104 ft Estimated Total Volume Pumped: 2.3 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 23.8 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled after overnight recharge at 0951 on 8-25-22. Cloudy 70s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/25/2022 9:29 AM	00:00	6.24 pH	24.34 °C	1,552.6 µS/cm	7.78 mg/L	10.00 NTU	65.5 mV	52.32 ft	100.00 ml/min
8/25/2022 9:34 AM	05:00	6.15 pH	23.32 °C	1,709.3 µS/cm	5.87 mg/L	12.00 NTU	61.6 mV	53.20 ft	100.00 ml/min
8/25/2022 9:39 AM	10:00	6.11 pH	23.08 °C	1,660.5 µS/cm	2.13 mg/L	6.90 NTU	64.8 mV	53.70 ft	100.00 ml/min
8/25/2022 9:44 AM	15:00	6.11 pH	23.03 °C	1,651.5 µS/cm	1.61 mg/L	8.40 NTU	68.1 mV	53.90 ft	100.00 ml/min
8/25/2022 9:49 AM	20:00	6.11 pH	23.01 °C	1,656.2 µS/cm	1.50 mg/L	6.80 NTU	69.2 mV	54.30 ft	100.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 3:20:10 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-50D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 99.9 ft Total Depth: 109.9 ft Initial Depth to Water: 38.11 ft	Pump Type: QED Bladder pump Tubing Type: Poly Pump Intake From TOC: 104 ft Estimated Total Volume Pumped: 43.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 350 ml/min Final Draw Down: 63.89 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Well purged dry. Allow well to recharge overnight. No sample collected

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/24/2022 3:20 PM	00:00	5.02 pH	32.11 °C	1,545.2 µS/cm	1.35 mg/L	3.92 NTU	179.1 mV	38.11 ft	125.00 ml/min
8/24/2022 3:25 PM	05:00	5.97 pH	29.39 °C	1,315.9 µS/cm	3.04 mg/L	3.11 NTU	97.5 mV	38.80 ft	125.00 ml/min
8/24/2022 3:30 PM	10:00	5.92 pH	26.65 °C	1,380.6 µS/cm	0.82 mg/L	3.65 NTU	64.9 mV	39.30 ft	125.00 ml/min
8/24/2022 3:35 PM	15:00	5.92 pH	26.88 °C	1,384.4 µS/cm	0.72 mg/L	3.21 NTU	48.8 mV	39.50 ft	125.00 ml/min
8/24/2022 3:40 PM	20:00	5.93 pH	27.85 °C	1,380.2 µS/cm	0.75 mg/L	3.05 NTU	35.0 mV	39.70 ft	125.00 ml/min
8/24/2022 3:45 PM	25:00	5.96 pH	27.22 °C	1,331.1 µS/cm	0.68 mg/L	2.50 NTU	27.1 mV	40.60 ft	350.00 ml/min
8/24/2022 3:50 PM	30:00	5.95 pH	23.30 °C	1,370.4 µS/cm	0.28 mg/L	2.79 NTU	24.3 mV	41.60 ft	350.00 ml/min
8/24/2022 3:55 PM	35:00	5.94 pH	23.21 °C	1,372.2 µS/cm	0.22 mg/L	3.33 NTU	21.2 mV	45.30 ft	350.00 ml/min
8/24/2022 4:00 PM	40:00	5.95 pH	23.03 °C	1,368.8 µS/cm	0.21 mg/L	2.74 NTU	18.7 mV	48.60 ft	350.00 ml/min
8/24/2022 4:05 PM	45:00	5.96 pH	23.05 °C	1,354.9 µS/cm	0.21 mg/L	2.94 NTU	16.7 mV	51.10 ft	350.00 ml/min
8/24/2022 4:10 PM	50:00	5.98 pH	22.40 °C	1,334.1 µS/cm	0.18 mg/L	1.97 NTU	15.5 mV	54.20 ft	350.00 ml/min
8/24/2022 4:15 PM	55:00	6.04 pH	22.45 °C	1,284.0 µS/cm	0.18 mg/L	3.78 NTU	18.6 mV	57.50 ft	350.00 ml/min
8/24/2022 4:20 PM	01:00:00	6.06 pH	22.72 °C	1,270.5 µS/cm	0.26 mg/L	4.21 NTU	24.3 mV	59.90 ft	350.00 ml/min
8/24/2022 4:25 PM	01:05:00	6.09 pH	22.09 °C	1,251.0 µS/cm	0.80 mg/L	6.37 NTU	31.7 mV	63.20 ft	350.00 ml/min
8/24/2022 4:30 PM	01:10:00	6.17 pH	21.82 °C	1,244.3 µS/cm	2.67 mg/L	8.42 NTU	42.3 mV	66.40 ft	350.00 ml/min

8/24/2022 4:35 PM	01:15:00	6.28 pH	21.91 °C	1,244.1 µS/cm	4.54 mg/L	11.00 NTU	51.8 mV	69.10 ft	350.00 ml/min
8/24/2022 4:40 PM	01:20:00	6.33 pH	21.98 °C	1,249.8 µS/cm	5.06 mg/L	13.00 NTU	57.4 mV	73.00 ft	350.00 ml/min
8/24/2022 4:45 PM	01:25:00	6.36 pH	21.93 °C	1,243.5 µS/cm	5.38 mg/L	12.00 NTU	60.8 mV	76.70 ft	350.00 ml/min
8/24/2022 4:50 PM	01:30:00	6.34 pH	22.09 °C	1,256.3 µS/cm	5.34 mg/L	15.00 NTU	62.2 mV	80.70 ft	350.00 ml/min
8/24/2022 4:55 PM	01:35:00	6.33 pH	22.67 °C	1,272.6 µS/cm	5.25 mg/L	17.00 NTU	62.8 mV	84.20 ft	350.00 ml/min
8/24/2022 5:00 PM	01:40:00	6.25 pH	23.18 °C	1,290.9 µS/cm	4.71 mg/L	16.00 NTU	59.1 mV	88.60 ft	350.00 ml/min
8/24/2022 5:05 PM	01:45:00	6.24 pH	26.85 °C	1,308.8 µS/cm	4.59 mg/L	14.00 NTU	53.7 mV	93.10 ft	350.00 ml/min
8/24/2022 5:10 PM	01:50:00	6.26 pH	28.89 °C	1,293.0 µS/cm	4.57 mg/L	15.00 NTU	53.8 mV	96.30 ft	350.00 ml/min
8/24/2022 5:15 PM	01:55:00	6.27 pH	29.81 °C	1,286.6 µS/cm	5.06 mg/L	18.00 NTU	56.8 mV	98.80 ft	350.00 ml/min
8/24/2022 5:20 PM	02:00:00	6.16 pH	26.08 °C	1,339.5 µS/cm	5.17 mg/L	25.00 NTU	56.1 mV	102.00 ft	350.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 9:47:29 AM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-51D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 96 ft Total Depth: 106 ft Initial Depth to Water: 38.08 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 100 ft Estimated Total Volume Pumped: 7.4 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 7.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1049 on 8-24-22. Cloudy 70s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/24/2022 9:47 AM	00:00	7.08 pH	25.95 °C	17.84 µS/cm	8.02 mg/L	10.00 NTU	266.4 mV	38.08 ft	200.00 ml/min
8/24/2022 9:52 AM	05:00	7.19 pH	24.69 °C	839.66 µS/cm	2.81 mg/L	7.20 NTU	43.4 mV	37.60 ft	120.00 ml/min
8/24/2022 9:57 AM	10:00	6.84 pH	23.06 °C	842.29 µS/cm	1.63 mg/L	7.00 NTU	-25.7 mV	37.90 ft	120.00 ml/min
8/24/2022 10:02 AM	15:00	6.90 pH	22.67 °C	851.93 µS/cm	1.02 mg/L	6.90 NTU	-47.6 mV	38.20 ft	120.00 ml/min
8/24/2022 10:07 AM	20:00	6.96 pH	22.45 °C	848.31 µS/cm	0.68 mg/L	8.90 NTU	-66.9 mV	38.50 ft	120.00 ml/min
8/24/2022 10:12 AM	25:00	7.01 pH	22.38 °C	848.10 µS/cm	0.51 mg/L	7.30 NTU	-76.4 mV	38.80 ft	120.00 ml/min
8/24/2022 10:17 AM	30:00	7.05 pH	22.53 °C	849.68 µS/cm	0.41 mg/L	7.10 NTU	-90.9 mV	39.10 ft	120.00 ml/min
8/24/2022 10:22 AM	35:00	7.08 pH	22.56 °C	851.00 µS/cm	0.36 mg/L	6.90 NTU	-91.8 mV	39.60 ft	120.00 ml/min
8/24/2022 10:27 AM	40:00	7.10 pH	22.82 °C	850.55 µS/cm	0.34 mg/L	6.50 NTU	-100.5 mV	39.70 ft	100.00 ml/min
8/24/2022 10:32 AM	45:00	7.11 pH	23.17 °C	847.30 µS/cm	0.35 mg/L	5.70 NTU	-96.9 mV	40.00 ft	100.00 ml/min
8/24/2022 10:37 AM	50:00	7.13 pH	23.30 °C	846.94 µS/cm	0.32 mg/L	5.40 NTU	-103.0 mV	39.30 ft	100.00 ml/min
8/24/2022 10:42 AM	55:00	7.14 pH	23.34 °C	848.03 µS/cm	0.32 mg/L	5.30 NTU	-98.2 mV	39.40 ft	100.00 ml/min
8/24/2022 10:47 AM	01:00:00	7.15 pH	23.04 °C	843.49 µS/cm	0.30 mg/L	4.80 NTU	-98.6 mV	39.50 ft	100.00 ml/min

Samples

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/24/2022 12:08:39 PM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-511 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 55 ft Total Depth: 65 ft Initial Depth to Water: 38.4 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 60 ft Estimated Total Volume Pumped: 4.4 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1234 on 8-24-22. Partly cloudy 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/24/2022 12:08 PM	00:00	6.49 pH	29.39 °C	1,527.3 µS/cm	4.14 mg/L	10.00 NTU	64.1 mV	38.40 ft	150.00 ml/min
8/24/2022 12:13 PM	05:00	5.62 pH	23.84 °C	1,659.9 µS/cm	1.40 mg/L	4.50 NTU	108.6 mV	38.80 ft	150.00 ml/min
8/24/2022 12:18 PM	10:00	5.55 pH	23.00 °C	1,689.4 µS/cm	0.51 mg/L	2.20 NTU	122.4 mV	38.90 ft	150.00 ml/min
8/24/2022 12:23 PM	15:00	5.52 pH	23.03 °C	1,700.7 µS/cm	0.27 mg/L	1.60 NTU	129.1 mV	38.90 ft	150.00 ml/min
8/24/2022 12:28 PM	20:00	5.51 pH	22.99 °C	1,627.9 µS/cm	0.21 mg/L	1.30 NTU	163.6 mV	38.90 ft	150.00 ml/min
8/24/2022 12:33 PM	25:00	5.49 pH	22.90 °C	1,630.5 µS/cm	0.17 mg/L	1.00 NTU	175.3 mV	38.90 ft	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 3:42:30 PM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-51S Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 40.4 ft Total Depth: 45.4 ft Initial Depth to Water: 38.35 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 42.5 ft Estimated Total Volume Pumped: 3.9 liter Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 13.2 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1609 on 8-24-22. Sunny 80s. FD-02 here.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/24/2022 3:42 PM	00:00	6.14 pH	30.58 °C	174.32 µS/cm	1.51 mg/L	5.00 NTU	101.0 mV	38.35 ft	200.00 ml/min
8/24/2022 3:47 PM	05:00	6.10 pH	23.80 °C	144.97 µS/cm	0.95 mg/L	5.90 NTU	164.1 mV	39.00 ft	200.00 ml/min
8/24/2022 3:52 PM	10:00	6.12 pH	23.21 °C	144.65 µS/cm	0.83 mg/L	4.30 NTU	168.5 mV	39.25 ft	150.00 ml/min
8/24/2022 3:57 PM	15:00	6.13 pH	23.44 °C	145.08 µS/cm	0.61 mg/L	2.50 NTU	173.5 mV	39.35 ft	120.00 ml/min
8/24/2022 4:02 PM	20:00	6.12 pH	23.07 °C	143.37 µS/cm	0.50 mg/L	2.00 NTU	187.6 mV	39.40 ft	120.00 ml/min
8/24/2022 4:07 PM	25:00	6.12 pH	22.90 °C	143.50 µS/cm	0.37 mg/L	1.90 NTU	178.3 mV	39.45 ft	120.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 10:20:10 AM

Project: Plant Branch Ash Ponds

Operator Name: A. Schnittker

Location Name: PZ-571 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 65.9 ft Total Depth: 75.9 ft Initial Depth to Water: 36.48 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 6 in	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Sample time 1055. Overcast 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/25/2022 10:20 AM	00:00	5.95 pH	22.90 °C	549.37 µS/cm	0.90 mg/L	2.64 NTU	48.2 mV	36.48 ft	250.00 ml/min
8/25/2022 10:25 AM	05:00	5.91 pH	21.35 °C	551.20 µS/cm	0.24 mg/L	2.61 NTU	31.4 mV	37.00 ft	250.00 ml/min
8/25/2022 10:30 AM	10:00	5.91 pH	21.15 °C	550.73 µS/cm	0.16 mg/L	2.82 NTU	26.2 mV	37.00 ft	250.00 ml/min
8/25/2022 10:35 AM	15:00	5.91 pH	21.14 °C	551.10 µS/cm	0.12 mg/L	2.97 NTU	23.0 mV	37.00 ft	250.00 ml/min
8/25/2022 10:40 AM	20:00	5.91 pH	21.29 °C	552.34 µS/cm	0.10 mg/L	3.15 NTU	18.3 mV	37.00 ft	250.00 ml/min
8/25/2022 10:45 AM	25:00	5.90 pH	21.28 °C	552.85 µS/cm	0.08 mg/L	2.74 NTU	14.7 mV	37.00 ft	250.00 ml/min
8/25/2022 10:50 AM	30:00	5.91 pH	21.36 °C	552.37 µS/cm	0.07 mg/L	2.76 NTU	12.0 mV	37.00 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 9:45:03 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-58I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53 ft Total Depth: 63.93 ft Initial Depth to Water: 38.44 ft	Pump Type: Bladder pump Tubing Type: Poly Pump Intake From TOC: 58 ft Estimated Total Volume Pumped: 11.25 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 2 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time -1030, FD-01 here

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/24/2022 9:45 AM	00:00	6.91 pH	24.54 °C	1.99 µS/cm	8.25 mg/L	3.21 NTU	220.6 mV	38.44 ft	250.00 ml/min
8/24/2022 9:50 AM	05:00	3.82 pH	21.96 °C	1,101.0 µS/cm	0.50 mg/L	2.88 NTU	187.7 mV	38.60 ft	250.00 ml/min
8/24/2022 9:55 AM	10:00	3.84 pH	21.56 °C	1,095.9 µS/cm	0.25 mg/L	3.60 NTU	181.4 mV	38.60 ft	250.00 ml/min
8/24/2022 10:00 AM	15:00	3.84 pH	21.55 °C	1,102.4 µS/cm	0.18 mg/L	4.83 NTU	176.2 mV	38.60 ft	250.00 ml/min
8/24/2022 10:05 AM	20:00	3.83 pH	21.47 °C	1,105.3 µS/cm	0.15 mg/L	5.02 NTU	171.0 mV	38.60 ft	250.00 ml/min
8/24/2022 10:10 AM	25:00	3.82 pH	21.47 °C	1,107.1 µS/cm	0.13 mg/L	6.15 NTU	170.3 mV	38.60 ft	250.00 ml/min
8/24/2022 10:15 AM	30:00	3.82 pH	21.51 °C	1,110.1 µS/cm	0.11 mg/L	2.87 NTU	169.1 mV	38.60 ft	250.00 ml/min
8/24/2022 10:20 AM	35:00	3.82 pH	21.51 °C	1,112.2 µS/cm	0.10 mg/L	2.95 NTU	169.1 mV	38.60 ft	250.00 ml/min
8/24/2022 10:25 AM	40:00	3.81 pH	21.61 °C	1,110.5 µS/cm	0.09 mg/L	2.15 NTU	168.5 mV	38.60 ft	250.00 ml/min
8/24/2022 10:30 AM	45:00	3.81 pH	21.63 °C	1,113.3 µS/cm	0.09 mg/L	2.22 NTU	168.3 mV	38.60 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 12:13:21 PM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-59I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 59.8 ft Total Depth: 69.81 ft Initial Depth to Water: 39.78 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 64 ft Estimated Total Volume Pumped: 12.8 liter Flow Cell Volume: 90 ml Final Flow Rate: 155 ml/min Final Draw Down: 40.3 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1316 on 8-25-22. Cloudy 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/25/2022 12:13 PM	00:00	5.59 pH	37.15 °C	1.50 µS/cm	6.52 mg/L	57.00 NTU	125.3 mV	39.78 ft	150.00 ml/min
8/25/2022 12:18 PM	05:00	3.72 pH	25.84 °C	2,980.3 µS/cm	0.76 mg/L	57.00 NTU	192.0 mV	40.20 ft	150.00 ml/min
8/25/2022 12:23 PM	10:00	3.72 pH	23.61 °C	3,079.7 µS/cm	0.16 mg/L	16.10 NTU	191.9 mV	40.40 ft	200.00 ml/min
8/25/2022 12:28 PM	15:00	3.72 pH	23.16 °C	3,133.2 µS/cm	0.10 mg/L	8.70 NTU	193.3 mV	40.40 ft	200.00 ml/min
8/25/2022 12:33 PM	20:00	3.71 pH	22.90 °C	3,128.5 µS/cm	0.08 mg/L	6.50 NTU	204.7 mV	40.40 ft	200.00 ml/min
8/25/2022 12:38 PM	25:00	3.72 pH	22.74 °C	3,123.9 µS/cm	0.06 mg/L	5.80 NTU	196.7 mV	40.45 ft	200.00 ml/min
8/25/2022 12:43 PM	30:00	3.71 pH	22.67 °C	3,126.5 µS/cm	0.05 mg/L	5.30 NTU	206.6 mV	40.45 ft	200.00 ml/min
8/25/2022 12:48 PM	35:00	3.71 pH	22.73 °C	3,129.3 µS/cm	0.04 mg/L	7.10 NTU	198.3 mV	40.45 ft	200.00 ml/min
8/25/2022 12:53 PM	40:00	3.72 pH	22.74 °C	3,128.7 µS/cm	0.03 mg/L	7.60 NTU	208.6 mV	40.45 ft	200.00 ml/min
8/25/2022 12:58 PM	45:00	3.71 pH	22.85 °C	3,138.2 µS/cm	0.03 mg/L	6.40 NTU	199.6 mV	40.45 ft	155.00 ml/min
8/25/2022 1:03 PM	50:00	3.72 pH	23.39 °C	3,131.9 µS/cm	0.03 mg/L	6.10 NTU	210.3 mV	4.30 ft	155.00 ml/min
8/25/2022 1:08 PM	55:00	3.72 pH	23.71 °C	3,130.4 µS/cm	0.03 mg/L	5.70 NTU	211.2 mV	4.30 ft	155.00 ml/min
8/25/2022 1:13 PM	01:00:00	3.72 pH	23.84 °C	3,130.4 µS/cm	0.03 mg/L	4.40 NTU	212.4 mV	4.30 ft	155.00 ml/min

Samples

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/24/2022 11:35:15 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-60I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 54.15 ft Total Depth: 64.15 ft Initial Depth to Water: 38.42 ft	Pump Type: Portable Bladder pump Tubing Type: Poly Pump Intake From TOC: 59 ft Estimated Total Volume Pumped: 11.2 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 1 in	Instrument Used: Aqua TROLL 400 Serial Number: 850751
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Test Notes:

Cloudy, sample time-1220

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
8/24/2022 11:35 AM	00:00	3.98 pH	31.25 °C	1.06 µS/cm	7.16 mg/L	3.00 NTU	194.3 mV	38.42 ft	250.00 ml/min
8/24/2022 11:40 AM	05:00	4.58 pH	23.36 °C	1,979.5 µS/cm	0.40 mg/L	1.26 NTU	237.1 mV	38.50 ft	250.00 ml/min
8/24/2022 11:45 AM	10:00	4.57 pH	22.38 °C	2,084.8 µS/cm	0.21 mg/L	1.48 NTU	292.5 mV	38.50 ft	250.00 ml/min
8/24/2022 11:50 AM	15:00	4.57 pH	22.27 °C	2,077.3 µS/cm	0.16 mg/L	1.74 NTU	312.6 mV	38.50 ft	250.00 ml/min
8/24/2022 11:55 AM	20:00	4.57 pH	22.24 °C	2,069.9 µS/cm	0.13 mg/L	2.09 NTU	337.9 mV	38.50 ft	250.00 ml/min
8/24/2022 12:00 PM	25:00	4.57 pH	22.18 °C	2,070.5 µS/cm	0.11 mg/L	1.86 NTU	368.6 mV	38.50 ft	250.00 ml/min
8/24/2022 12:05 PM	30:00	4.56 pH	22.18 °C	2,062.6 µS/cm	0.10 mg/L	1.83 NTU	347.9 mV	38.50 ft	250.00 ml/min
8/24/2022 12:10 PM	35:00	4.56 pH	22.05 °C	2,067.8 µS/cm	0.09 mg/L	1.11 NTU	365.6 mV	38.50 ft	250.00 ml/min
8/24/2022 12:15 PM	40:00	4.56 pH	22.07 °C	2,055.1 µS/cm	0.08 mg/L	1.05 NTU	361.0 mV	38.50 ft	250.00 ml/min
8/24/2022 12:20 PM	45:00	4.55 pH	22.15 °C	2,061.2 µS/cm	0.07 mg/L	1.14 NTU	394.0 mV	38.50 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/24/2022 1:25:13 PM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-611 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66 ft Total Depth: 76 ft Initial Depth to Water: 47.91 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 71 ft Estimated Total Volume Pumped: 5.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 3.5 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1402 on 8-24-22. Sunny 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/24/2022 1:25 PM	00:00	5.74 pH	29.80 °C	1,541.1 µS/cm	5.21 mg/L	10.00 NTU	82.5 mV	47.91 ft	150.00 ml/min
8/24/2022 1:30 PM	05:00	5.19 pH	23.56 °C	2,081.6 µS/cm	0.43 mg/L	27.00 NTU	145.8 mV	48.15 ft	150.00 ml/min
8/24/2022 1:35 PM	10:00	5.17 pH	22.71 °C	2,105.5 µS/cm	0.20 mg/L	19.00 NTU	154.9 mV	48.15 ft	150.00 ml/min
8/24/2022 1:40 PM	15:00	5.16 pH	22.54 °C	2,080.9 µS/cm	0.16 mg/L	10.80 NTU	156.4 mV	48.20 ft	150.00 ml/min
8/24/2022 1:45 PM	20:00	5.15 pH	22.54 °C	2,075.6 µS/cm	0.13 mg/L	11.70 NTU	204.0 mV	48.20 ft	150.00 ml/min
8/24/2022 1:50 PM	25:00	5.15 pH	22.35 °C	2,076.2 µS/cm	0.12 mg/L	7.64 NTU	208.9 mV	48.20 ft	150.00 ml/min
8/24/2022 1:55 PM	30:00	5.14 pH	22.34 °C	2,073.9 µS/cm	0.12 mg/L	6.60 NTU	212.9 mV	48.20 ft	150.00 ml/min
8/24/2022 2:00 PM	35:00	5.14 pH	22.81 °C	2,084.0 µS/cm	0.12 mg/L	4.50 NTU	165.6 mV	48.20 ft	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 10:54:59 AM

Project: Plant Branch Ash Ponds

Operator Name: H Auld

Location Name: PZ-62I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.5 ft Total Depth: 72.68 ft Initial Depth to Water: 39.18 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 67 ft Estimated Total Volume Pumped: 5.1 liter Flow Cell Volume: 90 ml Final Flow Rate: 175 ml/min Final Draw Down: 7.4 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sampled at 1121 on 8-25-22. Partly sunny 70s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/25/2022 10:54 AM	00:00	6.67 pH	25.96 °C	544.58 µS/cm	3.40 mg/L	10.00 NTU	-14.5 mV	39.18 ft	175.00 ml/min
8/25/2022 10:59 AM	05:00	5.56 pH	22.99 °C	925.98 µS/cm	0.89 mg/L	8.50 NTU	82.4 mV	39.60 ft	175.00 ml/min
8/25/2022 11:04 AM	10:00	5.52 pH	22.54 °C	955.52 µS/cm	0.58 mg/L	4.40 NTU	92.0 mV	39.60 ft	175.00 ml/min
8/25/2022 11:09 AM	15:00	5.51 pH	21.91 °C	954.90 µS/cm	0.32 mg/L	3.50 NTU	90.7 mV	39.70 ft	175.00 ml/min
8/25/2022 11:14 AM	20:00	5.50 pH	21.78 °C	955.63 µS/cm	0.27 mg/L	3.10 NTU	91.3 mV	39.80 ft	175.00 ml/min
8/25/2022 11:19 AM	25:00	5.50 pH	21.77 °C	956.56 µS/cm	0.23 mg/L	2.10 NTU	91.7 mV	39.80 ft	175.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/25/2022 11:45:17 AM

Project: Plant Branch Ash Ponds

Operator Name: A. Schnittker

Location Name: PZ-63I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 46.5 ft Total Depth: 56.5 ft Initial Depth to Water: 39.5 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 51 ft Estimated Total Volume Pumped: 7.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 11 in	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Sample time 1220. Overcast 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/25/2022 11:45 AM	00:00	6.20 pH	25.04 °C	502.12 µS/cm	0.72 mg/L	2.12 NTU	9.0 mV	39.50 ft	250.00 ml/min
8/25/2022 11:50 AM	05:00	6.03 pH	22.08 °C	500.67 µS/cm	0.21 mg/L	2.04 NTU	2.3 mV	40.20 ft	250.00 ml/min
8/25/2022 11:55 AM	10:00	5.86 pH	21.73 °C	493.22 µS/cm	0.15 mg/L	1.83 NTU	3.9 mV	40.30 ft	250.00 ml/min
8/25/2022 12:00 PM	15:00	5.75 pH	21.73 °C	490.91 µS/cm	0.13 mg/L	2.07 NTU	8.5 mV	40.40 ft	250.00 ml/min
8/25/2022 12:05 PM	20:00	5.70 pH	21.64 °C	489.24 µS/cm	0.10 mg/L	1.46 NTU	13.6 mV	40.40 ft	250.00 ml/min
8/25/2022 12:10 PM	25:00	5.67 pH	21.31 °C	489.64 µS/cm	0.09 mg/L	1.43 NTU	16.7 mV	40.40 ft	250.00 ml/min
8/25/2022 12:15 PM	30:00	5.65 pH	21.14 °C	489.12 µS/cm	0.08 mg/L	1.20 NTU	18.7 mV	40.40 ft	250.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/11/2022 3:15:10 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-64I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 61.57 ft Total Depth: 71.57 ft Initial Depth to Water: 38.96 ft	Pump Type: Portable Bladder pump Tubing Type: Poly Pump Intake From TOC: 65 ft Estimated Total Volume Pumped: 21375 ml Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 6.44 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

No sample collected

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
10/11/2022 3:15 PM	00:00	6.31 pH	28.75 °C	2,554.3 µS/cm	3.29 mg/L	15.00 NTU	61.2 mV	38.96 ft	225.00 ml/min
10/11/2022 3:20 PM	05:00	5.60 pH	22.54 °C	3,023.3 µS/cm	0.27 mg/L	12.00 NTU	121.5 mV	40.40 ft	225.00 ml/min
10/11/2022 3:25 PM	10:00	5.58 pH	22.40 °C	3,115.3 µS/cm	0.15 mg/L	12.00 NTU	113.6 mV	41.90 ft	225.00 ml/min
10/11/2022 3:30 PM	15:00	5.56 pH	22.27 °C	3,206.6 µS/cm	0.11 mg/L	13.00 NTU	120.3 mV	42.60 ft	225.00 ml/min
10/11/2022 3:35 PM	20:00	5.57 pH	22.27 °C	3,283.4 µS/cm	0.08 mg/L	12.00 NTU	76.3 mV	43.20 ft	225.00 ml/min
10/11/2022 3:40 PM	25:00	5.58 pH	22.42 °C	3,332.4 µS/cm	0.06 mg/L	12.00 NTU	70.3 mV	44.00 ft	225.00 ml/min
10/11/2022 3:45 PM	30:00	5.58 pH	22.32 °C	3,368.8 µS/cm	0.04 mg/L	13.00 NTU	82.5 mV	44.70 ft	225.00 ml/min
10/11/2022 3:50 PM	35:00	5.57 pH	21.91 °C	3,427.4 µS/cm	0.03 mg/L	14.00 NTU	88.2 mV	45.40 ft	225.00 ml/min
10/11/2022 3:55 PM	40:00	5.56 pH	22.51 °C	3,013.7 µS/cm	0.12 mg/L	13.00 NTU	164.9 mV	45.40 ft	225.00 ml/min
10/11/2022 4:00 PM	45:00	5.55 pH	23.26 °C	3,001.8 µS/cm	0.11 mg/L	15.00 NTU	144.9 mV	45.40 ft	225.00 ml/min
10/11/2022 4:05 PM	50:00	5.55 pH	23.29 °C	3,012.7 µS/cm	0.10 mg/L	16.00 NTU	155.0 mV	45.40 ft	225.00 ml/min
10/11/2022 4:10 PM	55:00	5.55 pH	22.85 °C	2,996.0 µS/cm	0.09 mg/L	18.00 NTU	197.7 mV	45.40 ft	225.00 ml/min
10/11/2022 4:15 PM	01:00:00	5.56 pH	21.93 °C	3,069.5 µS/cm	0.07 mg/L	17.00 NTU	146.7 mV	45.40 ft	225.00 ml/min
10/11/2022 4:20 PM	01:05:00	5.56 pH	22.68 °C	3,300.7 µS/cm	0.02 mg/L	13.00 NTU	132.8 mV	45.40 ft	225.00 ml/min
10/11/2022 4:25 PM	01:10:00	5.88 pH	23.80 °C	2,668.5 µS/cm	2.38 mg/L	10.00 NTU	152.0 mV	45.40 ft	225.00 ml/min

10/11/2022 4:30 PM	01:15:00	5.74 pH	24.00 °C	2,807.1 µS/cm	1.32 mg/L	9.75 NTU	157.5 mV	45.40 ft	225.00 ml/min
10/11/2022 4:35 PM	01:20:00	5.62 pH	24.16 °C	2,938.7 µS/cm	0.56 mg/L	10.00 NTU	155.3 mV	45.40 ft	225.00 ml/min
10/11/2022 4:40 PM	01:25:00	5.57 pH	24.02 °C	3,288.4 µS/cm	0.14 mg/L	9.69 NTU	130.8 mV	45.40 ft	225.00 ml/min
10/11/2022 4:45 PM	01:30:00	5.56 pH	23.84 °C	3,543.3 µS/cm	-0.01 mg/L	13.00 NTU	109.6 mV	45.40 ft	225.00 ml/min
10/11/2022 4:50 PM	01:35:00	5.56 pH	23.75 °C	3,574.3 µS/cm	-0.02 mg/L	12.00 NTU	97.5 mV	45.40 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/12/2022 9:25:48 AM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-64I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 61.57 ft Total Depth: 71.57 ft Initial Depth to Water: 38.88 ft	Pump Type: Portable Bladder pump Tubing Type: Poly Pump Intake From TOC: 65 ft Estimated Total Volume Pumped: 6.1 liter Flow Cell Volume: 90 ml Final Flow Rate: 175 ml/min Final Draw Down: 54.2 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Cloudy, sample time-1000

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
10/12/2022 9:25 AM	00:00	7.08 pH	20.77 °C	33.98 µS/cm	8.94 mg/L	9.87 NTU	255.1 mV	38.88 ft	175.00 ml/min
10/12/2022 9:30 AM	05:00	5.54 pH	21.06 °C	2,839.1 µS/cm	1.22 mg/L	8.37 NTU	84.4 mV	40.80 ft	175.00 ml/min
10/12/2022 9:35 AM	10:00	5.53 pH	20.73 °C	3,000.6 µS/cm	0.17 mg/L	6.55 NTU	72.7 mV	41.50 ft	175.00 ml/min
10/12/2022 9:40 AM	15:00	5.53 pH	20.69 °C	2,967.0 µS/cm	0.10 mg/L	6.01 NTU	54.4 mV	42.20 ft	175.00 ml/min
10/12/2022 9:45 AM	20:00	5.53 pH	20.68 °C	2,993.6 µS/cm	0.06 mg/L	5.77 NTU	47.2 mV	42.90 ft	175.00 ml/min
10/12/2022 9:50 AM	25:00	5.53 pH	20.69 °C	2,966.3 µS/cm	0.04 mg/L	5.23 NTU	42.3 mV	43.20 ft	175.00 ml/min
10/12/2022 9:55 AM	30:00	5.53 pH	20.75 °C	2,994.2 µS/cm	0.03 mg/L	4.89 NTU	38.8 mV	43.40 ft	175.00 ml/min
10/12/2022 10:00 AM	35:00	5.53 pH	20.78 °C	2,933.9 µS/cm	0.02 mg/L	4.41 NTU	35.7 mV	43.40 ft	175.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 11/7/2022 11:47:29 AM

Project: Plant Branch - Ash Pond

Operator Name: Taylor Goble

Location Name: PZ-64I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 61.57 ft Total Depth: 71.57 ft Initial Depth to Water: 39.1 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 66 ft Estimated Total Volume Pumped: 14.3 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 965658
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Test Notes:

Sampled at 1259. Fair 80 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 0.3	
11/7/2022 11:47 AM	00:00	5.76 pH	29.65 °C	3,157.1 µS/cm	4.38 mg/L	17.70 NTU	43.3 mV	39.56 ft	200.00 ml/min
11/7/2022 11:52 AM	05:00	5.61 pH	25.10 °C	3,458.4 µS/cm	3.07 mg/L	13.20 NTU	31.3 mV	39.90 ft	200.00 ml/min
11/7/2022 11:57 AM	10:00	5.60 pH	24.46 °C	3,439.4 µS/cm	2.60 mg/L	11.70 NTU	20.6 mV	40.12 ft	200.00 ml/min
11/7/2022 11:59 AM	11:31	5.60 pH	24.38 °C	3,426.7 µS/cm	2.65 mg/L	10.20 NTU	25.2 mV	40.20 ft	200.00 ml/min
11/7/2022 12:04 PM	16:31	5.60 pH	24.54 °C	3,395.9 µS/cm	1.74 mg/L	8.50 NTU	19.9 mV	40.20 ft	200.00 ml/min
11/7/2022 12:09 PM	21:31	5.60 pH	24.72 °C	3,362.9 µS/cm	1.48 mg/L	6.81 NTU	9.1 mV	40.20 ft	200.00 ml/min
11/7/2022 12:14 PM	26:31	5.60 pH	24.83 °C	3,328.2 µS/cm	1.43 mg/L	6.22 NTU	13.7 mV	40.20 ft	200.00 ml/min
11/7/2022 12:19 PM	31:31	5.61 pH	25.05 °C	3,253.9 µS/cm	1.33 mg/L	13.50 NTU	1.8 mV	40.20 ft	200.00 ml/min
11/7/2022 12:24 PM	36:31	5.53 pH	24.05 °C	3,378.7 µS/cm	1.35 mg/L	17.30 NTU	10.9 mV	40.20 ft	200.00 ml/min
11/7/2022 12:29 PM	41:31	5.49 pH	24.24 °C	3,453.5 µS/cm	1.32 mg/L	12.30 NTU	17.0 mV	40.20 ft	200.00 ml/min
11/7/2022 12:34 PM	46:31	5.48 pH	25.23 °C	3,454.0 µS/cm	0.75 mg/L	9.80 NTU	20.6 mV	40.20 ft	200.00 ml/min
11/7/2022 12:39 PM	51:31	5.47 pH	25.30 °C	3,427.0 µS/cm	0.49 mg/L	10.50 NTU	22.9 mV	40.20 ft	200.00 ml/min
11/7/2022 12:44 PM	56:31	5.47 pH	24.01 °C	3,370.3 µS/cm	0.45 mg/L	9.13 NTU	29.5 mV	40.20 ft	200.00 ml/min
11/7/2022 12:49 PM	01:01:31	5.59 pH	23.51 °C	3,133.8 µS/cm	0.42 mg/L	7.27 NTU	19.3 mV	40.20 ft	200.00 ml/min
11/7/2022 12:54 PM	01:06:31	5.60 pH	24.74 °C	3,044.6 µS/cm	0.40 mg/L	5.59 NTU	10.8 mV	40.20 ft	200.00 ml/min

11/7/2022 12:59 PM	01:11:31	5.59 pH	25.51 °C	3,039.9 µS/cm	0.39 mg/L	4.69 NTU	-4.7 mV	40.20 ft	200.00 ml/min
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Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/11/2022 1:50:13 PM

Project: Plant Branch Ash Pond

Operator Name: Taylor Goble

Location Name: PZ-65I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.27 ft Total Depth: 72.27 ft Initial Depth to Water: 36.71 ft	Pump Type: Portable Bladder Pump Tubing Type: Poly Pump Intake From TOC: 67 ft Estimated Total Volume Pumped: 7550 ml Flow Cell Volume: 90 ml Final Flow Rate: 170 ml/min Final Draw Down: 2.95 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

Sampled at 1430. Cloudy 81 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
10/11/2022 1:50 PM	00:00	4.34 pH	36.00 °C	2,274.5 µS/cm	3.24 mg/L	90.00 NTU	138.7 mV	37.33 ft	200.00 ml/min
10/11/2022 1:55 PM	05:00	4.24 pH	24.91 °C	2,599.1 µS/cm	0.47 mg/L	70.10 NTU	126.7 mV	38.08 ft	200.00 ml/min
10/11/2022 2:00 PM	10:00	4.21 pH	23.54 °C	2,633.0 µS/cm	0.25 mg/L	49.40 NTU	128.5 mV	38.80 ft	200.00 ml/min
10/11/2022 2:05 PM	15:00	4.21 pH	22.75 °C	2,637.1 µS/cm	0.21 mg/L	32.50 NTU	130.5 mV	39.11 ft	200.00 ml/min
10/11/2022 2:10 PM	20:00	4.20 pH	22.62 °C	2,643.7 µS/cm	0.18 mg/L	22.70 NTU	131.7 mV	39.45 ft	200.00 ml/min
10/11/2022 2:15 PM	25:00	4.19 pH	22.96 °C	2,642.9 µS/cm	0.16 mg/L	8.73 NTU	132.8 mV	39.57 ft	170.00 ml/min
10/11/2022 2:20 PM	30:00	4.18 pH	23.27 °C	2,639.5 µS/cm	0.15 mg/L	6.11 NTU	134.0 mV	39.62 ft	170.00 ml/min
10/11/2022 2:25 PM	35:00	4.17 pH	24.06 °C	2,644.3 µS/cm	0.14 mg/L	5.26 NTU	135.0 mV	39.64 ft	170.00 ml/min
10/11/2022 2:30 PM	40:00	4.16 pH	24.32 °C	2,627.7 µS/cm	0.13 mg/L	4.80 NTU	136.3 mV	39.66 ft	170.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/11/2022 12:00:10 PM

Project: Plant Branch Ash Ponds

Operator Name: Jordan Berisford

Location Name: PZ-66I Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 60.87 ft Total Depth: 70.87 ft Initial Depth to Water: 36.47 ft	Pump Type: Portable Bladder pump Tubing Type: Poly Pump Intake From TOC: 65 ft Estimated Total Volume Pumped: 24.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 32.7 in	Instrument Used: Aqua TROLL 400 Serial Number: 883530
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Test Notes:

Sunny, sample time -1440

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
10/11/2022 12:00 PM	00:00	7.08 pH	27.81 °C	20.54 µS/cm	7.90 mg/L	276.00 NTU	224.3 mV	36.47 ft	150.00 ml/min
10/11/2022 12:05 PM	05:00	5.89 pH	23.74 °C	2,776.6 µS/cm	0.36 mg/L	189.00 NTU	17.4 mV	37.50 ft	150.00 ml/min
10/11/2022 12:10 PM	10:00	5.89 pH	23.48 °C	2,774.0 µS/cm	0.18 mg/L	131.00 NTU	9.0 mV	38.00 ft	150.00 ml/min
10/11/2022 12:15 PM	15:00	5.89 pH	23.53 °C	2,785.7 µS/cm	0.12 mg/L	102.00 NTU	7.0 mV	38.20 ft	150.00 ml/min
10/11/2022 12:20 PM	20:00	5.91 pH	23.57 °C	2,803.2 µS/cm	0.09 mg/L	86.00 NTU	6.2 mV	38.50 ft	150.00 ml/min
10/11/2022 12:25 PM	25:00	5.86 pH	23.99 °C	2,715.3 µS/cm	0.08 mg/L	71.00 NTU	4.7 mV	38.70 ft	150.00 ml/min
10/11/2022 12:30 PM	30:00	5.66 pH	24.20 °C	2,512.8 µS/cm	0.08 mg/L	65.00 NTU	10.8 mV	38.80 ft	150.00 ml/min
10/11/2022 12:35 PM	35:00	5.66 pH	24.33 °C	2,500.3 µS/cm	0.06 mg/L	56.00 NTU	14.3 mV	38.80 ft	150.00 ml/min
10/11/2022 12:40 PM	40:00	5.67 pH	24.15 °C	2,517.6 µS/cm	0.06 mg/L	58.00 NTU	17.3 mV	38.80 ft	150.00 ml/min
10/11/2022 12:45 PM	45:00	5.75 pH	23.62 °C	2,590.6 µS/cm	0.06 mg/L	65.00 NTU	18.8 mV	38.80 ft	150.00 ml/min
10/11/2022 12:50 PM	50:00	5.81 pH	24.34 °C	2,652.1 µS/cm	0.04 mg/L	60.00 NTU	13.4 mV	38.80 ft	150.00 ml/min
10/11/2022 12:55 PM	55:00	5.81 pH	24.02 °C	2,206.7 µS/cm	0.05 mg/L	39.00 NTU	-26.4 mV	38.80 ft	150.00 ml/min
10/11/2022 1:00 PM	01:00:00	5.76 pH	24.58 °C	2,322.1 µS/cm	0.04 mg/L	22.00 NTU	-31.1 mV	38.80 ft	150.00 ml/min
10/11/2022 1:05 PM	01:05:00	5.72 pH	24.79 °C	2,418.7 µS/cm	0.04 mg/L	26.00 NTU	-25.0 mV	38.80 ft	150.00 ml/min
10/11/2022 1:10 PM	01:10:00	5.69 pH	25.02 °C	2,492.7 µS/cm	0.04 mg/L	24.00 NTU	-24.2 mV	38.80 ft	150.00 ml/min

10/11/2022 1:15 PM	01:15:00	5.72 pH	25.06 °C	2,545.5 µS/cm	0.02 mg/L	23.00 NTU	-6.6 mV	38.80 ft	150.00 ml/min
10/11/2022 1:20 PM	01:20:00	5.88 pH	24.87 °C	2,779.4 µS/cm	-0.01 mg/L	25.00 NTU	-10.9 mV	38.80 ft	150.00 ml/min
10/11/2022 1:25 PM	01:25:00	5.92 pH	25.11 °C	2,816.4 µS/cm	-0.02 mg/L	24.00 NTU	-3.2 mV	38.80 ft	150.00 ml/min
10/11/2022 1:30 PM	01:30:00	5.92 pH	24.57 °C	2,805.9 µS/cm	0.00 mg/L	15.00 NTU	9.1 mV	39.20 ft	225.00 ml/min
10/11/2022 1:35 PM	01:35:00	5.91 pH	24.56 °C	2,727.8 µS/cm	-0.02 mg/L	16.00 NTU	4.6 mV	39.20 ft	225.00 ml/min
10/11/2022 1:40 PM	01:40:00	5.91 pH	23.80 °C	2,762.5 µS/cm	0.00 mg/L	17.00 NTU	8.5 mV	39.20 ft	225.00 ml/min
10/11/2022 1:45 PM	01:45:00	5.90 pH	24.33 °C	2,793.2 µS/cm	0.04 mg/L	14.00 NTU	11.3 mV	39.20 ft	225.00 ml/min
10/11/2022 1:50 PM	01:50:00	5.89 pH	23.61 °C	2,795.0 µS/cm	-0.01 mg/L	11.00 NTU	19.3 mV	39.20 ft	225.00 ml/min
10/11/2022 1:55 PM	01:55:00	5.87 pH	24.38 °C	2,808.2 µS/cm	0.11 mg/L	9.84 NTU	22.8 mV	39.20 ft	225.00 ml/min
10/11/2022 2:00 PM	02:00:00	5.86 pH	23.90 °C	2,812.6 µS/cm	-0.03 mg/L	8.12 NTU	28.6 mV	39.20 ft	225.00 ml/min
10/11/2022 2:05 PM	02:05:00	5.85 pH	23.25 °C	2,819.1 µS/cm	-0.03 mg/L	7.59 NTU	31.7 mV	39.20 ft	225.00 ml/min
10/11/2022 2:10 PM	02:10:00	5.83 pH	23.19 °C	2,821.6 µS/cm	-0.02 mg/L	6.11 NTU	32.7 mV	39.20 ft	225.00 ml/min
10/11/2022 2:15 PM	02:15:00	5.82 pH	23.49 °C	2,824.2 µS/cm	-0.01 mg/L	5.46 NTU	32.4 mV	39.20 ft	225.00 ml/min
10/11/2022 2:20 PM	02:20:00	5.81 pH	23.62 °C	2,816.1 µS/cm	0.00 mg/L	4.31 NTU	32.9 mV	39.20 ft	225.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 10/6/2022 2:28:22 PM

Project: Plant Branch Ash Pond

Operator Name: Taylor Goble

Location Name: PZ-67 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 31.22 ft Total Depth: 41.22 ft Initial Depth to Water: 31.17 ft	Pump Type: Mega Monsoon Pro Tubing Type: Poly Pump Intake From TOC: 36 ft Estimated Total Volume Pumped: 8022.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 60 ml/min Final Draw Down: 3.53 ft	Instrument Used: Aqua TROLL 400 Serial Number: 714344
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Test Notes:

No sample. Field parameters only.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
10/6/2022 2:28 PM	00:00	4.49 pH	32.24 °C	3,401.2 µS/cm	4.11 mg/L	57.50 NTU	98.7 mV	31.55 ft	110.00 ml/min
10/6/2022 2:33 PM	05:00	3.98 pH	24.95 °C	3,843.2 µS/cm	0.88 mg/L	53.40 NTU	99.3 mV	31.82 ft	110.00 ml/min
10/6/2022 2:38 PM	10:00	3.92 pH	25.23 °C	3,896.8 µS/cm	0.23 mg/L	47.20 NTU	103.7 mV	32.17 ft	110.00 ml/min
10/6/2022 2:42 PM	14:05	3.90 pH	25.34 °C	3,930.9 µS/cm	0.18 mg/L	46.10 NTU	107.2 mV	32.28 ft	110.00 ml/min
10/6/2022 2:43 PM	15:12	3.90 pH	25.39 °C	3,948.3 µS/cm	0.17 mg/L	46.70 NTU	108.0 mV	32.52 ft	110.00 ml/min
10/6/2022 2:48 PM	20:12	3.90 pH	25.62 °C	3,976.8 µS/cm	0.14 mg/L	42.80 NTU	111.3 mV	32.78 ft	110.00 ml/min
10/6/2022 2:51 PM	22:49	3.91 pH	25.77 °C	3,973.6 µS/cm	0.13 mg/L	41.50 NTU	112.5 mV	32.87 ft	110.00 ml/min
10/6/2022 2:56 PM	27:54	3.92 pH	26.14 °C	3,930.8 µS/cm	0.13 mg/L	38.70 NTU	115.0 mV	32.96 ft	70.00 ml/min
10/6/2022 3:01 PM	32:54	3.91 pH	26.86 °C	3,950.3 µS/cm	0.11 mg/L	36.60 NTU	116.2 mV	33.08 ft	70.00 ml/min
10/6/2022 3:06 PM	37:54	3.91 pH	26.66 °C	3,928.1 µS/cm	0.11 mg/L	35.90 NTU	118.4 mV	33.20 ft	70.00 ml/min
10/6/2022 3:11 PM	42:54	3.91 pH	26.78 °C	3,918.0 µS/cm	0.10 mg/L	35.60 NTU	119.9 mV	33.31 ft	70.00 ml/min
10/6/2022 3:16 PM	47:54	3.91 pH	27.24 °C	3,905.1 µS/cm	0.08 mg/L	28.60 NTU	121.3 mV	33.50 ft	70.00 ml/min
10/6/2022 3:21 PM	52:54	3.91 pH	27.28 °C	3,912.5 µS/cm	0.07 mg/L	22.20 NTU	122.7 mV	33.69 ft	70.00 ml/min
10/6/2022 3:26 PM	57:54	3.92 pH	27.48 °C	3,910.8 µS/cm	0.07 mg/L	20.50 NTU	124.0 mV	33.75 ft	70.00 ml/min
10/6/2022 3:32 PM	01:03:40	4.45 pH	28.28 °C	31.24 µS/cm	7.38 mg/L	19.30 NTU	155.9 mV	33.92 ft	70.00 ml/min

10/6/2022 3:37 PM	01:08:40	3.93 pH	28.06 °C	3,908.8 µS/cm	0.85 mg/L	18.80 NTU	127.3 mV	34.09 ft	60.00 ml/min
10/6/2022 3:42 PM	01:13:40	3.94 pH	28.26 °C	3,868.7 µS/cm	0.09 mg/L	16.40 NTU	128.0 mV	34.16 ft	60.00 ml/min
10/6/2022 3:47 PM	01:18:40	3.94 pH	28.40 °C	3,826.6 µS/cm	0.05 mg/L	11.10 NTU	128.5 mV	34.24 ft	60.00 ml/min
10/6/2022 3:52 PM	01:23:40	3.93 pH	29.95 °C	3,808.7 µS/cm	0.02 mg/L	10.40 NTU	128.7 mV	34.30 ft	60.00 ml/min
10/6/2022 3:57 PM	01:28:40	4.00 pH	28.01 °C	3,647.3 µS/cm	0.15 mg/L	7.52 NTU	130.8 mV	34.40 ft	60.00 ml/min
10/6/2022 4:02 PM	01:33:40	3.97 pH	28.54 °C	3,724.4 µS/cm	0.07 mg/L	6.12 NTU	130.4 mV	34.50 ft	60.00 ml/min
10/6/2022 4:07 PM	01:38:40	4.00 pH	29.01 °C	3,589.4 µS/cm	1.05 mg/L	6.65 NTU	132.0 mV	34.60 ft	60.00 ml/min
10/6/2022 4:12 PM	01:43:40	3.97 pH	29.32 °C	3,688.0 µS/cm	0.10 mg/L	4.88 NTU	132.0 mV	34.70 ft	60.00 ml/min

Samples

Sample ID:	Description:
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Plant Branch Surface Water Samples 08/24/2022

Sample ID	Total Depth (ft)	Sample Depth (ft)	Time	Temp(F)	pH	OPR (mV)	DO (mg/L)	Turbidity (NTU)	Conductance (mS/cm)	Coordinates
LR-1 (surface)	44.3	Surface	1152	84.56	6.99	133.1	5.03	4.81	0.078	33.178603, -83.317692
LR-1 (mid)		22.1	1150	84.02	7.10	143.2	5.39	7.43	0.080	
LR-1 (bottom)		44.3	1145	83.84	7.12	144.6	5.41	8.57	0.079	
LR+8A (surface)	9.8	Surface	1205	84.92	7.11	137.9	6.08	3.42	0.075	33.188793, -83.298479
LR+9A (surface)	9.8	Surface	1211	84.92	7.11	137.1	6.08	3.65	0.076	33.190136, -83.297139
LR+8 (surface)	22.1	Surface	1133	84.73	7.10	136.3	5.93	3.90	0.076	33.187322, -83.296928
LR+8 (mid)		11.0	1124	84.02	7.18	145.5	6.19	4.79	0.077	
LR+8 (bottom)		22.1	1130	84.38	7.15	137.8	6.09	4.57	0.076	
LR+9 (surface)	52.9	Surface	1115	84.74	7.08	133.6	5.81	4.11	0.075	33.189500, -83.295199
LR+9 (mid)		26.0	1109	84.38	7.17	136.2	6.05	5.86	0.077	
LR+9 (bottom)		52.9	1113	84.56	7.14	134.2	6.09	8.32	0.076	
LR-10 (surface)	27.9	Surface	1045	84.56	7.05	157.0	5.82	4.24	0.073	33.188519, -83.284506
LR-10 (mid)		14.0	1058	71.42	7.15	140.9	6.17	4.93	0.074	
LR-10 (bottom)		27.9	1052	71.42	7.16	148.1	6.34	5.95	0.077	

CALIBRATION REPORTS

Fall 2022



Daily Instrument Calibration Log

SITE: _____ Plant Branch
 TECHNICIAN: J. Berrisford
 WATER LEVEL: Solent
 WATER LEVEL S/N: 267304

INSTRUMENT S/N: 850751
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTIONS:
 ID: pH 4 LOT #: 21470032 EXP. DATE: 4/23
 ID: pH 7 LOT #: 2158002 EXP. DATE: 4/23
 ID: pH 10 LOT #: 20086056 EXP. DATE: 4/23
 ID: Cond LOT #: 160805 EXP. DATE: 11/22
 ID: ORP LOT #: 21146143 EXP. DATE: 4/23

Midday pH check
 Must be less than .10
 (6.90-7.10 range)
 Recalibrate if not within range

Calibration Date: 8/23/22

RDO: 100% sat. = 106.3
 PH: 4.00 = 9.66 7.00 = 7.02 10.00 = 9.91 Midday pH check
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = 7.01
 CONDUCTIVITY: 1413 = 1441 post recal check
 ORP (mV) 228 = 228

Calibration Date: 8/24/22

RDO: 100% sat. = 99.9
 PH: 4.00 = 9.03 7.00 = 7.04 10.00 = 9.84 Midday pH check
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = 7.06
 CONDUCTIVITY: 1413 = 1423
 ORP (mV) 228 = 229

Calibration Date: 8/25/22

RDO: 100% sat. = 99.6
 PH: 4.00 = 9.00 7.00 = 6.99 10.00 = 10.18 Midday pH check
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = 7.02
 CONDUCTIVITY: 1413 = 1406
 ORP (mV) 228 = 230

Calibration Date:

RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date:

RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____



Daily Instrument Calibration Log

SITE: _____ Plant Branch
TECHNICIAN: J. P. Riefel

INSTRUMENT S/N: 17120663767
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # PI 1126 EXP. DATE: N/A
10 NTU - LOT # A12012 EXP. DATE: 11/22
20 NTU - LOT # A1267 EXP. DATE: 11/22

Calibration Date: 8/23/22

Calibration Solution	Instrument Reading	
0.0	<u>0.27</u>	NTU
10.0	<u>10.2</u>	NTU
20.0	<u>20.6</u>	NTU

Calibration Date: 8/24/22

Calibration Solution	Instrument Reading	
0.0	<u>0.19</u>	NTU
10.0	<u>9.98</u>	NTU
20.0	<u>20.4</u>	NTU

Calibration Date: 8/25/22

Calibration Solution	Instrument Reading	
0.0	<u>0.17</u>	NTU
10.0	<u>10.1</u>	NTU
20.0	<u>20.5</u>	NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date: _____

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
 TECHNICIAN: H. Ancl
 WATER LEVEL: Solinst
 WATER LEVEL S/N: 48832

INSTRUMENT S/N: 883530
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTIONS/ID: pH 4 LOT #: 2GE870 EXP. DATE: 8/24
 ID: pH 7 LOT #: 21010086 EXP. DATE: 8/2022
 ID: pH 10 LOT #: 20086056 EXP. DATE: 04/23
 ID: Cond. LOT #: 2681062 EXP. DATE: 02/23
 ID: ORP LOT #: 21140143 EXP. DATE: 04/23

Midday pH check
 Must be less than .10
 (6.90-7.10 range)
 Recalibrate if not within range

Calibration Date: 8-23-22

RDO: 100% sat. = 81% 106%
 PH: 4.00 = 4.07 7.00 = 7.01 10.00 = 9.99 7.0 = 7.03
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: 1413 = 1660
 ORP (mV) 228 = 226

Midday pH check

Calibration Date: 8-24-22

RDO: 100% sat. = 98.4
 PH: 4.00 = 4.01 7.00 = 6.94 10.00 = 9.91 7.0 = 7.01
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: 1413 = 1390
 ORP (mV) 228 = 230

Midday pH check

Calibration Date: 8-25-22

RDO: 100% sat. = 98.9%
 PH: 4.00 = 4.02 7.00 = 6.99 10.00 = 9.97 7.0 = 7.04
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: 1413 = 1428
 ORP (mV) 228 = 229

Midday pH check

Calibration Date:

RDO: 100% sat. = _____
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Midday pH check

Calibration Date:

RDO: 100% sat. = _____
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Midday pH check



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
TECHNICIAN: H. Amiel

INSTRUMENT S/N: 12050C017705
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # — EXP. DATE: New DI
10 NTU - LOT # A2122 EXP. DATE: 8/23
20 NTU - LOT # A2124 EXP. DATE: 8/23

Calibration Date: 8-23-22

Calibration Solution	Instrument Reading	
0.0	0.3	NTU
10.0	9.7	NTU
20.0	19.9	NTU

Calibration Date: 8-24-22

Calibration Solution	Instrument Reading	
0.0	0.2	NTU
10.0	9.91	NTU
20.0	19.2	NTU

Calibration Date: 8-25-22

Calibration Solution	Instrument Reading	
0.0	0.3	NTU
10.0	19.6	NTU
20.0	20.9	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: Plant Branch
 TECHNICIAN: A Schmidt
 WATER LEVEL: Solinst
 WATER LEVEL S/N: 377060

INSTRUMENT S/N: 728566
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTIONS/ID: pH 4 LOT #: 16K617 EXP. DATE: 11/23
 ID: pH 7 LOT #: 266169 EXP. DATE: 3/24
 ID: pH 10 LOT #: 166429 EXP. DATE: 7/23
 ID: Cond LOT #: 26F806 EXP. DATE: 6/23
 ID: ORP LOT #: 21140143 EXP. DATE: 4/23

Midday pH check
 Must be less than .10
 (6.90-7.10 range)
 Recalibrate if not within range

Calibration Date: 8/23/22
 RDO: 100% sat. = 96.46
 PH: 4.00 = 5.89 7.00 = 7.00 10.00 = 9.98
 PH Recal (if needed): 4.00 = NA 7.00 = NA 10.00 = NA 7.0 = NA post recal check
 CONDUCTIVITY: 1413 = 1142
 ORP (mV) 228 = 229.4

Midday pH check
 7.0 = 6.98
 7.0 = NA post recal check

Calibration Date: 8/24/22
 RDO: 100% sat. = 104.38
 PH: 4.00 = 4.05 7.00 = 7.04 10.00 = 10.01
 PH Recal (if needed): 4.00 = NA 7.00 = NA 10.00 = NA 7.0 = NA post recal check
 CONDUCTIVITY: 1413 = 1422
 ORP (mV) 228 = 233

Midday pH check
 7.0 = 6.99
 7.0 = NA post recal check

Calibration Date: 8/25/22
 RDO: 100% sat. = 99.0
 PH: 4.00 = 4.00 7.00 = 7.02 10.00 = 9.96
 PH Recal (if needed): 4.00 = NA 7.00 = NA 10.00 = NA 7.0 = 7.00 post recal check
 CONDUCTIVITY: 1413 = 1447.6
 ORP (mV) 228 = 228.3

Midday pH check
 7.0 = 7.00
 7.0 = NA post recal check

Calibration Date:
 RDO: 100% sat. =
 PH: 4.00 = 7.00 = 10.00 = 7.0 =
 PH Recal (if needed): 4.00 = 7.00 = 10.00 = 7.0 = post recal check
 CONDUCTIVITY: =
 ORP (mV) =

Midday pH check
 7.0 =
 7.0 = post recal check

Calibration Date:
 RDO: 100% sat. =
 PH: 4.00 = 7.00 = 10.00 = 7.0 =
 PH Recal (if needed): 4.00 = 7.00 = 10.00 = 7.0 = post recal check
 CONDUCTIVITY: =
 ORP (mV) =

Midday pH check
 7.0 =
 7.0 = post recal check



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
TECHNICIAN: A Schmittler

INSTRUMENT S/N: 11090C012353
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # NA EXP. DATE: Fresh DI
10 NTU - LOT # A2122 EXP. DATE: 8/23
20 NTU - LOT # A2124 EXP. DATE: 8/23

Calibration Date: 8/23/22

Calibration Solution	Instrument Reading	
0.0	<u>0.57</u>	NTU
10.0	<u>10.1</u>	NTU
20.0	<u>20.8</u>	NTU

Calibration Date: 8/24/22

Calibration Solution	Instrument Reading	
0.0	<u>0.28</u>	NTU
10.0	<u>10.7</u>	NTU
20.0	<u>19.5</u>	NTU

Calibration Date: 8/25/22

Calibration Solution	Instrument Reading	
0.0	<u>0.23</u>	NTU
10.0	<u>9.88</u>	NTU
20.0	<u>20.5</u>	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
 TECHNICIAN: _____ T. Goble _____
 WATER LEVEL: _____ Solinst _____
 WATER LEVEL S/N: _____ 236986 _____

INSTRUMENT S/N: _____ 883536 _____
 INSTRUMENT TYPE: AquaTroll _____
 CAL. SOLUTION/S: ID: PH 4 LOT #: 21470032 EXP. DATE: 4/23
 ID: PH 7 LOT #: 21380102 EXP. DATE: 4/23
 ID: PH 10 LOT #: 20080056 EXP. DATE: 4/23
 ID: Cond LOT #: 21470032 EXP. DATE: 4/23
 ID: ORP LOT #: 2114013 EXP. DATE: 4/23

Midday pH check
 Must be less than .10
 (6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 8-23-22

RDO: 100% sat. = 102.18 _____ Midday pH check
 PH: 4.00 = 4.12 7.00 = 7.01 10.00 = 9.93 7.0 = 7.04
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check N/A
 CONDUCTIVITY: 4490 = 4410 _____
 ORP (mV) 226 = 217.7 _____

Calibration Date: 8-24-22

RDO: 100% sat. = 101.93 _____ Midday pH check
 PH: 4.00 = 4.03 7.00 = 7.01 10.00 = 10.09 7.0 = 7.02
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check N/A
 CONDUCTIVITY: 4490 = 4468 _____
 ORP (mV) 228 = 227.1 _____

Calibration Date: 8-25-22

RDO: 100% sat. = 100.14 _____ Midday pH check
 PH: 4.00 = 4.03 7.00 = 6.99 10.00 = 9.97 7.0 = 7.02
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check N/A
 CONDUCTIVITY: 4490 = 4470 _____
 ORP (mV) 228 = _____

Calibration Date:

RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date:

RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
 TECHNICIAN: T. Goble

INSTRUMENT S/N: 150410C040490
 INSTRUMENT TYPE: Hach 2100Q
 CAL. SOLUTION: 0 NTU - LOT # — EXP. DATE: New 01
10 NTU - LOT # 2964401 EXP. DATE: 10/22
20 NTU - LOT # 2684801 EXP. DATE: 10/22

Calibration Date: 8-23-22

Calibration Solution	Instrument Reading	
0.0	0.31	NTU
10.0	10.9	NTU
20.0	21.2	NTU

100 = 101
 800 = 795

Calibration Date: 8-24-22

Calibration Solution	Instrument Reading	
0.0	0.27	NTU
10.0	10.8	NTU
20.0	20.2	NTU

100 = 101
 800 = 802

Calibration Date: 8-25-22

Calibration Solution	Instrument Reading	
0.0	0.24	NTU
10.0	10.6	NTU
20.0	20.0	NTU

100 = 100
 800 = 803

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
 TECHNICIAN: J. Benford
 WATER LEVEL: Solvent
 WATER LEVEL S/N: 267304

INSTRUMENT S/N: 883530
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTIONS/ID: PH 4 LOT #: 1616617 EXP. DATE: 11/23
PH 7 LOT #: 161458 EXP. DATE: 6/23
PH 10 LOT #: 266042 EXP. DATE: 7/24
Cond LOT #: 265806 EXP. DATE: 6/23
ORP LOT #: 261316 EXP. DATE: 11/22

Midday pH check
 Must be less than .10
 (6.90-7.10 range)
 Recalibrate if not within range

Calibration Date: 10/11/22

RDO: 100% sat. = 99.0 *Midday pH check*
 PH: 4.00 = 4.00 7.00 = 7.11 10.00 = 10.11 7.0 = 7.02
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1413 = 917
 ORP (mV) 240 = 247.1

Calibration Date: 10/12/22

RDO: 100% sat. = 100.4 *Midday pH check*
 PH: 4.00 = 4.07 7.00 = 7.06 10.00 = 10.08 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: 1713 = 1600
 ORP (mV) 240 = 229.7

Calibration Date: _____

RDO: 100% sat. = _____ *Midday pH check*
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date: _____

RDO: 100% sat. = _____ *Midday pH check*
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date: _____

RDO: 100% sat. = _____ *Midday pH check*
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
TECHNICIAN: J. Bengala

INSTRUMENT S/N: 171206063767
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # DI 420 EXP. DATE: N/A
10 NTU - LOT # A1201C EXP. DATE: 11/22
20 NTU - LOT # A1207 EXP. DATE: 4/22

Calibration Date: 10/11/22

Calibration Solution	Instrument Reading	
0.0	<u>0.25</u>	NTU
10.0	<u>10.2</u>	NTU
20.0	<u>20.0</u>	NTU

Calibration Date: 10/12/22

Calibration Solution	Instrument Reading	
0.0	<u>0.22</u>	NTU
10.0	<u>10.1</u>	NTU
20.0	<u>20.1</u>	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: 1 Plant Branch
 TECHNICIAN: T. Goble
 WATER LEVEL: Solinst
 WATER LEVEL S/N: 236986

INSTRUMENT S/N: 714344
 INSTRUMENT TYPE: AquaTroll
 CAL. SOLUTION/S:
 ID: pH 4 LOT #: 2GG181 EXP. DATE: 7/24
 ID: pH 7 LOT #: 2GG042 EXP. DATE: 7/24
 ID: pH 10 LOT #: 1GF958 EXP. DATE: 6/23
 ID: ORP LOT #: 2G2207 EXP. DATE: 6/23
 ID: Cond LOT #: 1GH998 EXP. DATE: 10-22 **Midday pH check**
 ID: _____ LOT #: _____ EXP. DATE: _____ **Must be less than .10**
 ID: _____ LOT #: _____ EXP. DATE: _____ **(6.90-7.10 range)**
 ID: _____ LOT #: _____ EXP. DATE: _____ **Recalibrate if not within range**

Calibration Date: 10-11-22
 RDO: 100% sat. = 90.28 **Midday pH check**
 PH: 4.00 = 3.82 7.00 = 6.77 10.00 = 9.83 7.0 = 7.04
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check NA
 CONDUCTIVITY: 1413 = 1312
 ORP (mV) 240 = 238.2

Calibration Date: 10-12-22
 RDO: 100% sat. = 106.25 **Midday pH check**
 PH: 4.00 = 4.04 7.00 = 7.01 10.00 = 10.09 7.0 = 7.07
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check NA
 CONDUCTIVITY: 1413 = 1341
 ORP (mV) 240 = 236.3

Calibration Date:
 RDO: 100% sat. = _____ **Midday pH check**
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date:
 RDO: 100% sat. = _____ **Midday pH check**
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date:
 RDO: 100% sat. = _____ **Midday pH check**
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
TECHNICIAN: T. Goble

INSTRUMENT S/N: 11090C012353
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # — EXP. DATE: New DI
10 NTU - LOT # 296401 EXP. DATE: 8-23
20 NTU - LOT # 2664801 EXP. DATE: 8-23

Calibration Date: 10-11-22

Calibration Solution	Instrument Reading	
0.0	0.18	NTU
10.0	10.4	NTU
20.0	20.0	NTU

100 = 100
800 = 788

Calibration Date: 10-12-22

Calibration Solution	Instrument Reading	
0.0	0.23	NTU
10.0	10.7	NTU
20.0	20.5	NTU

100 = 102
800 = 803

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: Plant Branch
 TECHNICIAN: J. Bradford

WATER LEVEL: solinst
 WATER LEVEL S/N: 267304

INSTRUMENT S/N: 883530
 INSTRUMENT TYPE: chlorine trial

CAL. SOLUTION/S:	ID:	LOT #:	EXP. DATE:
	<u>PH 4</u>	<u>260243</u>	<u>3/21</u>
	<u>PH 7</u>	<u>161340</u>	<u>11/23</u>
	<u>PH 10</u>	<u>161054</u>	<u>11/23</u>
	<u>ORP</u>	<u>261110</u>	<u>11/22</u>
	<u>Cond</u>	<u>1611805</u>	<u>11/22</u>
	ID:	LOT #:	EXP. DATE:
	ID:	LOT #:	EXP. DATE:

Calibration Date: 10/4/22

RDO: 100% sat. = 97.4
 PH: 4.00 = 3.93 7.00 = 6.92 10.00 = 10.04
 CONDUCTIVITY: 1413 = 1783
 ORP (mV) 240 223.1

*Middy check
7.00 = 7.04*

Calibration Date: 10/5/22

RDO: 100% sat. = 99.2
 PH: 4.00 = 4.12 7.00 = 7.11 10.00 = 10.10
 CONDUCTIVITY: 1413 = 1246
 ORP (mV) 240 242.9

7.00 = 7.07

Calibration Date: 10/6/22

RDO: 100% sat. = 100.8
 PH: 4.00 = 3.95 7.00 = 7.05 10.00 = 10.19
 CONDUCTIVITY: 1413 = 1774
 ORP (mV) 240 = 239.7

7.00 = 7.05

Calibration Date: 10/7/22

RDO: 100% sat. = 99.5
 PH: 4.00 = 3.98 7.00 = 7.02 10.00 = 10.03
 CONDUCTIVITY: 1413 = 1292
 ORP (mV) 240 = 239.1

7.00 = 7.03

Calibration Date:

RDO: 100% sat. = _____
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____
 CONDUCTIVITY: _____
 ORP (mV) _____



Daily Instrument Calibration Log

SITE: Plant Branch
 TECHNICIAN: J. Brostern

INSTRUMENT S/N: 17120C063767
 INSTRUMENT TYPE: Hach 2100 Q Turbidity Meter
 CAL. SOLUTION: 0 NTU - LOT # N/A EXP. DATE: 2/1/20
10 NTU - LOT # A1201R EXP. DATE: 4/22
20 NTU - LOT # A1207 EXP. DATE: 11/22
100 NTU - LOT # A1209 EXP. DATE: 4/22
800 NTU - LOT # A1211 EXP. DATE: 11/22

Calibration Date: 10/21/22

Calibration Solution	Instrument Reading	
0.0	0.32	NTU
10.0	10.1	NTU
20.0	20.7	NTU
100.0	102	NTU
800.0	784	NTU

Calibration Date: 10/5/22

Calibration Solution	Instrument Reading	
0.0	0.30	NTU
10.0	10.2	NTU
20.0	20.2	NTU
100	105	NTU
800	794	NTU

Calibration Date: 10/6/22

Calibration Solution	Instrument Reading	
0.0	0.27	NTU
10.0	9.82	NTU
20.0	20.1	NTU
100	101	NTU
800	795	NTU

Calibration Date: 10/7/22

Calibration Solution	Instrument Reading	
0.0	0.19	NTU
10.0	9.72	NTU
20.0	19.4	NTU
100	108	NTU
800	781	NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU
		NTU
		NTU



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
 TECHNICIAN: _____ T. Goble _____
 WATER LEVEL: _____ Solinst _____
 WATER LEVEL S/N: _____ 236986 _____
 INSTRUMENT S/N: _____ 714302 _____
 INSTRUMENT TYPE: AquaTroll _____
 CAL. SOLUTION/S: ID: pH4 LOT #: 2G5870 EXP. DATE: 5/24 _____
 ID: pH7 LOT #: 2G6042 EXP. DATE: 7/24 _____
 ID: pH10 LOT #: 2G8707 EXP. DATE: 2/24 _____
 ID: ORP LOT #: 2G1207 EXP. DATE: 6/23 _____
 ID: Cond LOT #: 1GK805 EXP. DATE: 1/22 _____ Midday pH check
 ID: _____ LOT #: _____ EXP. DATE: _____ Must be less than .10
 ID: _____ LOT #: _____ EXP. DATE: _____ (6.90-7.10 range)
Recalibrate if not within range

Calibration Date: 10-4-22
 RDO: 100% sat. = 99.31 _____ Midday pH check
 PH: 4.00 = 3.99 7.00 = 7.16 10.00 = 10.97 7.0 = 7.02
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check NA
 CONDUCTIVITY: 1413 = 1368 _____
 ORP (mV) 240 = 246.1 _____

Calibration Date: 10-5-22
 RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = 3.96 7.00 = 6.96 10.00 = 10.34 7.0 = 7.08
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check NA
 CONDUCTIVITY: 1413 = 1271 _____
 ORP (mV) 240 = 199.2 _____

Calibration Date: 10-6-22
 RDO: 100% sat. = 104.67 _____ Midday pH check
 PH: 4.00 = 4.34 7.00 = 7.16 10.00 = 9.52 7.0 = 7.08
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = post recal check NA
 CONDUCTIVITY: 1413 = 1432 _____
 ORP (mV) 240 = 271.4 _____

Calibration Date: _____
 RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____

Calibration Date: _____
 RDO: 100% sat. = _____ Midday pH check
 PH: 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____
 PH Recal (if needed): 4.00 = _____ 7.00 = _____ 10.00 = _____ 7.0 = _____ post recal check
 CONDUCTIVITY: _____ = _____
 ORP (mV) _____ = _____



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
TECHNICIAN: T. Goble

INSTRUMENT S/N: 11090C012353
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # — EXP. DATE: New DI
10 NTU - LOT # 2961801 EXP. DATE: 8/23
20 NTU - LOT # 2694901 EXP. DATE: 8/23

Calibration Date: 10-4-22

Calibration Solution	Instrument Reading	
0.0	<u>0.18</u>	NTU
10.0	<u>10.2</u>	NTU
20.0	<u>19.8</u>	NTU

100 = 98.8
800 = 788

Calibration Date: 10-5-22

Calibration Solution	Instrument Reading	
0.0	<u>0.21</u>	NTU
10.0		NTU
20.0	<u>20.5</u>	NTU

100 = 101
800 = 806

Calibration Date: 10-6-22

Calibration Solution	Instrument Reading	
0.0	<u>0.20</u>	NTU
10.0	<u>10.5</u>	NTU
20.0	<u>20.1</u>	NTU

100 = 99.3
800 = 805

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



Daily Instrument Calibration Log

SITE: _____ Plant Branch _____
 TECHNICIAN: _____ T. Goble _____
 WATER LEVEL: _____ Solinst _____
 WATER LEVEL S/N: _____ 236946 _____

INSTRUMENT S/N: _____ 965658 _____
 INSTRUMENT TYPE: AquaTroll _____
 CAL. SOLUTIONS: ID: ORP LOT #: 2GT207 EXP. DATE: 6-23
 ID: pH4 LOT #: 2GG184 EXP. DATE: 7-24
 ID: pH7 LOT #: 2GG042 EXP. DATE: 7-24
 ID: pH10 LOT #: 2GG018 EXP. DATE: 7-24
 ID: Cond LOT #: 2GF906 EXP. DATE: 6-23

Midday pH check
 Must be less than .10
 (6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 11-7-22

RDO: 100% sat. = 97.22
 PH: 4.00 = 3.98 7.00 = 6.73 10.00 = 10.12
 PH Recal (if needed): 4.00 = 7.00 = 10.00 =
 CONDUCTIVITY: 1413 = 1372
 ORP (mV) 240 = 219.9

Midday pH check
 7.0 = NA - no recal needed, only sample 1 well
 7.0 = post recal check

Calibration Date:

RDO: 100% sat. =
 PH: 4.00 = 7.00 = 10.00 =
 PH Recal (if needed): 4.00 = 7.00 = 10.00 =
 CONDUCTIVITY: =
 ORP (mV) =

Midday pH check
 7.0 =
 7.0 = post recal check

Calibration Date:

RDO: 100% sat. =
 PH: 4.00 = 7.00 = 10.00 =
 PH Recal (if needed): 4.00 = 7.00 = 10.00 =
 CONDUCTIVITY: =
 ORP (mV) =

Midday pH check
 7.0 =
 7.0 = post recal check

Calibration Date:

RDO: 100% sat. =
 PH: 4.00 = 7.00 = 10.00 =
 PH Recal (if needed): 4.00 = 7.00 = 10.00 =
 CONDUCTIVITY: =
 ORP (mV) =

Midday pH check
 7.0 =
 7.0 = post recal check

Calibration Date:

RDO: 100% sat. =
 PH: 4.00 = 7.00 = 10.00 =
 PH Recal (if needed): 4.00 = 7.00 = 10.00 =
 CONDUCTIVITY: =
 ORP (mV) =

Midday pH check
 7.0 =
 7.0 = post recal check



Daily Instrument Calibration Log

SITE: _____ Plant Branch
TECHNICIAN: T. Goble

INSTRUMENT S/N: 11090C012353
INSTRUMENT TYPE: Hach 2100Q
CAL. SOLUTION: 0 NTU - LOT # New DI EXP. DATE: ---
10 NTU - LOT # 2961401 EXP. DATE: 8/23
20 NTU - LOT # 2694901 EXP. DATE: 8/23

Calibration Date: 11-7-22

Calibration Solution	Instrument Reading	
0.0	<u>0.27</u>	NTU
10.0	<u>10.3</u>	NTU
20.0	<u>20.1</u>	NTU

100 = 100
800 = 802

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibration Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

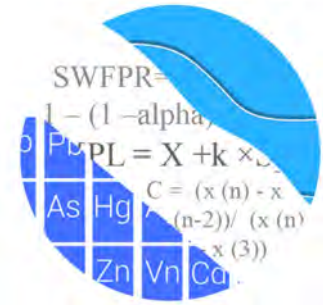
APPENDIX D

Statistical Analyses Report

GROUNDWATER STATS CONSULTING

February 28, 2023

Southern Company Services
Attn: Mr. Joju Abraham
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308-3374



Re: Plant Branch Ponds B, C, D – August/September 2022 Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting (GSC), formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August/September 2022 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical Analysis of groundwater data for Georgia Power Company's Plant Branch Ponds B, C, and D. The analysis complies with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009). The site is in Assessment Monitoring.

Sampling began for Appendix III and IV parameters in 2016 for most wells. However, sampling for wells BRGWC-45, BRGWC-47, BRGWC-50 and BRGWC-52I began in 2018, and at least 8 background samples have been collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of constituents has been performed for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWA-12I, BRGWA-12S, and BRGWA-23S
- **Downgradient wells:** BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, and BRGWC-52I
- **Assessment wells:** PZ-50D, PZ-51D, PZ-51I, PZ-51S, PZ-57I, PZ-58I, PZ-59I, PZ-60I, PZ-61I, PZ-62I, and PZ-63I

Data from assessment wells are evaluated using confidence intervals when a minimum of 4 samples are available.

Data were sent electronically to GSC, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician to GSC.

The Coal Combustion Residuals (CCR) program consists of the following constituents:

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV well/constituent pairs with 100% non-detects follows this letter. A substitution of the most recent reporting limit is used for non-detect data. Note that Minimum Detectable Concentrations (MDCs) were not provided for the September 2022 sample event for combined radium 226 + 228 observations at the time of this report.

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). Assessment well data are included on the time series graphs, and with the confidence intervals when a minimum of 4 samples are available as discussed above. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

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.

Summary of Statistical Methods – Appendix III Parameters:

Based on the earlier evaluation described above, the following method was selected:

- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are 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.

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 most reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, the earlier portion of data are deselected 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.

Summary of Background Screening – Conducted in March 2019

Outlier Analysis

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified either visually or by Tukey's test, flagged in the computer database with "o" and deselected prior to construction of statistical limits. A list of flagged values is provided in the outlier summary. Although outliers are screened for all wells, only outliers in upgradient wells will affect the interwell prediction limits. The current list of outliers includes a few additional measurements that were not flagged as outliers in the previous background screening list for Appendix III parameters.

When suspected outliers were evaluated using the Tukey box plot method during the previous screening, several outliers were identified. In cases where the most recent value was identified as an outlier, values were not flagged in the database as they may represent a future trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

When any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. A substitution of the most recent reporting limit was applied when varying detection limits existed in data. Note that the reporting limit for boron during the March 2019 event was 0.1 mg/L; however, the historical reporting limit of 0.04 mg/L was substituted at that time for all non-detects which provided more conservative (lower) statistical limits.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits

will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Tests

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses, included with the background screening report, showed a number of statistically significant decreasing trends for the Appendix III parameters. All trends noted were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for fluoride, making this constituent eligible for interwell analyses. Variation was noted for boron, calcium, chloride, pH, sulfate, and TDS. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

Evaluation of Appendix III Parameters – August/September 2022

Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through September 2022 (Figure D). Background (upgradient) well data were re-assessed for potential outliers during this analysis and no new values were flagged. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The August/September 2022 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

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 resamples confirm the initial exceedance, a statistically significant increase is identified, and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Prediction limit exceedances were noted for several Appendix III parameters. Exceedances were identified for the following well/constituent pairs:

- Boron: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, and BRGWC-52I
- Calcium: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, and BRGWC-52I
- Chloride: BRGWC-29I, BRGWC-45, BRGWC-50, and BRGWC-52I
- Fluoride: BRGWC-50
- pH (lower limit): BRGWC-29I and BRGWC-50
- Sulfate: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, and BRGWC-52I
- TDS: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, and BRGWC-50

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 wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site which is an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. While several statistically significant decreasing trends were noted in both upgradient and downgradient wells, statistically significant increasing trends were identified for the following well/constituent pairs:

- Calcium: BRGWA-6S (upgradient) and BRGWC-30I
- Fluoride: BRGWA-12S (upgradient)
- Sulfate: BRGWC-30I
- TDS: BRGWC-30I

Evaluation of Appendix IV Parameters – August/September 2022

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 containing 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

First, interwell tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through September 2022 for Appendix IV constituents (Figure F). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

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). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium,

and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, 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, Federal and State CCR Rules specify levels 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

Following Georgia EPD Rule requirements and the Federal CCR requirements, GWPS were established for statistical comparison of Appendix IV constituents for this sample event (Figure G).

Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well with detections (Figure H). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. Those confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified.

Statistical exceedances were identified for the following well/constituent pairs:

- Cadmium: BRGWC-50
- Cobalt: BRGWC-50 and PZ-511
- Selenium: BRGWC-32S

Although no confidence exceedance was identified for selenium at downgradient well BRGWC-32S when evaluating the entire record of data, a steady increasing trend in concentrations since 2019 was noted. Therefore, an additional confidence interval is provided which evaluates data since 2019, and the confidence interval was found to exceed its respective GWPS of 0.05 mg/L.

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 I). 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. The following statistically significant trends were identified:

Increasing

- Selenium: BRGWC-32S

Decreasing

- Cadmium: BRGWC-50
- Cobalt: BRGWA-2S (upgradient)

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Branch Ponds B, C, D. 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
Senior Statistician

100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 11/4/2022 3:58 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

Antimony (mg/L)

BRGWC-25I, BRGWC-27I, PZ-57I, PZ-58I, PZ-60I, PZ-61I, PZ-59I, PZ-63I, PZ-62I

Arsenic (mg/L)

PZ-57I, PZ-63I, PZ-62I

Beryllium (mg/L)

BRGWC-25I, BRGWC-30I, BRGWC-32S, BRGWC-52I, PZ-51D, PZ-51S, PZ-63I

Cadmium (mg/L)

BRGWC-25I, BRGWC-29I, BRGWC-52I, PZ-50D, PZ-51D, PZ-51S, PZ-63I

Chromium (mg/L)

PZ-50D, PZ-51D, PZ-57I, PZ-58I, PZ-60I, PZ-63I, PZ-62I

Lead (mg/L)

BRGWC-32S, PZ-51S, PZ-57I, PZ-60I, PZ-59I, PZ-63I, PZ-62I

Lithium (mg/L)

BRGWC-25I

Mercury (mg/L)

BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I, PZ-50D, PZ-51D, PZ-51S, PZ-57I, PZ-58I, PZ-60I, PZ-61I, PZ-59I, PZ-63I, PZ-62I

Molybdenum (mg/L)

BRGWC-27I, BRGWC-29I, BRGWC-32S, PZ-51S, PZ-57I, PZ-58I, PZ-60I, PZ-61I, PZ-59I

Selenium (mg/L)

BRGWC-52I, PZ-50D, PZ-51D, PZ-51I, PZ-51S, PZ-57I, PZ-63I, PZ-62I

Thallium (mg/L)

BRGWC-25I, BRGWC-27I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I, PZ-50D, PZ-51D, PZ-51I, PZ-51S, PZ-57I, PZ-58I, PZ-60I, PZ-61I, PZ-59I, PZ-63I, PZ-62I

Appendix III Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:39 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)	BRGWC-25I	0.068	n/a	8/23/2022	1.38	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	8/25/2022	1.03	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	8/24/2022	1.13	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	8/24/2022	2.15	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	8/25/2022	1.07	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	8/23/2022	0.547	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	8/24/2022	0.406	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	8/25/2022	1.56	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	8/23/2022	51.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	8/25/2022	64	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	8/24/2022	61	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	8/24/2022	316	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	8/25/2022	48.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	8/25/2022	33.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	8/23/2022	323	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	8/24/2022	215	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	8/25/2022	38.3	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-29I	5.8	n/a	8/24/2022	5.84	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-45	5.8	n/a	8/25/2022	14.9	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-50	5.8	n/a	8/24/2022	15.8	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-52I	5.8	n/a	8/25/2022	6.27	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	8/24/2022	0.497	Yes	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-29I	7.04	5.588	8/24/2022	4.39	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-50	7.04	5.588	8/24/2022	5.01	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-25I	89	n/a	8/23/2022	158	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-27I	89	n/a	8/25/2022	176	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-29I	89	n/a	8/24/2022	298	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-30I	89	n/a	8/24/2022	935	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-32S	89	n/a	8/25/2022	254	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-45	89	n/a	8/25/2022	114	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-47	89	n/a	8/23/2022	1410	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-50	89	n/a	8/24/2022	1400	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-52I	89	n/a	8/25/2022	142	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-25I	299	n/a	8/23/2022	315	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-27I	299	n/a	8/25/2022	311	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-29I	299	n/a	8/24/2022	383	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-30I	299	n/a	8/24/2022	1540	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-32S	299	n/a	8/25/2022	437	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-47	299	n/a	8/23/2022	2060	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-50	299	n/a	8/24/2022	1990	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:39 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)	BRGWC-25I	0.068	n/a	8/23/2022	1.38	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	8/25/2022	1.03	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	8/24/2022	1.13	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	8/24/2022	2.15	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	8/25/2022	1.07	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	8/25/2022	0.0458	No	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	8/23/2022	0.547	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	8/24/2022	0.406	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	8/25/2022	1.56	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	8/23/2022	51.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	8/25/2022	64	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	8/24/2022	61	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	8/24/2022	316	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	8/25/2022	48.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	8/25/2022	33.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	8/23/2022	323	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	8/24/2022	215	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	8/25/2022	38.3	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-25I	5.8	n/a	8/23/2022	5.38	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-27I	5.8	n/a	8/25/2022	4.65	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-29I	5.8	n/a	8/24/2022	5.84	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-30I	5.8	n/a	8/24/2022	4.91	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-32S	5.8	n/a	8/25/2022	3.96	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-45	5.8	n/a	8/25/2022	14.9	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-47	5.8	n/a	8/23/2022	4.49	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-50	5.8	n/a	8/24/2022	15.8	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-52I	5.8	n/a	8/25/2022	6.27	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	8/23/2022	0.186	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	8/25/2022	0.234	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	8/24/2022	0.103	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	8/24/2022	0.318	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	8/25/2022	0.138	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	8/25/2022	0.166	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	8/23/2022	0.1ND	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	8/24/2022	0.497	Yes	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	8/25/2022	0.157	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-25I	7.04	5.588	8/23/2022	6.11	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-27I	7.04	5.588	8/25/2022	6.03	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-29I	7.04	5.588	8/24/2022	4.39	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-30I	7.04	5.588	8/24/2022	6.38	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-32S	7.04	5.588	8/25/2022	6.06	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-45	7.04	5.588	8/25/2022	5.74	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-47	7.04	5.588	8/23/2022	5.61	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-50	7.04	5.588	8/24/2022	5.01	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-52I	7.04	5.588	8/25/2022	6.21	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-25I	89	n/a	8/23/2022	158	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-27I	89	n/a	8/25/2022	176	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-29I	89	n/a	8/24/2022	298	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-30I	89	n/a	8/24/2022	935	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-32S	89	n/a	8/25/2022	254	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-45	89	n/a	8/25/2022	114	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-47	89	n/a	8/23/2022	1410	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-50	89	n/a	8/24/2022	1400	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-52I	89	n/a	8/25/2022	142	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Total Dissolved Solids (mg/L)	BRGWC-25I	299	n/a	8/23/2022	315	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-27I	299	n/a	8/25/2022	311	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-29I	299	n/a	8/24/2022	383	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-30I	299	n/a	8/24/2022	1540	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-32S	299	n/a	8/25/2022	437	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-45	299	n/a	8/25/2022	248	No	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-47	299	n/a	8/23/2022	2060	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-50	299	n/a	8/24/2022	1990	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-52I	299	n/a	8/25/2022	296	No	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWC-271	-0.1256	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-291	-0.1312	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-1.083	-59	-58	Yes	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1657	69	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-25I	-4.85	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-271	-3.929	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-30I	23.17	97	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-2.344	-67	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-12I (bg)	-0.2039	-88	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-23S (bg)	-0.1807	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.2006	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-45	-8.907	-78	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-50	-2.087	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-52I	-0.3801	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0.006411	71	68	Yes	18	66.67	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-23S (bg)	-0.04537	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.1019	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.0368	-71	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05383	-81	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12I (bg)	-0.2311	-105	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12S (bg)	-0.1348	-81	-63	Yes	17	17.65	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-25I	-35.25	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-271	-22.5	-90	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-291	-32.54	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-30I	43.71	60	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-32S	-35.7	-74	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.658	-65	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-25I	-46.21	-96	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-271	-26.31	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-291	-63.47	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-30I	99.28	74	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-32S	-48.29	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-50	-115.9	-68	-58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-12I (bg)	-0.0002161	-11	-58	No	16	18.75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-12S (bg)	0	8	58	No	16	81.25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-23S (bg)	0.001638	21	58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2I (bg)	0.001506	18	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	-3	-58	No	16	87.5	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	-6	-58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-8	-58	No	16	56.25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	2	58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-25I	-0.09624	-49	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-27I	-0.1256	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-29I	-0.1312	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-30I	0.006741	14	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-32S	-0.05023	-39	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-47	0.0244	42	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-50	0.004693	15	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-52I	0.01634	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12I (bg)	-0.01457	-1	-63	No	17	5.882	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12S (bg)	0.1808	27	63	No	17	5.882	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-1.083	-59	-58	Yes	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.5425	43	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	0.073	30	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	0.03321	5	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.5076	-36	-58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1657	69	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-25I	-4.85	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-27I	-3.929	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-29I	-6.709	-54	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-30I	23.17	97	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-32S	-4.259	-54	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-2.344	-67	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-47	0.1986	3	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-50	-7.514	-42	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-52I	0.4585	11	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-12I (bg)	-0.2039	-88	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-12S (bg)	0.05355	39	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-23S (bg)	-0.1807	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2I (bg)	-0.04825	-38	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2S (bg)	-0.02501	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.2006	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5S (bg)	-0.07499	-48	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-6S (bg)	-0.01997	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-29I	-0.1991	-46	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-45	-8.907	-78	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-50	-2.087	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-52I	-0.3801	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12I (bg)	-0.01195	-45	-68	No	18	22.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0.006411	71	68	Yes	18	66.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-23S (bg)	0	-10	-68	No	18	55.56	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	0	-17	-68	No	18	50	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	49	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	54	68	No	18	72.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	0	-20	-68	No	18	38.89	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0	55	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-50	-0.07419	-28	-68	No	18	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results Page 2

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH, Field (S.U.)	BRGWA-12I (bg)	-0.03267	-43	-81	No	20	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-12S (bg)	-0.02298	-48	-74	No	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-23S (bg)	-0.04537	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.1019	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.0368	-71	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5I (bg)	-0.02765	-47	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05383	-81	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-6S (bg)	0	0	63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-29I	-0.01622	-18	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-50	-0.05165	-47	-74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12I (bg)	-0.2311	-105	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12S (bg)	-0.1348	-81	-63	Yes	17	17.65	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-23S (bg)	-5.093	-42	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2I (bg)	-0.1382	-32	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2S (bg)	-0.00315	-15	-58	No	16	37.5	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5I (bg)	-0.3159	-48	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5S (bg)	-0.07263	-52	-58	No	16	37.5	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-6S (bg)	-0.01229	-34	-58	No	16	25	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-25I	-35.25	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-27I	-22.5	-90	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-29I	-32.54	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-30I	43.71	60	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-32S	-35.7	-74	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-45	-3.782	-45	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-47	-66.51	-50	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-50	-99.04	-44	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-52I	-11.11	-49	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-12I (bg)	-5.702	-55	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-12S (bg)	-6.383	-48	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-23S (bg)	-10.83	-53	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-2I (bg)	-6.071	-28	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-2S (bg)	0.7623	11	58	No	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5I (bg)	-4.462	-30	-58	No	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.658	-65	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-6S (bg)	-2.774	-23	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-25I	-46.21	-96	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-27I	-26.31	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-29I	-63.47	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-30I	99.28	74	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-32S	-48.29	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-47	-71.84	-54	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-50	-115.9	-68	-58	Yes	16	0	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:54 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.0241	n/a	n/a	n/a	n/a	136	n/a	n/a	82.35	n/a	n/a	0.0009341	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a	136	n/a	n/a	75	n/a	n/a	0.0009341	NP Inter(NDs)
Barium (mg/L)	n/a	0.13	n/a	n/a	n/a	n/a	136	n/a	n/a	0	n/a	n/a	0.0009341	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a	136	n/a	n/a	100	n/a	n/a	0.0009341	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a	138	n/a	n/a	98.55	n/a	n/a	0.0008431	NP Inter(NDs)
Chromium (mg/L)	n/a	0.016	n/a	n/a	n/a	n/a	136	n/a	n/a	19.85	n/a	n/a	0.0009341	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0135	n/a	n/a	n/a	n/a	136	n/a	n/a	55.88	n/a	n/a	0.0009341	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.699	n/a	n/a	n/a	n/a	136	0.8071	0.474	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.42	n/a	n/a	n/a	n/a	144	n/a	n/a	53.47	n/a	n/a	0.0006197	NP Inter(NDs)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a	136	n/a	n/a	86.76	n/a	n/a	0.0009341	NP Inter(NDs)
Lithium (mg/L)	n/a	0.089	n/a	n/a	n/a	n/a	136	n/a	n/a	39.71	n/a	n/a	0.0009341	NP Inter(normality)
Mercury (mg/L)	n/a	0.00021	n/a	n/a	n/a	n/a	120	n/a	n/a	87.5	n/a	n/a	0.002122	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.008	n/a	n/a	n/a	n/a	133	n/a	n/a	77.44	n/a	n/a	0.00109	NP Inter(NDs)
Selenium (mg/L)	n/a	0.006	n/a	n/a	n/a	n/a	136	n/a	n/a	91.18	n/a	n/a	0.0009341	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a	136	n/a	n/a	100	n/a	n/a	0.0009341	NP Inter(NDs)

PLANT BRANCH POND BCD GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.024	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.13	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.001	0.005
Chromium, Total (mg/L)	0.1		0.016	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.014	0.014
Combined Radium, Total (pCi/L)	5		1.7	5
Fluoride, Total (mg/L)	4		0.42	4
Lead, Total (mg/L)	n/a	0.015	0.002	0.015
Lithium, Total (mg/L)	n/a	0.04	0.089	0.089
Mercury, Total (mg/L)	0.002		0.00021	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.008	0.1
Selenium, Total (mg/L)	0.05		0.006	0.05
Thallium, Total (mg/L)	0.002		0.002	0.002

**Highlighted cells indicate Background is higher than MCLs*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BRGWC-50	0.03637	0.0123	0.005	Yes	17	0.02766	0.02475	0	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.42	1.3	0.014	Yes	17	1.395	0.06615	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	PZ-511	0.0239	0.018	0.014	Yes	10	0.02239	0.006881	0	None	No	0.011	NP (normality)

Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BRGWC-29I	0.003	0.0007	0.006	No	17	0.002865	0.0005578	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-30I	0.003	0.0013	0.006	No	17	0.0029	0.0004123	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-32S	0.003	0.0014	0.006	No	17	0.002906	0.0003881	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-45	0.003	0.0014	0.006	No	18	0.002447	0.0008933	61.11	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-47	0.003	0.00035	0.006	No	18	0.002853	0.0006246	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-50	0.003	0.00092	0.006	No	17	0.002579	0.0009413	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-52I	0.003	0.00091	0.006	No	17	0.002599	0.0008968	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	PZ-50D	0.003	0.00056	0.006	No	4	0.00239	0.00122	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	PZ-51D	0.003	0.0013	0.006	No	4	0.002575	0.00085	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	PZ-51I	0.003	0.00079	0.006	No	8	0.002336	0.0009479	62.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	PZ-51S	0.003	0.00043	0.006	No	8	0.002529	0.0009463	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BRGWC-25I	0.005	0.00091	0.01	No	17	0.003985	0.001887	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-27I	0.005	0.0014	0.01	No	17	0.004065	0.001743	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-29I	0.005	0.0015	0.01	No	17	0.003447	0.001957	58.82	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-30I	0.005	0.00283	0.01	No	17	0.004611	0.001169	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-32S	0.005	0.00053	0.01	No	17	0.004737	0.001084	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-45	0.005	0.00096	0.01	No	18	0.003894	0.00186	72.22	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-47	0.005	0.0012	0.01	No	18	0.002951	0.001837	33.33	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-50	0.005	0.0025	0.01	No	17	0.004124	0.001675	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-52I	0.005	0.0026	0.01	No	17	0.003657	0.001473	41.18	None	No	0.01	NP (normality)
Arsenic (mg/L)	PZ-50D	0.002914	0.0000331	0.01	No	4	0.002355	0.001874	25	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	PZ-51D	0.00374	0.0002464	0.01	No	4	0.002745	0.001689	25	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	PZ-51I	0.005	0.00222	0.01	No	8	0.004652	0.0009829	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Arsenic (mg/L)	PZ-51S	0.005	0.002	0.01	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	BRGWC-25I	0.03483	0.02632	2	No	17	0.03078	0.007065	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BRGWC-27I	0.01685	0.015	2	No	17	0.01592	0.001471	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-29I	0.0192	0.0169	2	No	17	0.01805	0.001838	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-30I	0.02874	0.02236	2	No	17	0.02569	0.00533	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BRGWC-32S	0.04195	0.02702	2	No	17	0.03449	0.01191	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-45	0.09373	0.07398	2	No	18	0.08386	0.01632	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-47	0.04274	0.03319	2	No	18	0.03797	0.007891	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-50	0.02107	0.01806	2	No	17	0.01956	0.002402	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-52I	0.02435	0.0161	2	No	17	0.02052	0.007012	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	PZ-50D	0.05003	0.01782	2	No	4	0.03393	0.007091	0	None	No	0.01	Param.
Barium (mg/L)	PZ-51D	0.08	0.057	2	No	4	0.0631	0.01129	0	None	No	0.0625	NP (normality)
Barium (mg/L)	PZ-51I	0.01626	0.01359	2	No	8	0.01493	0.00126	0	None	No	0.01	Param.
Barium (mg/L)	PZ-51S	0.03466	0.02467	2	No	8	0.02966	0.004711	0	None	No	0.01	Param.
Beryllium (mg/L)	BRGWC-27I	0.0005	0.0001	0.004	No	18	0.0002352	0.0001743	27.78	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-29I	0.001026	0.00074	0.004	No	17	0.0008832	0.0002286	5.882	None	No	0.01	Param.
Beryllium (mg/L)	BRGWC-45	0.0005	0.000079	0.004	No	19	0.0004539	0.0001381	89.47	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-47	0.0005	0.000056	0.004	No	18	0.0004254	0.0001716	83.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-50	0.005518	0.002801	0.004	No	17	0.004159	0.002169	11.76	None	No	0.01	Param.
Beryllium (mg/L)	PZ-50D	0.0004024	-0.00007439	0.004	No	4	0.000332	0.0002121	50	Kaplan-Meier	No	0.01	Param.
Beryllium (mg/L)	PZ-51I	0.0005	0.000064	0.004	No	8	0.0001845	0.0001951	25	None	No	0.004	NP (normality)
Cadmium (mg/L)	BRGWC-27I	0.001	0.00009	0.005	No	18	0.0008978	0.0002975	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-30I	0.001	0.00014	0.005	No	18	0.0009011	0.000288	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-32S	0.001	0.00011	0.005	No	18	0.0008494	0.0003465	83.33	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-45	0.001	0.0002	0.005	No	19	0.0008183	0.0003619	78.95	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-47	0.001	0.00015	0.005	No	18	0.0005406	0.0004238	44.44	None	No	0.01	NP (normality)
Cadmium (mg/L)	BRGWC-50	0.03637	0.0123	0.005	Yes	17	0.02766	0.02475	0	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	PZ-51I	0.01225	0.001149	0.005	No	10	0.007311	0.01016	0	None	x^(1/3)	0.01	Param.
Chromium (mg/L)	BRGWC-25I	0.01	0.0016	0.1	No	17	0.008975	0.002895	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-27I	0.01	0.003	0.1	No	17	0.009059	0.00268	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-29I	0.02	0.01	0.1	No	17	0.01059	0.002425	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-30I	0.014	0.0051	0.1	No	17	0.009947	0.00158	88.24	None	No	0.01	NP (NDs)

Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	BRGWC-32S	0.01	0.0012	0.1	No	17	0.004629	0.004109	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-45	0.01	0.0014	0.1	No	18	0.008496	0.003464	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-47	0.01	0.0018	0.1	No	18	0.008008	0.003841	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-50	0.01	0.00098	0.1	No	17	0.006514	0.004389	58.82	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-52I	0.01	0.0017	0.1	No	17	0.009512	0.002013	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	PZ-51I	0.01	0.0008	0.1	No	8	0.007722	0.004217	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	PZ-51S	0.01	0.00042	0.1	No	8	0.007631	0.004386	75	None	No	0.004	NP (NDs)
Cobalt (mg/L)	BRGWC-25I	0.006497	0.003517	0.014	No	17	0.005007	0.002378	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-27I	0.01062	0.007739	0.014	No	18	0.009178	0.002378	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-29I	0.009914	0.006062	0.014	No	17	0.007988	0.003074	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-30I	0.00119	0.0007782	0.014	No	18	0.001106	0.0003155	16.67	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BRGWC-32S	0.0025	0.001	0.014	No	18	0.001083	0.0003536	88.89	Kaplan-Meier	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-45	0.015	0.0054	0.014	No	19	0.01238	0.01443	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-47	0.001751	0.0004698	0.014	No	18	0.002175	0.003099	22.22	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.42	1.3	0.014	Yes	17	1.395	0.06615	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-52I	0.0015	0.00063	0.014	No	17	0.001382	0.000966	58.82	None	No	0.01	NP (NDs)
Cobalt (mg/L)	PZ-50D	0.5119	-0.1865	0.014	No	5	0.1627	0.2084	0	None	No	0.01	Param.
Cobalt (mg/L)	PZ-51D	0.0004605	0.0002954	0.014	No	5	0.0006232	0.0003464	40	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	PZ-51I	0.0239	0.018	0.014	Yes	10	0.02239	0.006881	0	None	No	0.011	NP (normality)
Cobalt (mg/L)	PZ-51S	0.007228	0.002645	0.014	No	9	0.004937	0.002373	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-25I	1.536	0.5768	5	No	17	1.137	0.9613	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-27I	1.415	0.5721	5	No	17	1.059	0.798	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-29I	1.648	1.18	5	No	17	1.414	0.3731	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-30I	1.353	0.6195	5	No	17	1.036	0.6789	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-32S	1.079	0.468	5	No	17	0.7737	0.4878	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-45	0.8864	0.3806	5	No	18	0.6335	0.4179	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-47	1.593	0.716	5	No	18	1.223	0.8064	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-50	1.957	1.264	5	No	17	1.611	0.5523	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-52I	2.558	1.453	5	No	17	2.06	0.9825	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-50D	3.133	0.07744	5	No	4	1.605	0.6728	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-51D	3.894	1.101	5	No	4	2.498	0.6152	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-51I	11.7	0.625	5	No	8	2.451	3.764	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	PZ-51S	17.1	0.00107	5	No	8	2.786	5.805	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	BRGWC-25I	0.27	0.14	4	No	18	0.2081	0.1353	5.556	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-27I	0.2596	0.1546	4	No	18	0.2071	0.08675	11.11	None	No	0.01	Param.
Fluoride (mg/L)	BRGWC-29I	0.37	0.085	4	No	18	0.1734	0.1234	11.11	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-30I	0.3461	0.1334	4	No	18	0.2594	0.215	5.556	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-32S	0.11	0.09	4	No	18	0.1077	0.03756	61.11	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BRGWC-45	0.166	0.067	4	No	19	0.1764	0.2312	52.63	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BRGWC-47	0.34	0.076	4	No	19	0.2334	0.257	52.63	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BRGWC-50	0.8057	0.3536	4	No	18	0.6159	0.4444	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-52I	0.2297	0.1292	4	No	17	0.1795	0.08022	5.882	None	No	0.01	Param.
Fluoride (mg/L)	PZ-50D	0.2794	0.04298	4	No	5	0.1612	0.07055	0	None	No	0.01	Param.
Fluoride (mg/L)	PZ-51D	0.3329	0.2023	4	No	5	0.2676	0.03897	0	None	No	0.01	Param.
Fluoride (mg/L)	PZ-51I	0.148	0.061	4	No	9	0.101	0.02184	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	PZ-51S	0.1175	0.05175	4	No	8	0.08463	0.03101	0	None	No	0.01	Param.
Lead (mg/L)	BRGWC-25I	0.002	0.00011	0.015	No	17	0.001889	0.0004584	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-27I	0.002	0.000063	0.015	No	17	0.001886	0.0004698	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-29I	0.0006	0.00029	0.015	No	16	0.0006819	0.0006628	18.75	None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-30I	0.002	0.00011	0.015	No	17	0.001889	0.0004584	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-45	0.002	0.00026	0.015	No	18	0.001696	0.0007011	83.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-47	0.002	0.00012	0.015	No	18	0.00168	0.0007372	83.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-50	0.002	0.0001	0.015	No	17	0.001144	0.000942	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-52I	0.002	0.000042	0.015	No	17	0.001885	0.0004749	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	PZ-50D	0.002	0.000056	0.015	No	4	0.001514	0.000972	75	None	No	0.0625	NP (NDs)

Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	PZ-51D	0.002	0.00013	0.015	No	4	0.001533	0.000935	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	PZ-51I	0.002	0.00017	0.015	No	8	0.001566	0.0008048	75	None	No	0.004	NP (NDs)
Lithium (mg/L)	BRGWC-27I	0.0021	0.0012	0.089	No	17	0.002106	0.001405	17.65	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-29I	0.003608	0.00302	0.089	No	17	0.003314	0.0004687	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-30I	0.01735	0.01219	0.089	No	17	0.01493	0.004314	0	None	sqrt(x)	0.01	Param.
Lithium (mg/L)	BRGWC-32S	0.0035	0.0021	0.089	No	17	0.002688	0.001061	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-45	0.003728	0.002896	0.089	No	17	0.003312	0.0006642	5.882	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-47	0.04413	0.04074	0.089	No	18	0.04243	0.002802	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-50	0.0439	0.03831	0.089	No	17	0.04111	0.004465	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-52I	0.006682	0.003294	0.089	No	17	0.005294	0.003416	5.882	None	x^(1/3)	0.01	Param.
Lithium (mg/L)	PZ-50D	0.02921	0.01504	0.089	No	4	0.02213	0.003119	0	None	No	0.01	Param.
Lithium (mg/L)	PZ-51D	0.0096	0.0042	0.089	No	4	0.008175	0.002654	0	None	No	0.0625	NP (normality)
Lithium (mg/L)	PZ-51I	0.026	0.019	0.089	No	8	0.0209	0.002371	0	None	No	0.004	NP (normality)
Lithium (mg/L)	PZ-51S	0.005	0.0012	0.089	No	8	0.004525	0.001344	87.5	None	No	0.004	NP (NDs)
Mercury (mg/L)	BRGWC-25I	0.0002	0.000083	0.002	No	15	0.0001815	0.00004941	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-27I	0.0002	0.00005	0.002	No	15	0.0001798	0.00005331	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-29I	0.0002	0.000098	0.002	No	15	0.0001739	0.0000552	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-30I	0.0002	0.000082	0.002	No	15	0.0001728	0.0000569	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-32S	0.0002	0.0001	0.002	No	15	0.0001781	0.0000454	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	PZ-51I	0.0002	0.000099	0.002	No	8	0.0001874	0.00003571	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	BRGWC-25I	0.00105	0.00089	0.1	No	16	0.0009781	0.00007876	62.5	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-30I	0.0012	0.001	0.1	No	16	0.001099	0.0003203	68.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-45	0.001	0.00076	0.1	No	17	0.000952	0.0001479	88.24	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-47	0.001	0.000296	0.1	No	17	0.0009586	0.0001707	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-50	0.0022	0.001	0.1	No	16	0.001219	0.0006306	87.5	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-52I	0.005	0.001	0.1	No	16	0.002117	0.002007	43.75	None	No	0.01	NP (normality)
Molybdenum (mg/L)	PZ-50D	0.002584	0.0004608	0.1	No	4	0.001523	0.0004676	0	None	No	0.01	Param.
Molybdenum (mg/L)	PZ-51D	0.009763	0.0001132	0.1	No	4	0.003278	0.002415	0	None	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	PZ-51I	0.001	0.000313	0.1	No	8	0.0009141	0.0002429	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	BRGWC-25I	0.005	0.0021	0.05	No	17	0.004829	0.0007034	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-27I	0.005	0.0025	0.05	No	17	0.003841	0.001247	35.29	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-29I	0.005	0.0042	0.05	No	17	0.004829	0.001348	52.94	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-30I	0.005	0.0045	0.05	No	17	0.004618	0.0008662	76.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-32S	0.13	0.0019	0.05	No	18	0.07245	0.07317	22.22	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-45	0.005	0.0029	0.05	No	18	0.004883	0.000495	94.44	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-47	0.005	0.002	0.05	No	18	0.003978	0.001509	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-50	0.005	0.002	0.05	No	17	0.003704	0.00139	47.06	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-29I	0.002	0.00016	0.002	No	17	0.0006071	0.0007966	23.53	None	No	0.01	NP (normality)

Confidence Intervals - Selenium BRGWC-32S

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/5/2022, 11:45 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	BRGWC-32S	0.1727	0.08187	0.05	Yes	10	0.1273	0.05091	0	None	No	0.01	Param.

Appendix IV Trend Tests - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 1/9/2023, 10:29 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cadmium (mg/L)	BRGWC-50	-0.008185	-69	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0004021	-70	-63	Yes	17	11.76	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWC-32S	0.03432	107	68	Yes	18	22.22	n/a	n/a	0.01	NP

Appendix IV Trend Tests - All Results

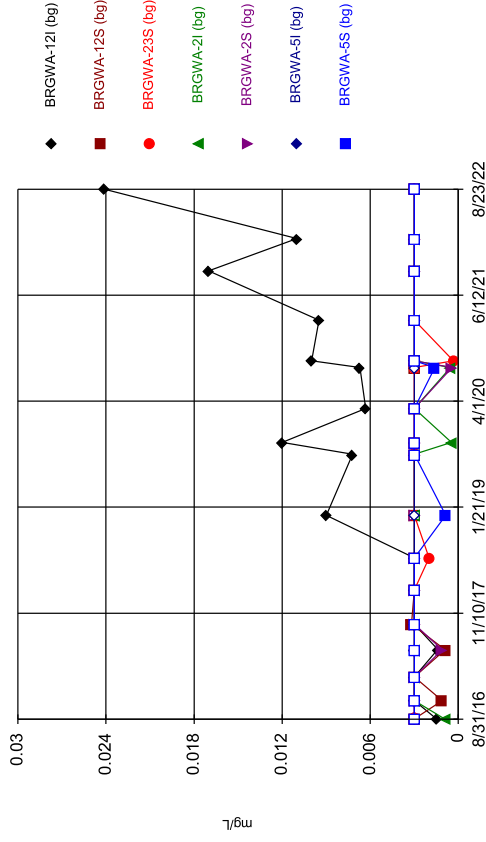
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 1/9/2023, 10:29 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cadmium (mg/L)	BRGWA-12I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-12S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-23S (bg)	0	5	63	No	17	88.24	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-2I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-2S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-5I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-5S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-6S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWC-50	-0.008185	-69	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-12I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-12S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-23S (bg)	-0.0006981	-57	-63	No	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2I (bg)	0	-16	-63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0004021	-70	-63	Yes	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5I (bg)	-0.0001378	-49	-53	No	15	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5S (bg)	0	26	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-6S (bg)	0	9	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-50	0	33	63	No	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	PZ-51I	0.001128	12	30	No	10	0	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-12I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-12S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-23S (bg)	-0.0003899	-38	-63	No	17	29.41	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-2I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-2S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-5I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-5S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-6S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWC-32S	0.03432	107	68	Yes	18	22.22	n/a	n/a	0.01	NP

FIGURE A.

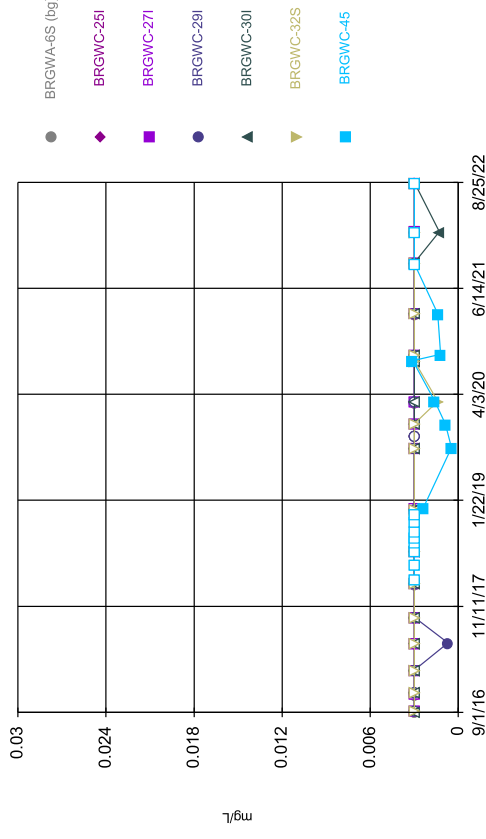
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Hollow symbols indicate censored values.

Time Series



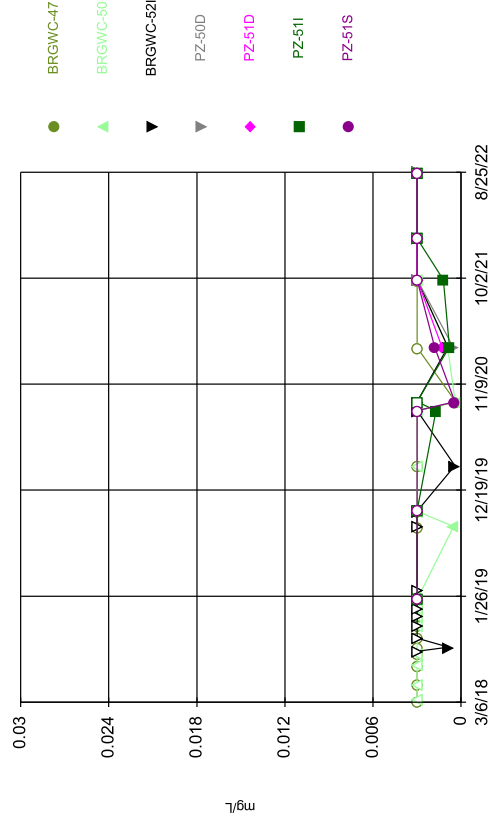
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Time Series



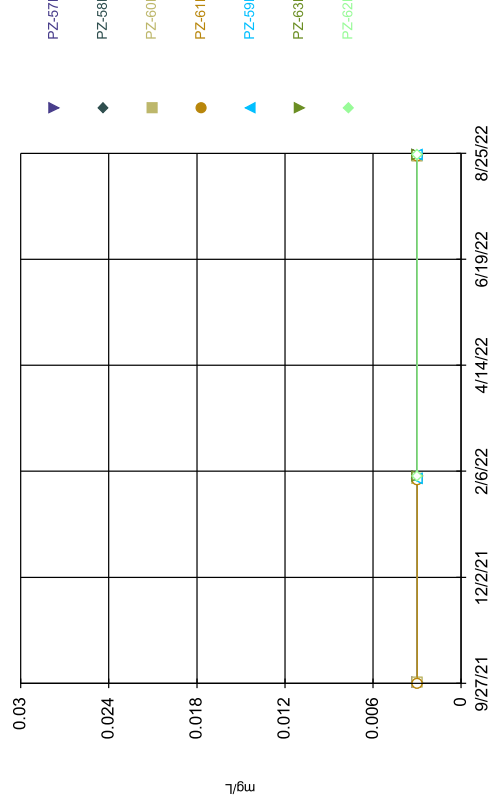
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Hollow symbols indicate censored values.

Time Series



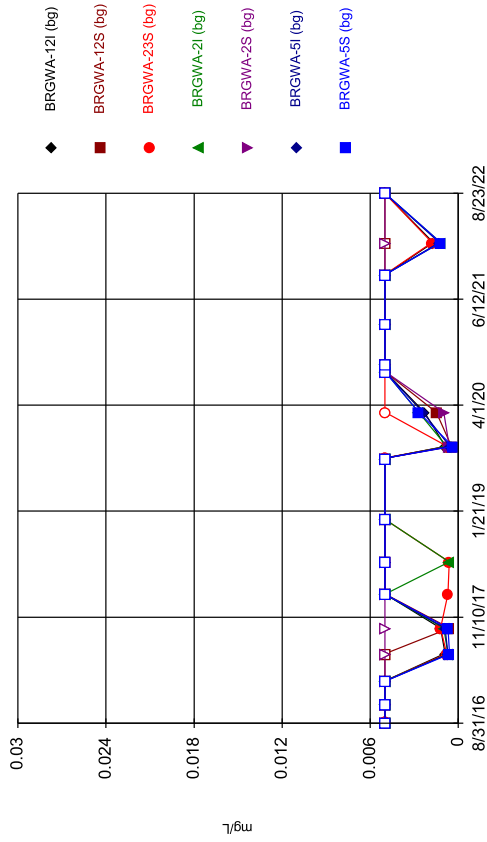
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Time Series



Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
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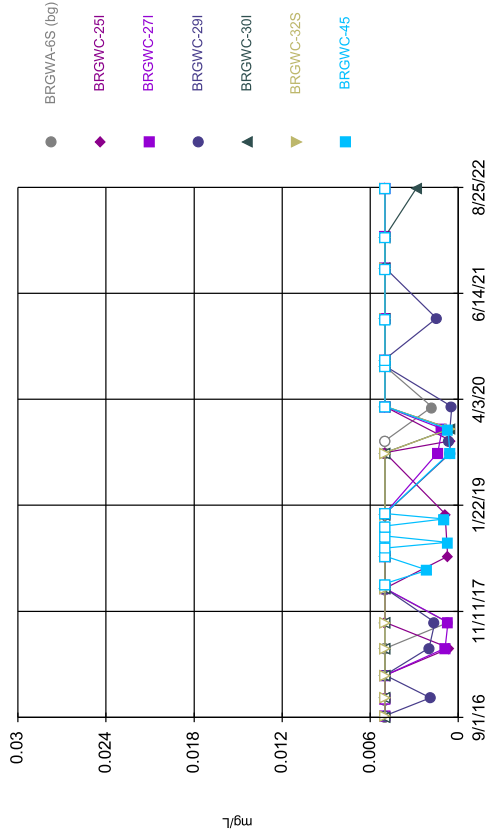
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Constituent: Arsenic Analysis Run 11/4/2022 3:42 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
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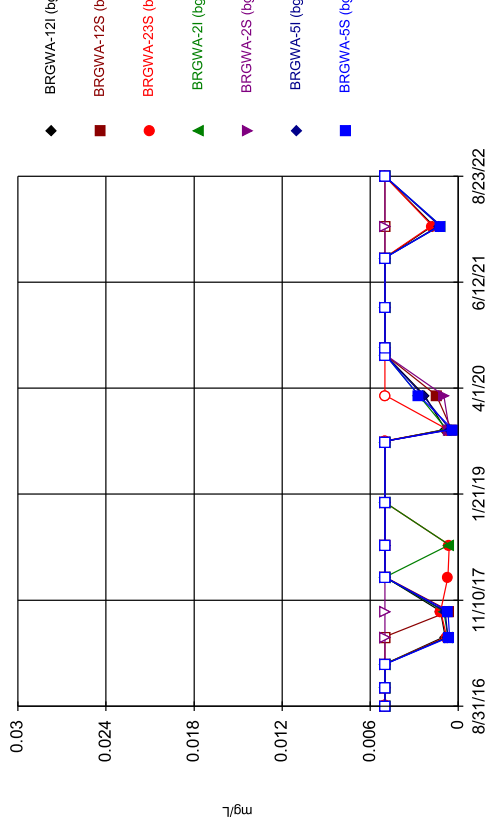
Time Series



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Plant Branch Client: Southern Company Data: Plant Branch AP

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Hollow symbols indicate censored values.

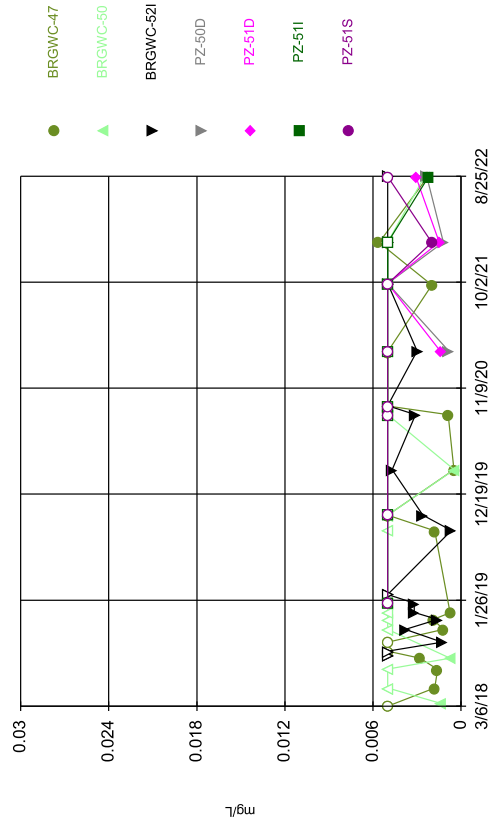
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Plant Branch Client: Southern Company Data: Plant Branch AP

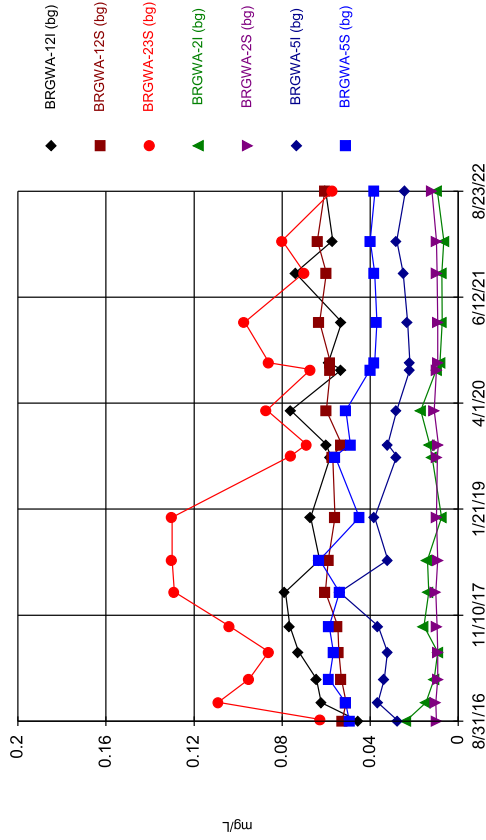
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Time Series



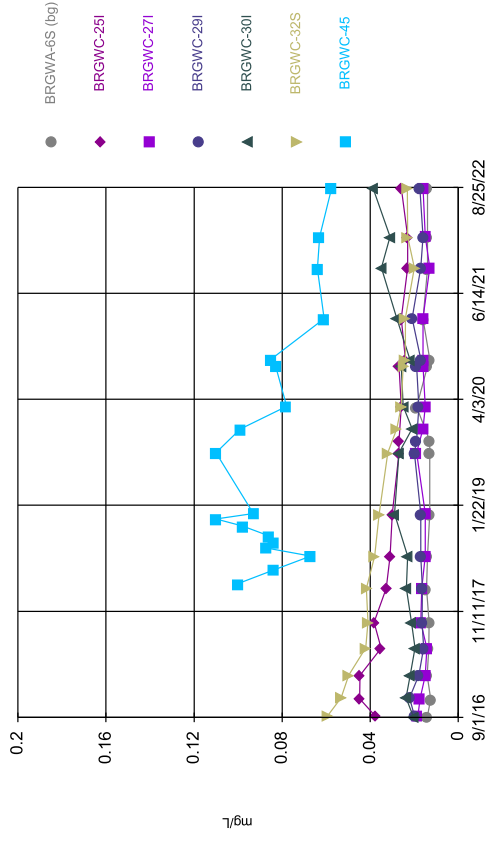
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



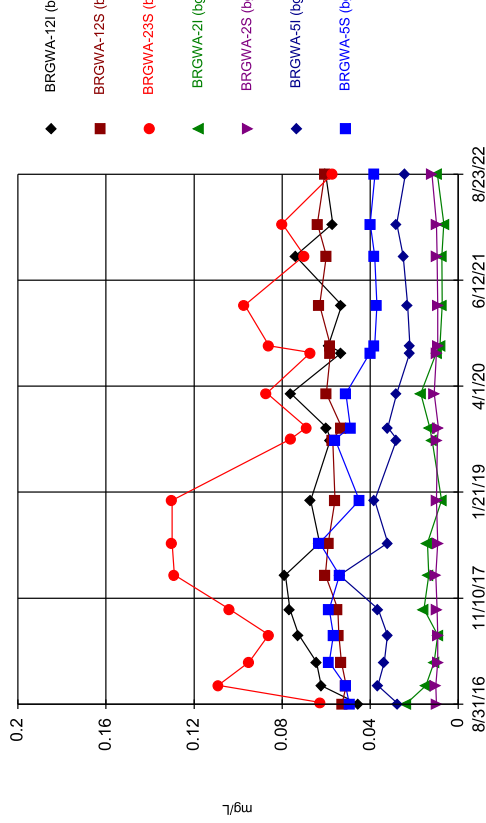
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



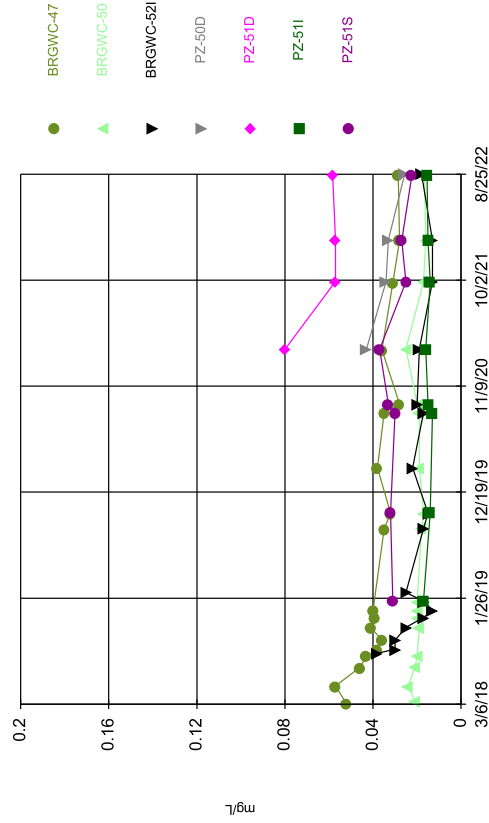
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Barium Analysis Run 11/4/2022 3:42 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

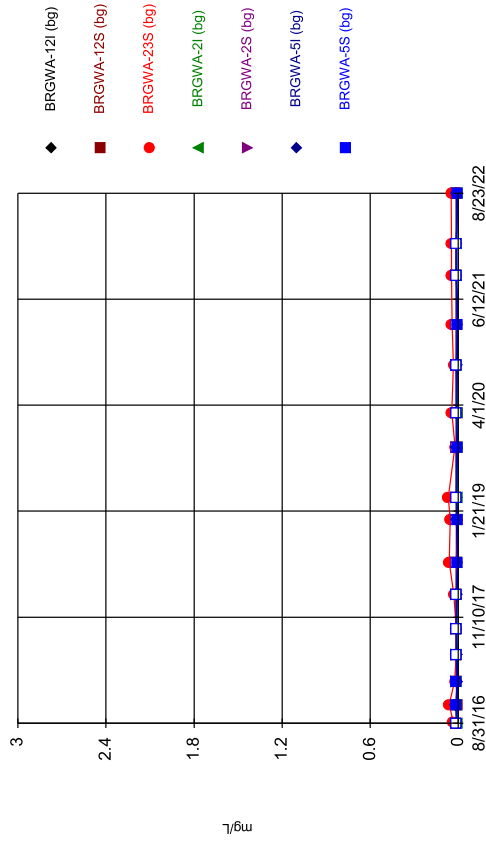
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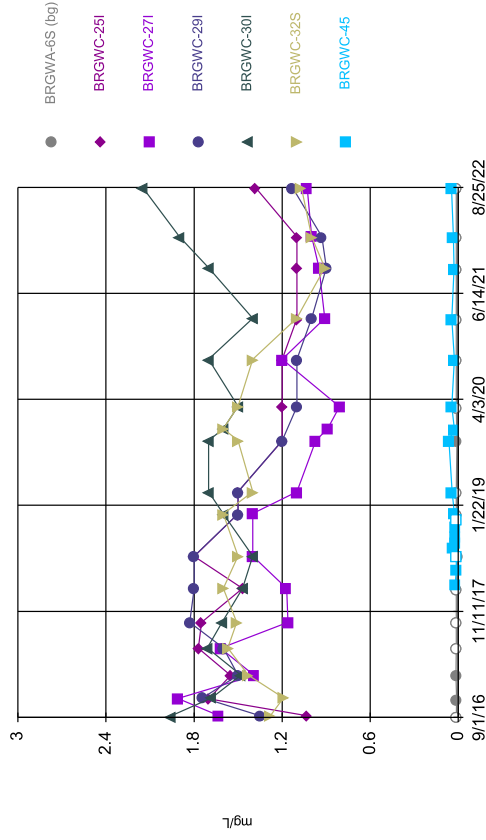
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Plant Branch Client: Southern Company Data: Plant Branch AP

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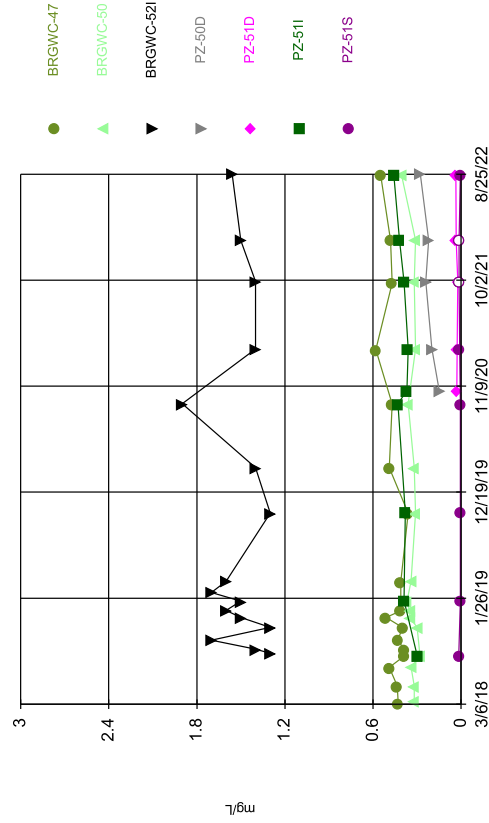
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Plant Branch Client: Southern Company Data: Plant Branch AP

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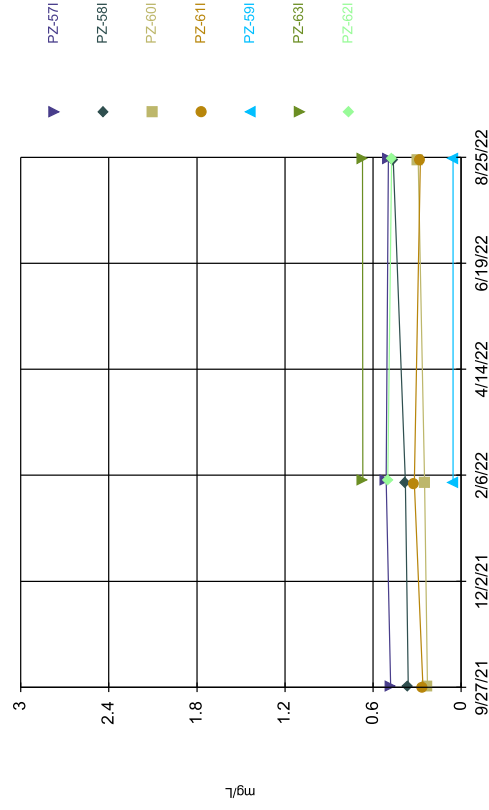
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Plant Branch Client: Southern Company Data: Plant Branch AP

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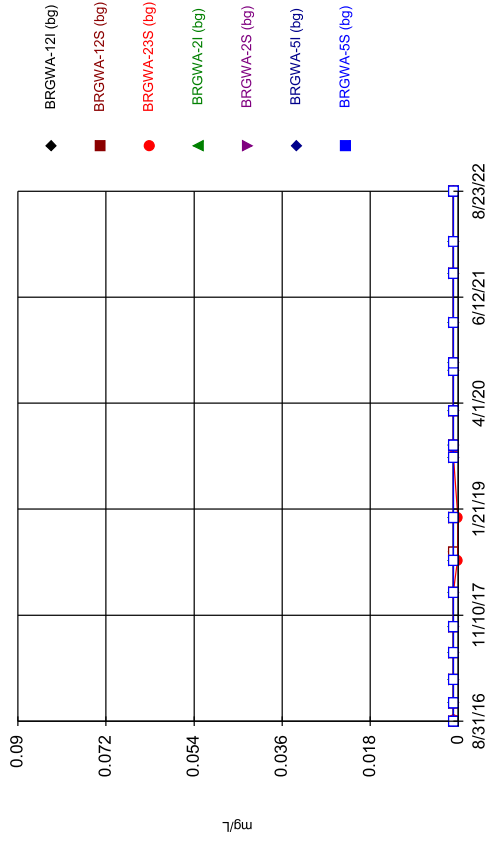
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Plant Branch Client: Southern Company Data: Plant Branch AP

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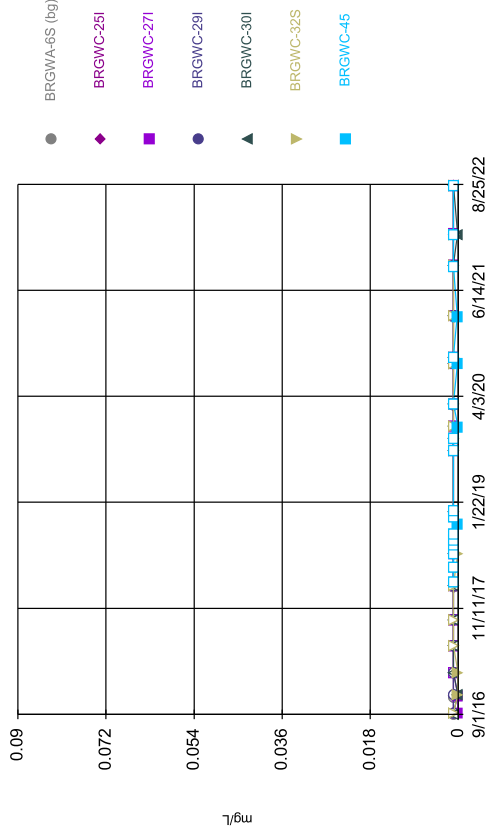
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Plant Branch Client: Southern Company Data: Plant Branch AP

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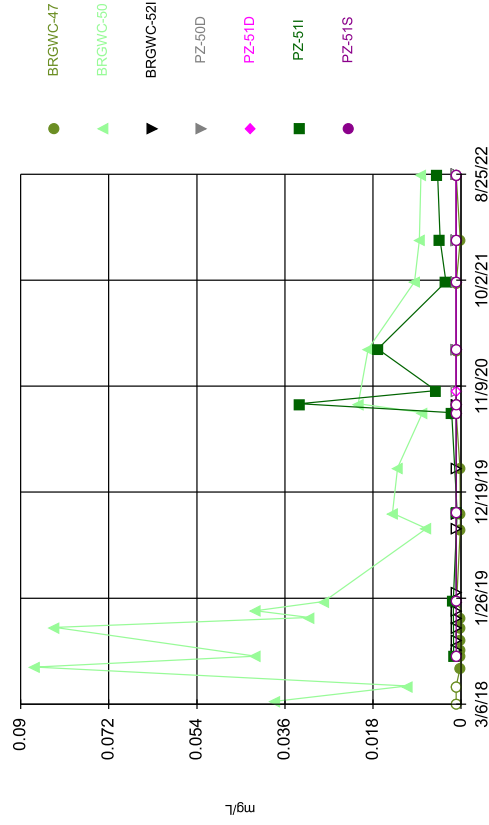
Time Series



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Plant Branch Client: Southern Company Data: Plant Branch AP

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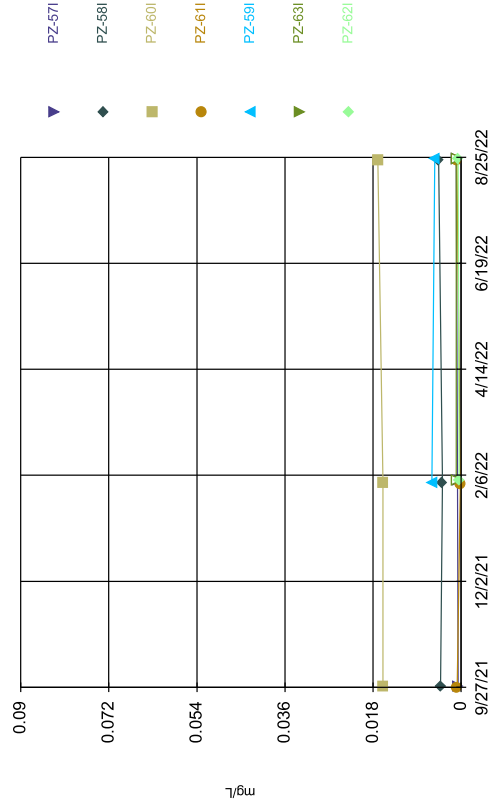
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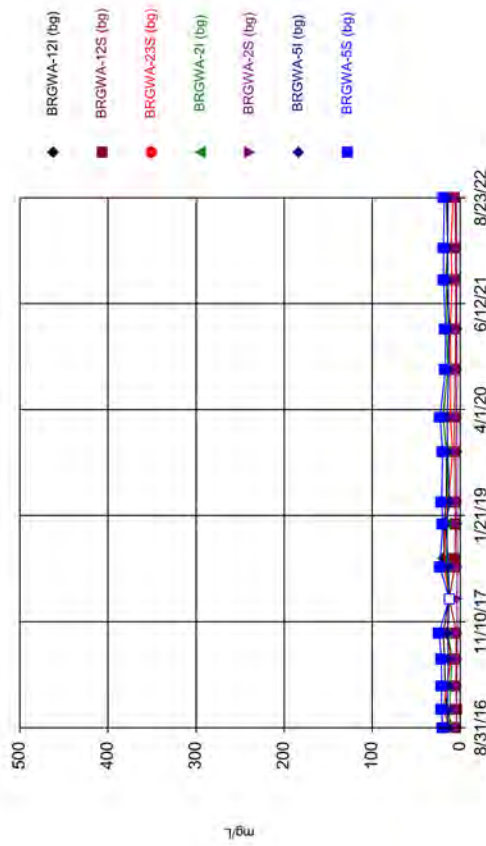
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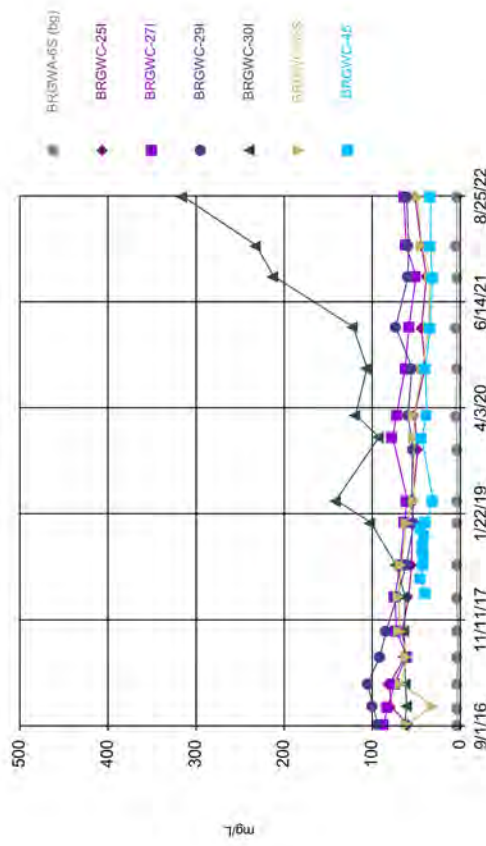


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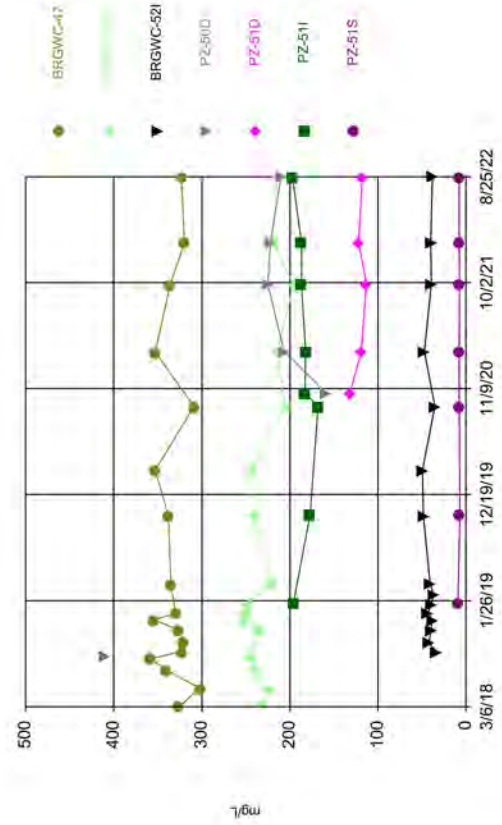
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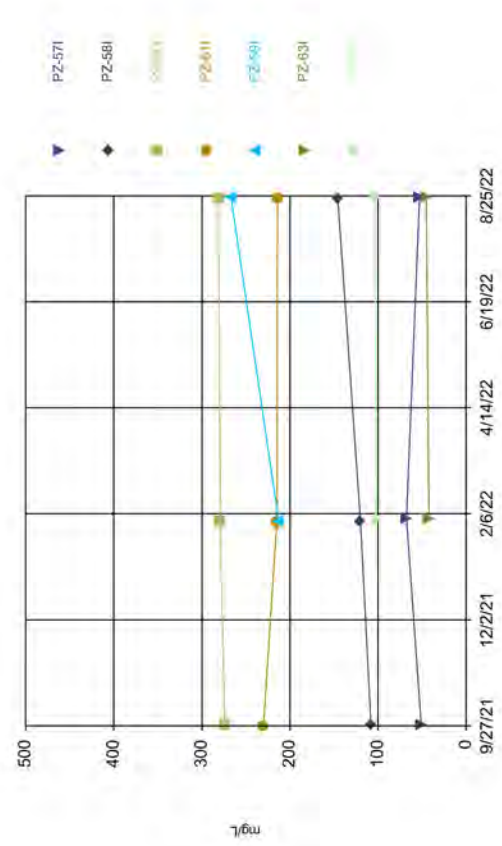
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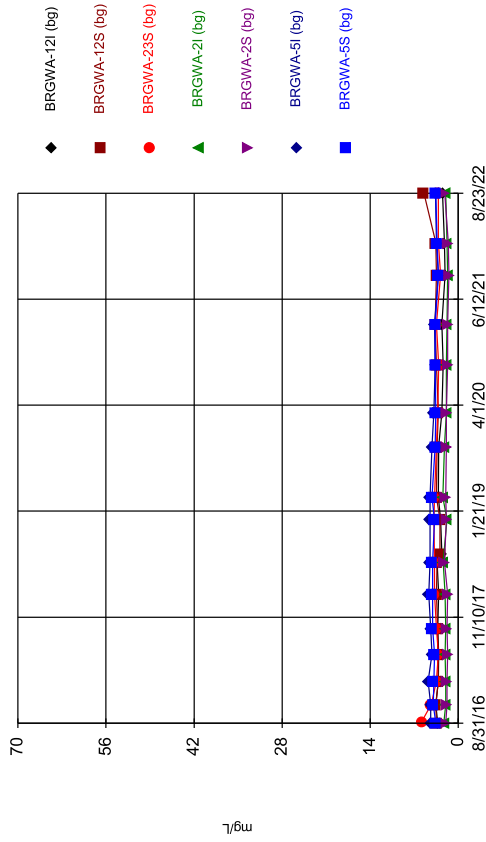
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Time Series

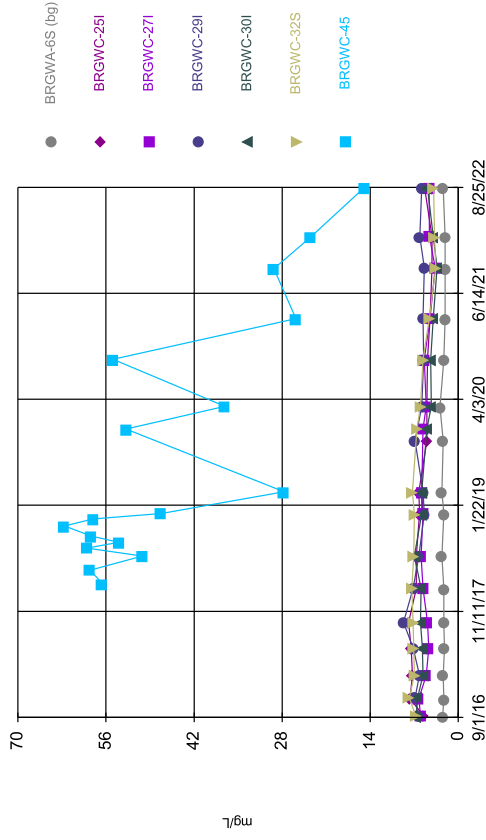


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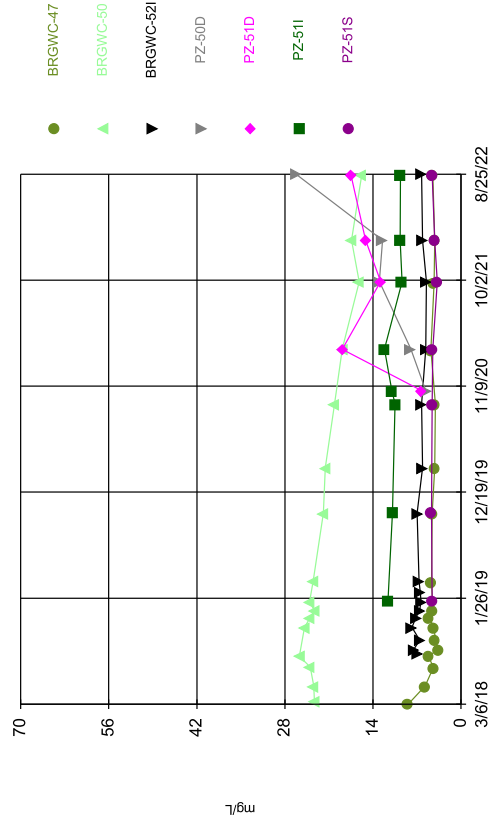
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Time Series



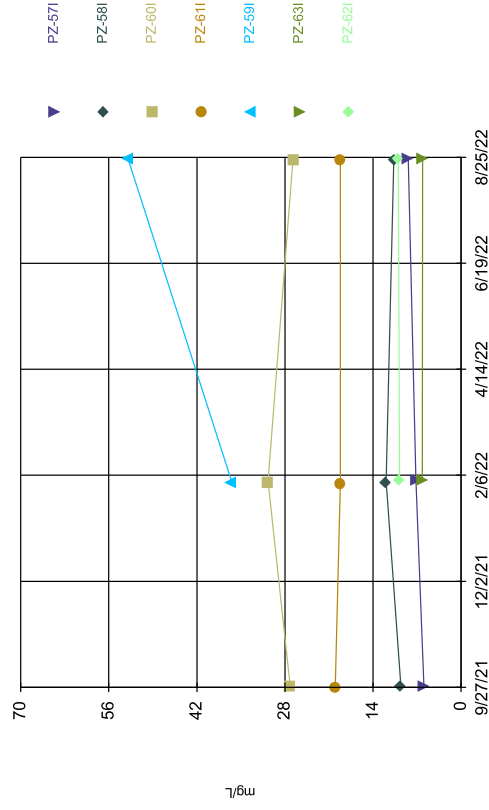
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Time Series



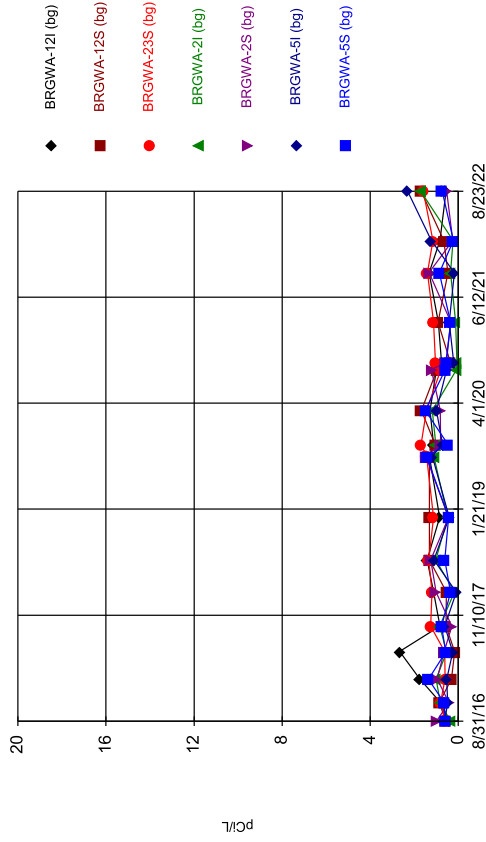
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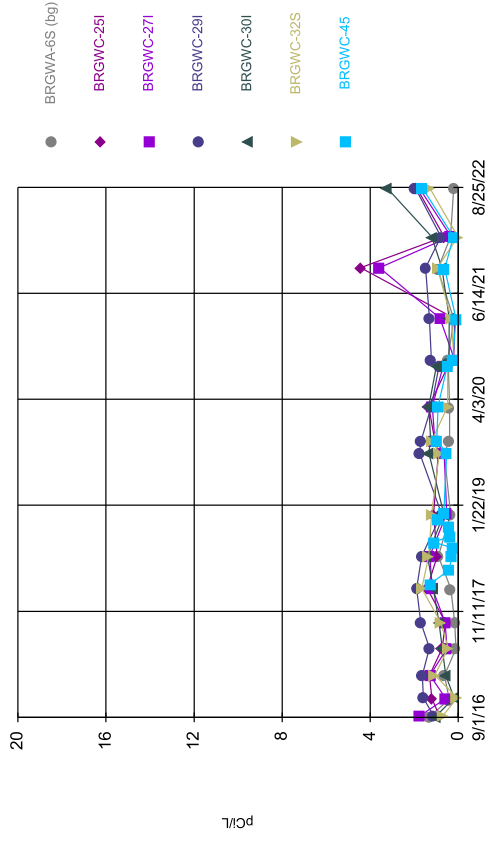
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Time Series



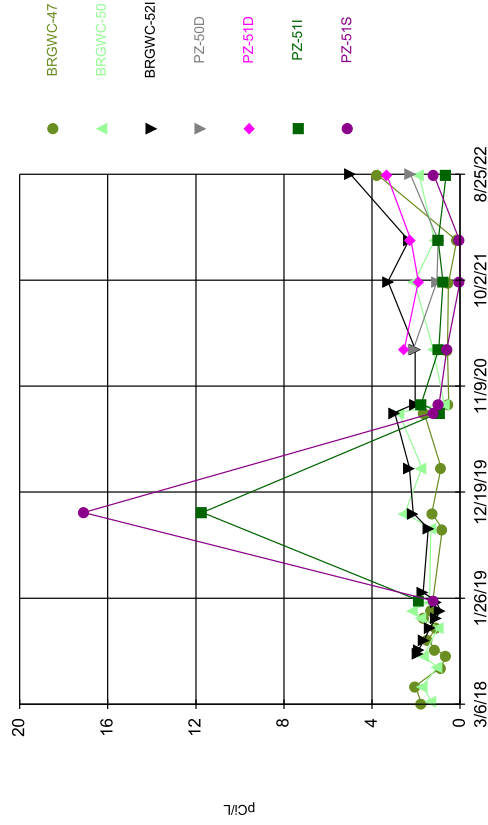
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



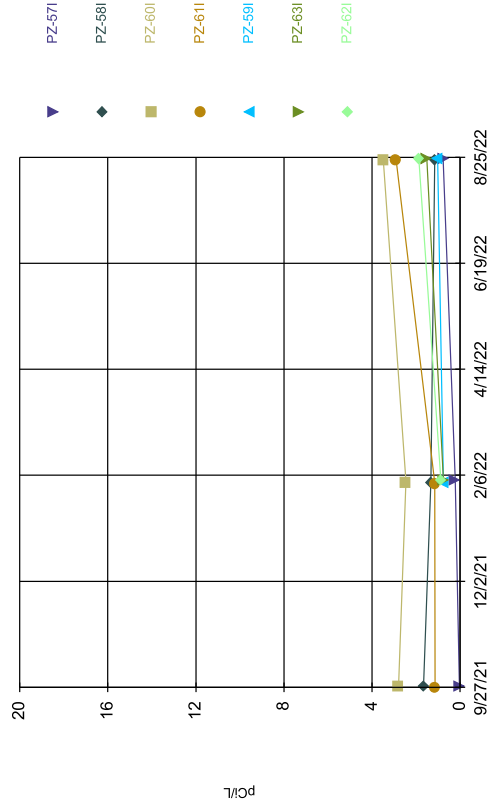
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

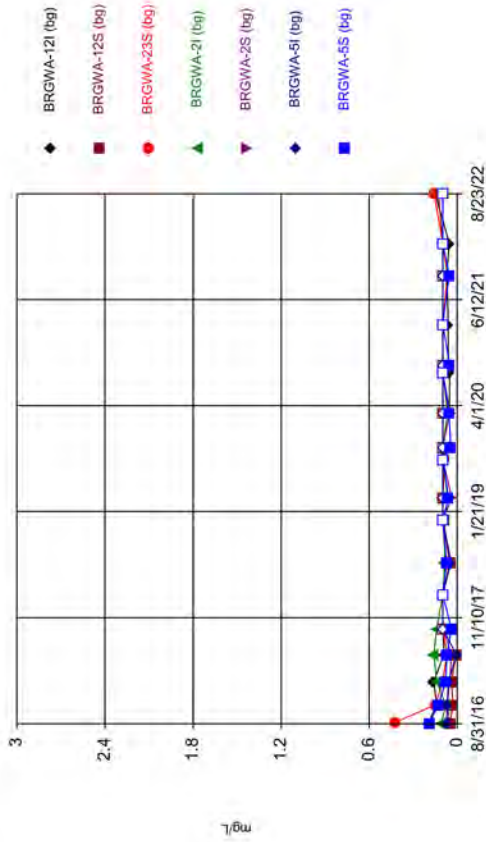
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

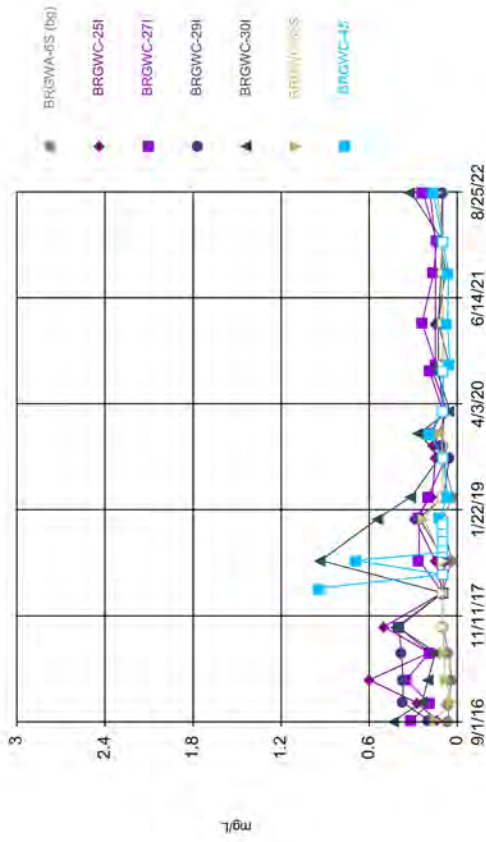
Time Series



Constituent: Fluoride Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

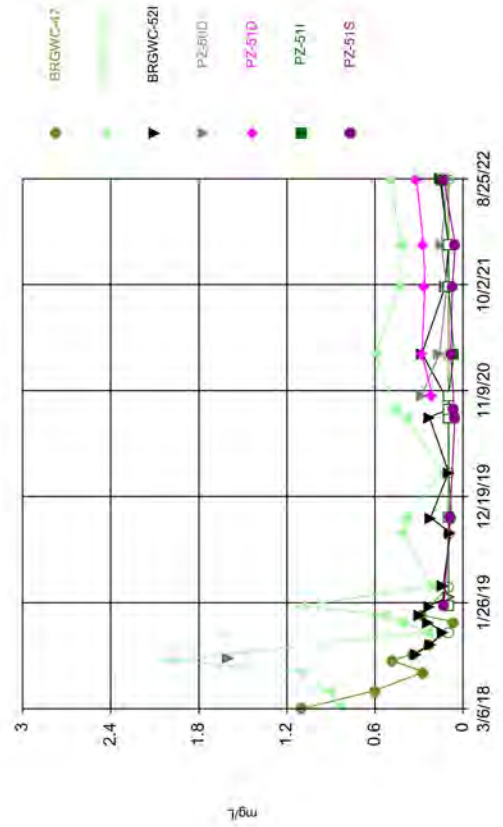
Time Series



Constituent: Fluoride Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

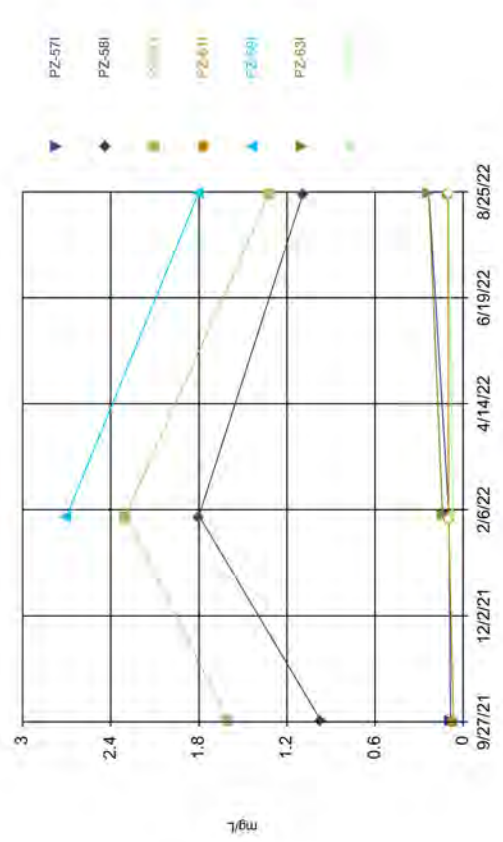
Time Series



Constituent: Fluoride Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

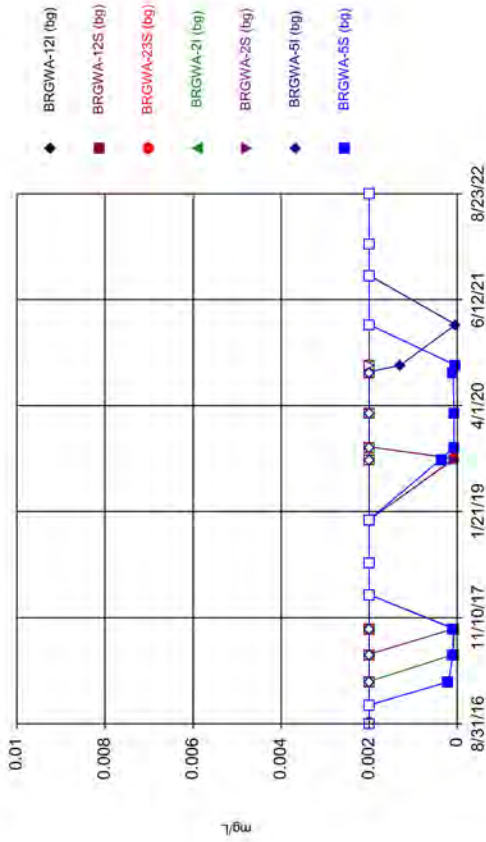
Time Series



Constituent: Fluoride Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

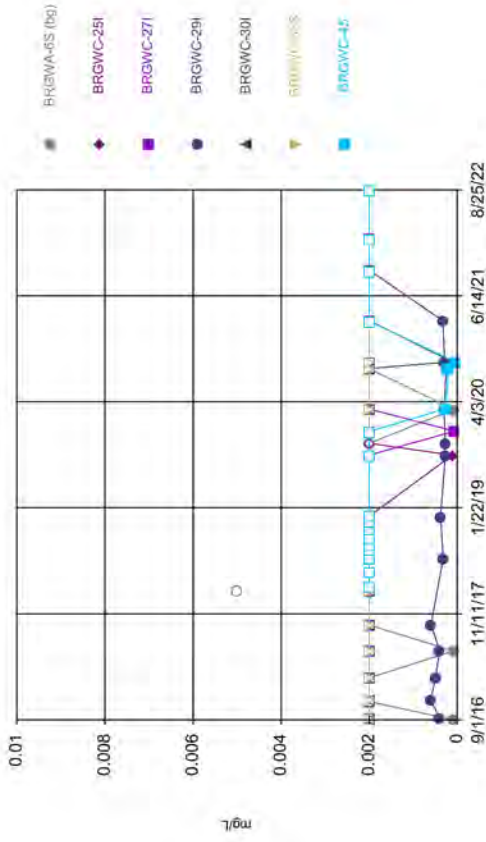
Time Series



Constituent: Lead Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

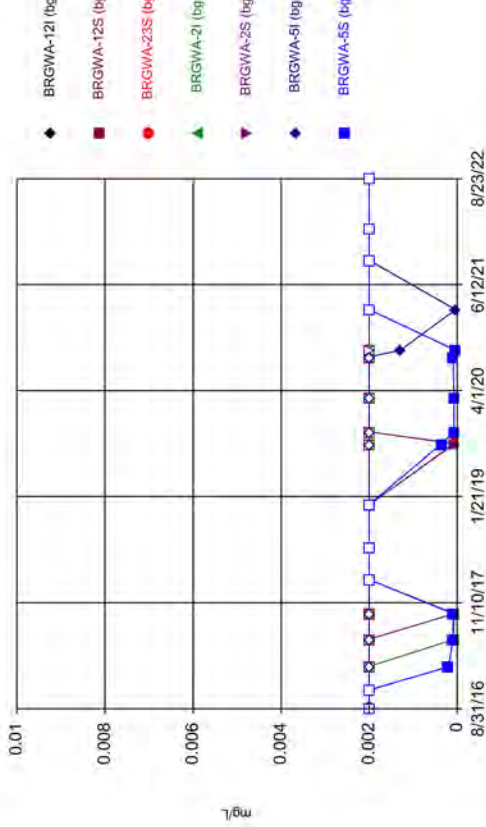
Time Series



Constituent: Lead Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

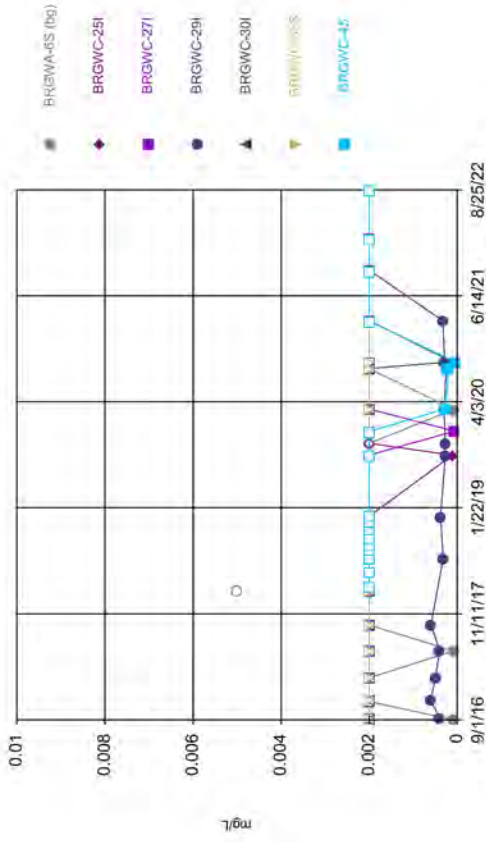
Time Series



Constituent: Lead Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

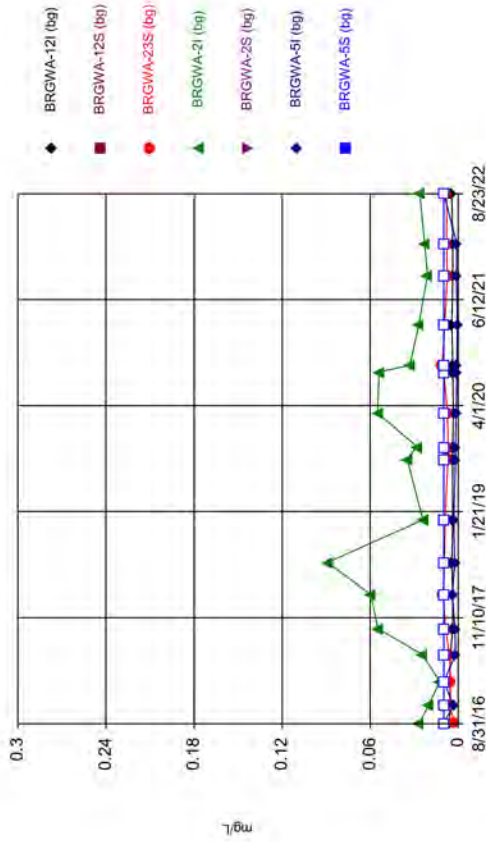
Time Series



Constituent: Lead Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

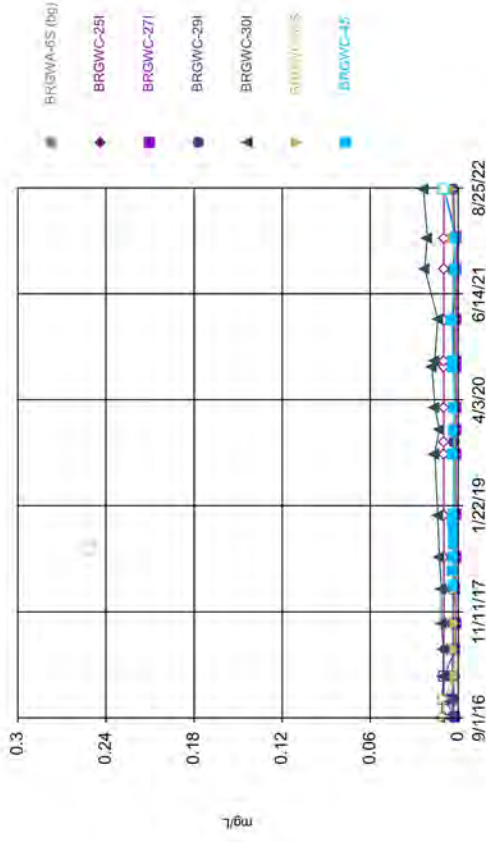
Time Series



Constituent: Lithium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

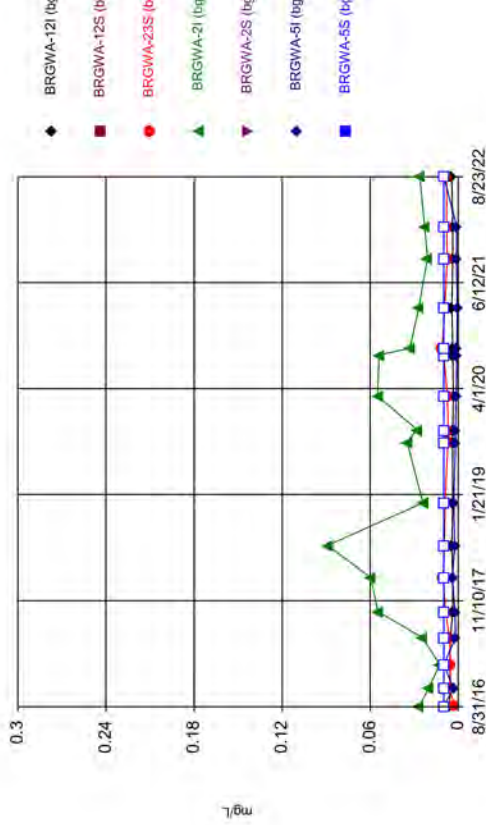
Time Series



Constituent: Lithium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

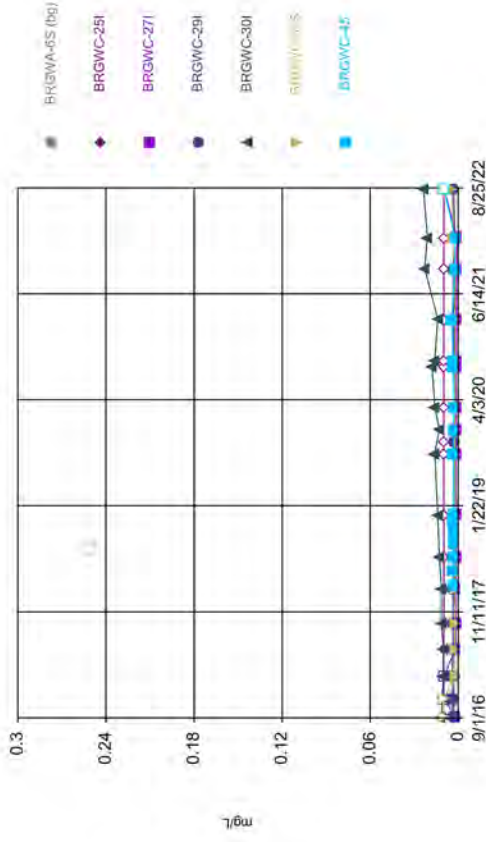
Time Series



Constituent: Lithium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

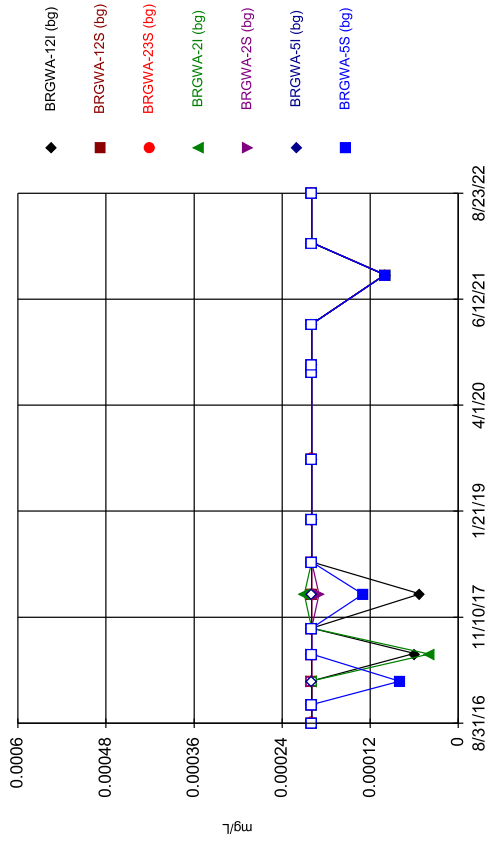
Time Series



Constituent: Lithium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

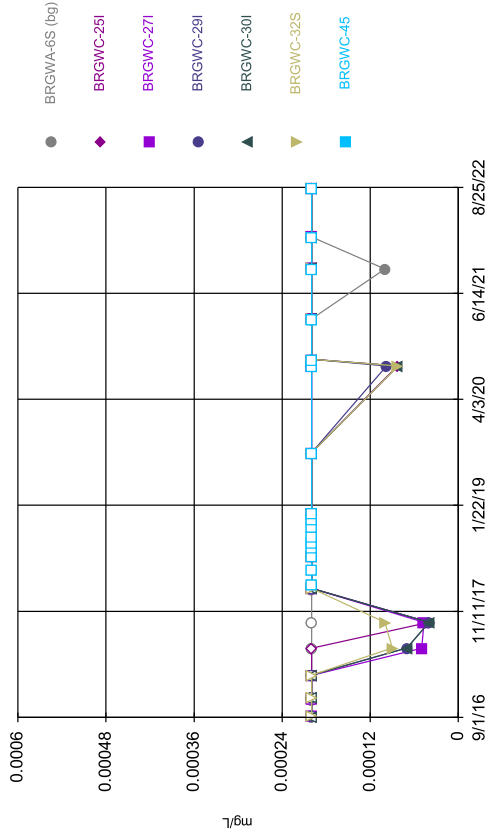
Time Series



Constituent: Mercury Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

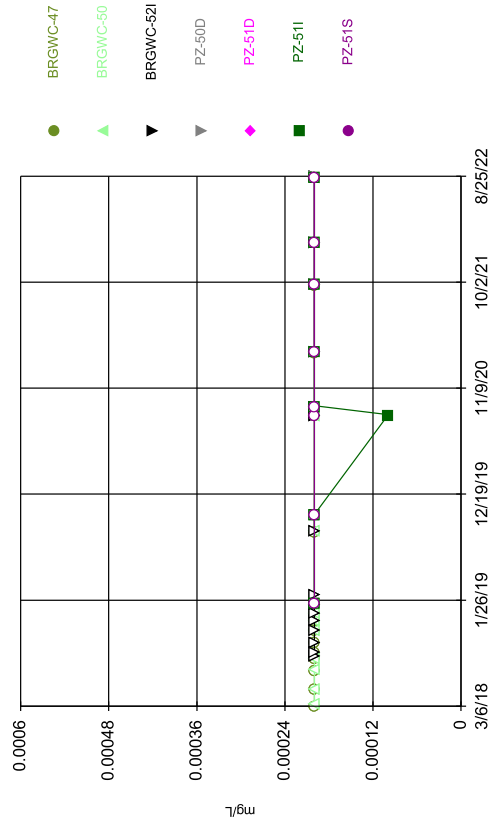
Time Series



Constituent: Mercury Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

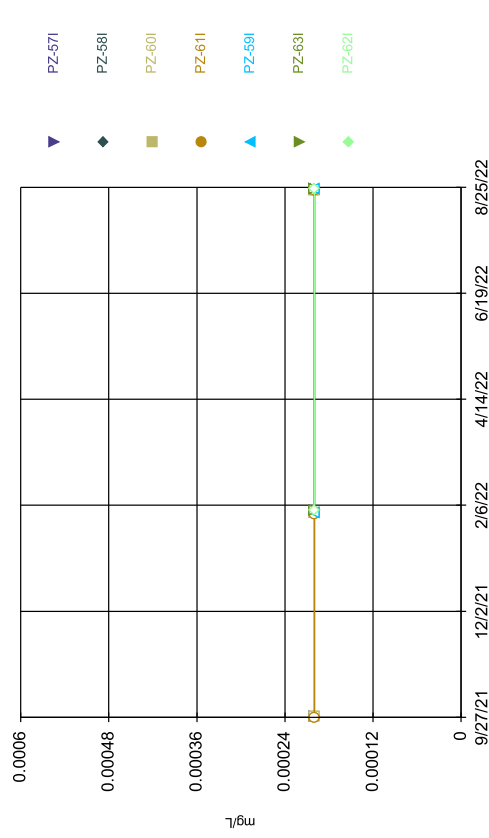
Time Series



Constituent: Mercury Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

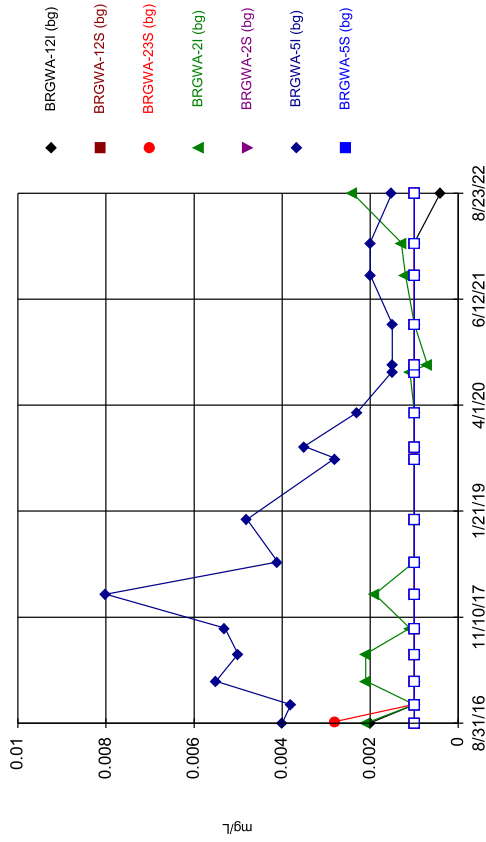
Time Series



Constituent: Mercury Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

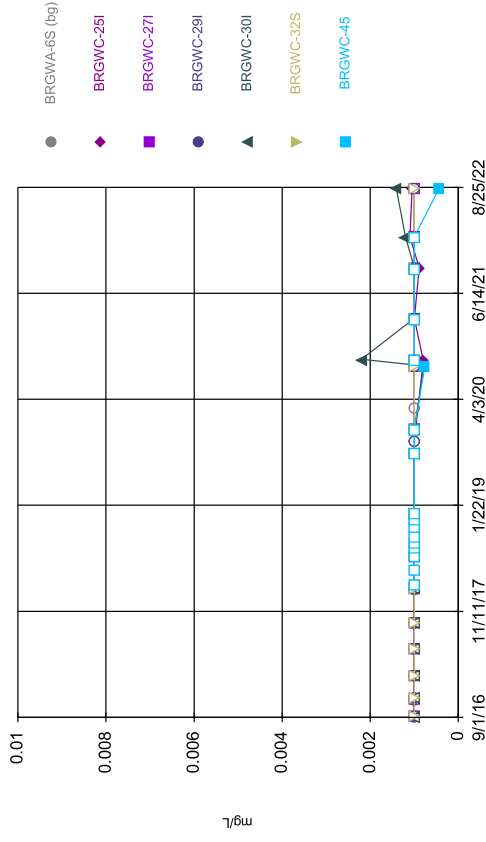
Time Series



Constituent: Molybdenum Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

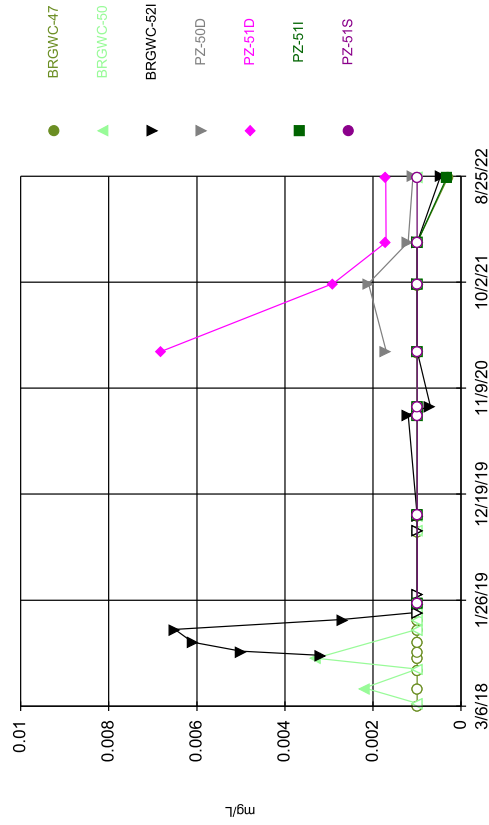
Time Series



Constituent: Molybdenum Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

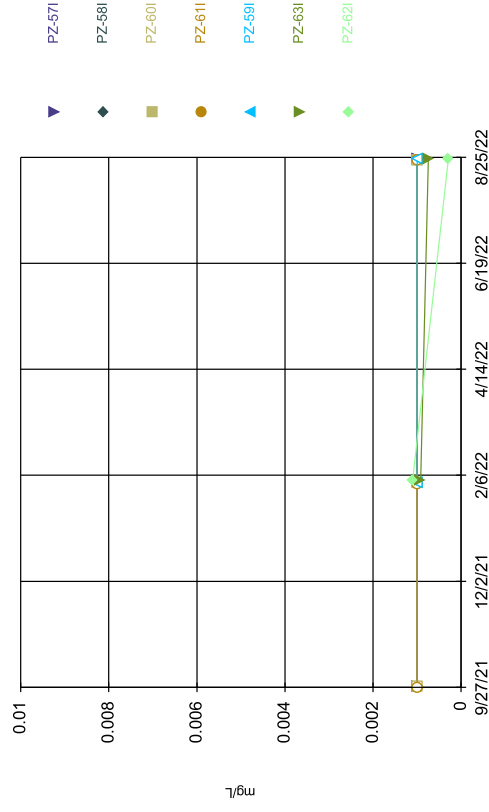
Time Series



Constituent: Molybdenum Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

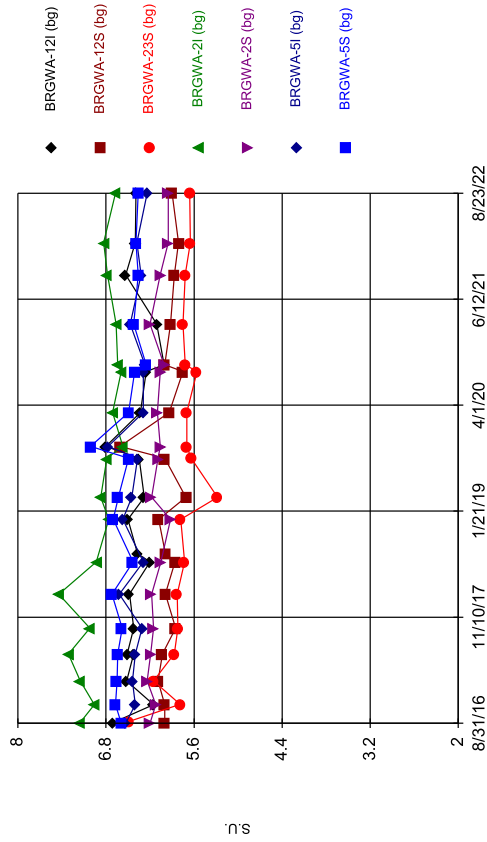
Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Time Series



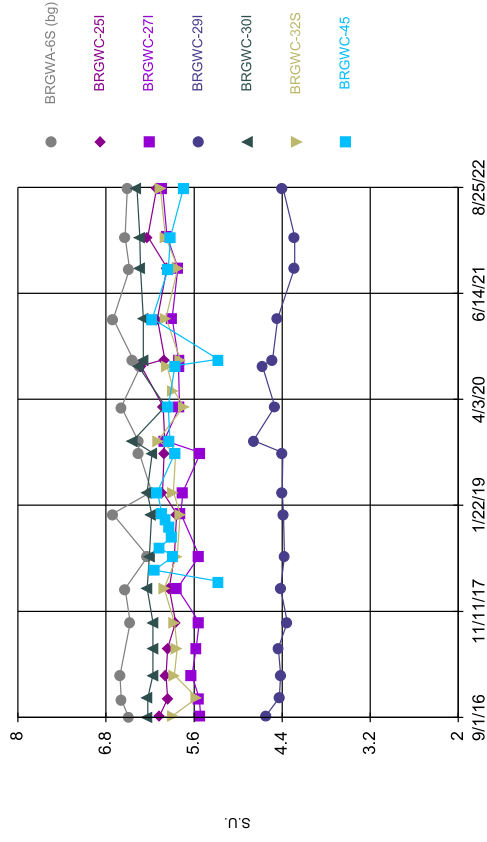
Constituent: Molybdenum Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



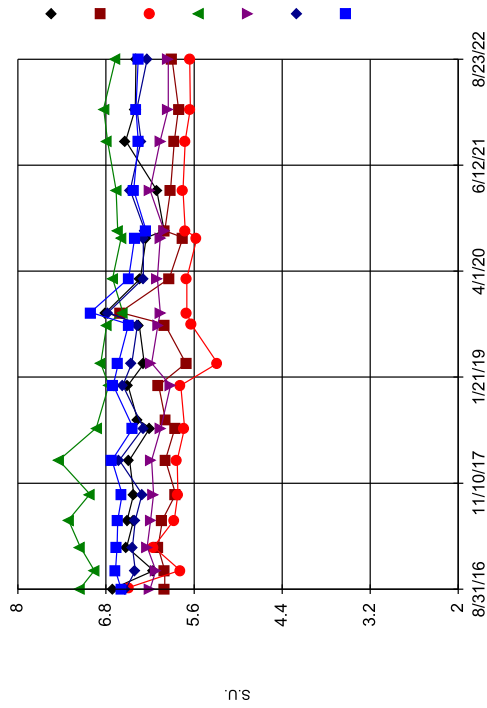
Constituent: pH, Field Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



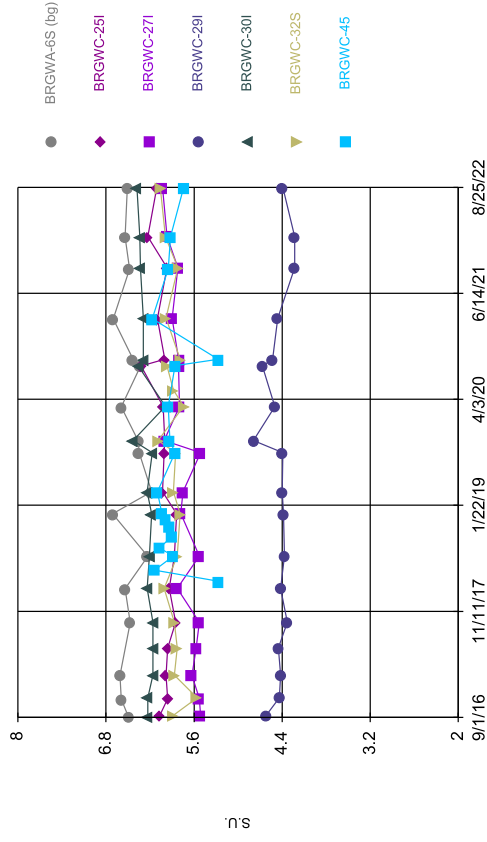
Constituent: pH, Field Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: pH, Field Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

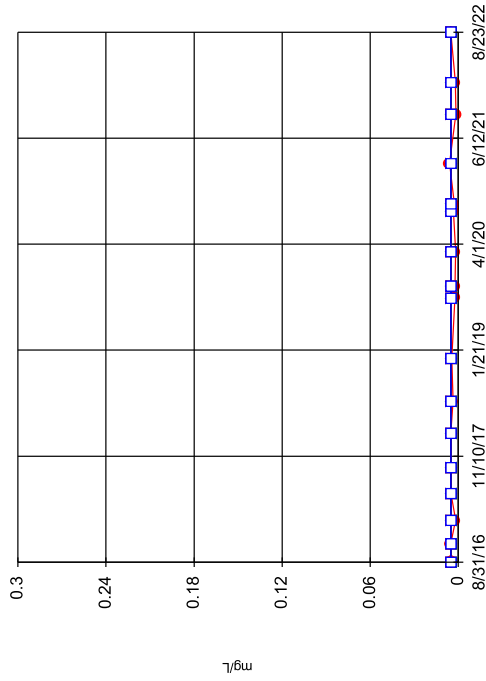
Time Series



Constituent: pH, Field Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

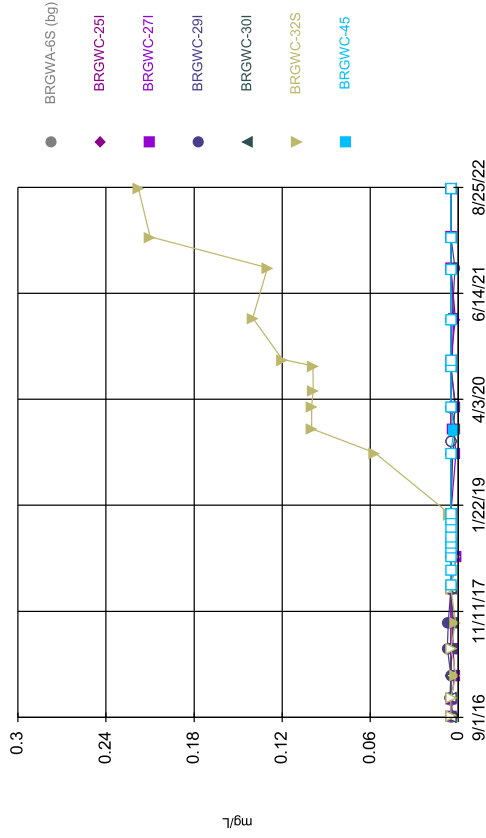
Time Series



Constituent: Selenium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

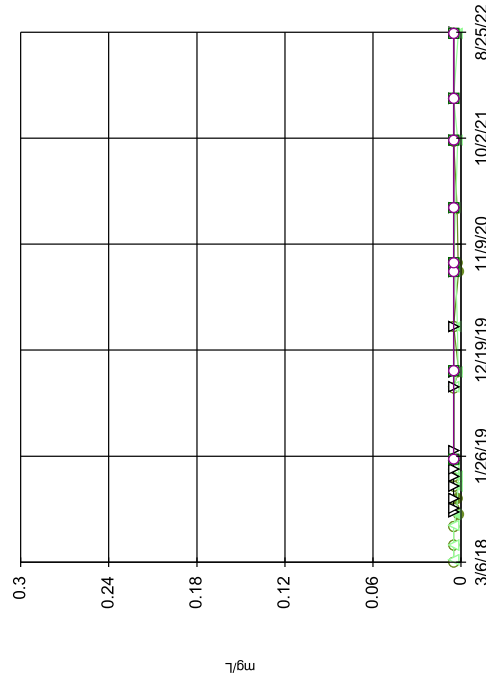
Time Series



Constituent: Selenium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

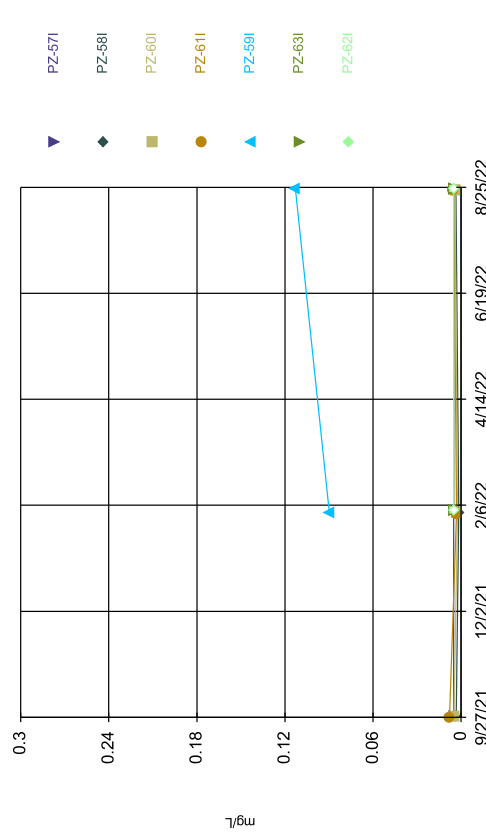
Time Series



Constituent: Selenium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

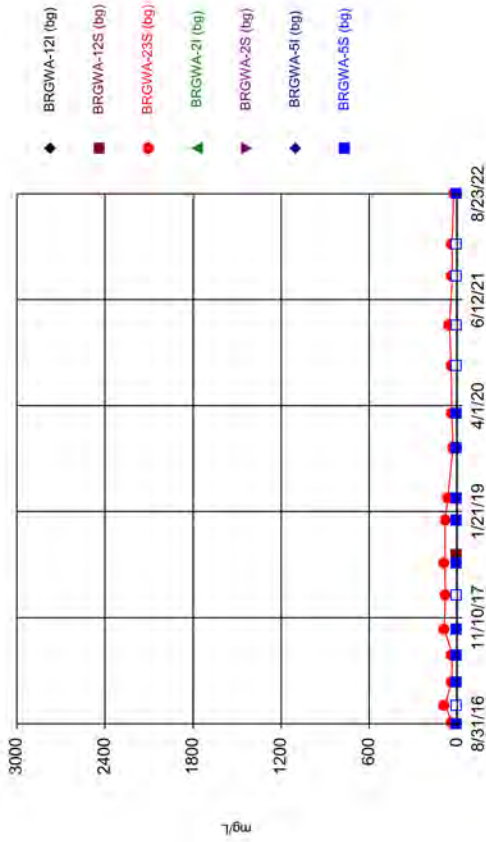
Time Series



Constituent: Selenium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

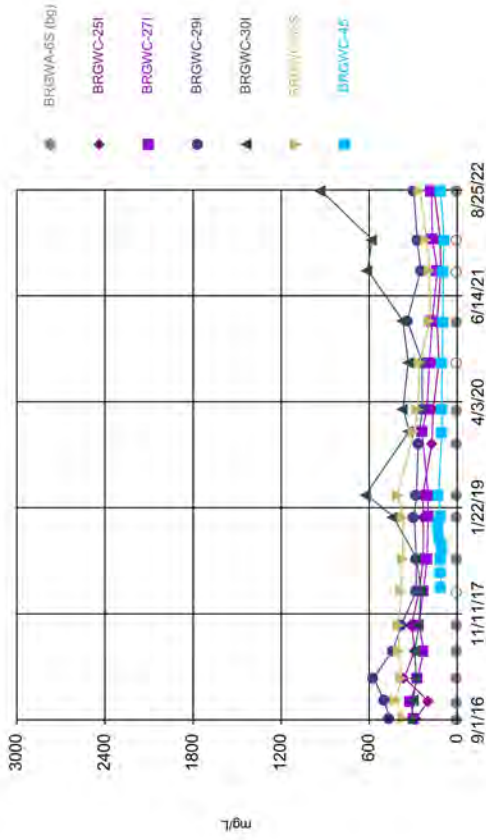
Time Series



Constituent: Sulfate Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

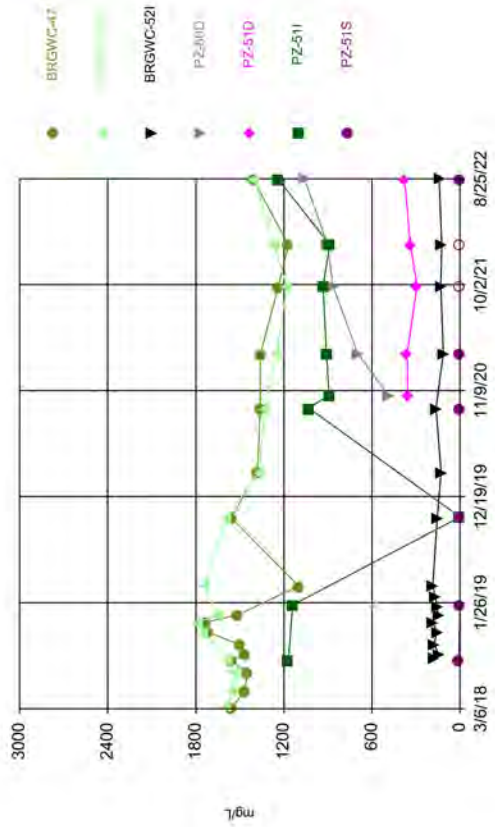
Time Series



Constituent: Sulfate Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Sentia™ v9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

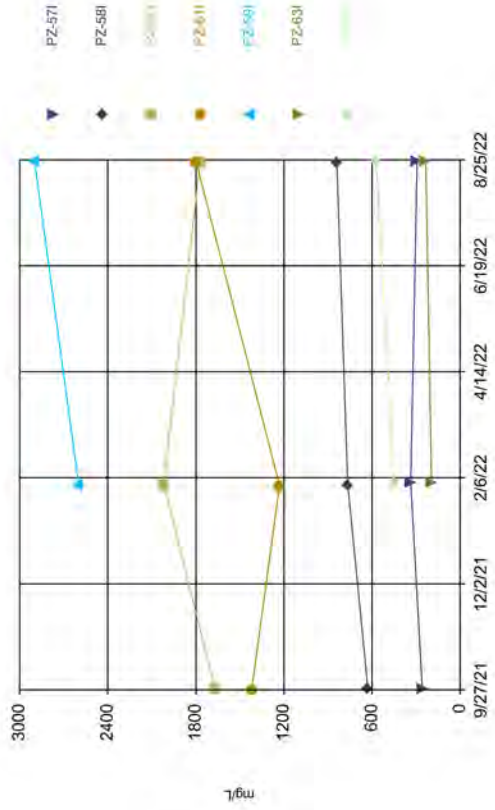
Time Series



Constituent: Sulfate Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

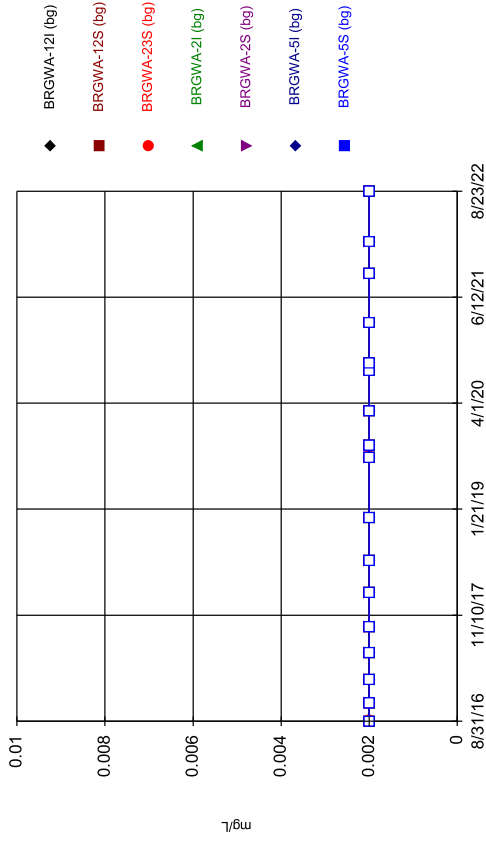
Sentia™ v9.6.35 Groundwater Stats Consulting, UG

Time Series



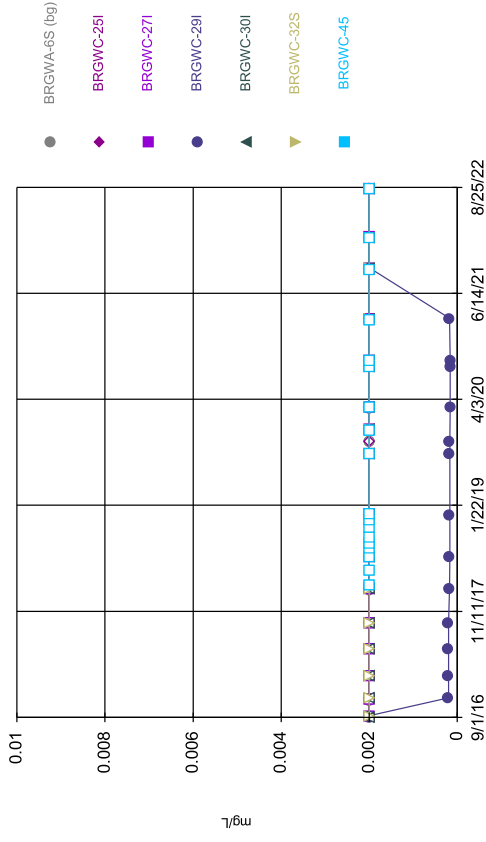
Constituent: Sulfate Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



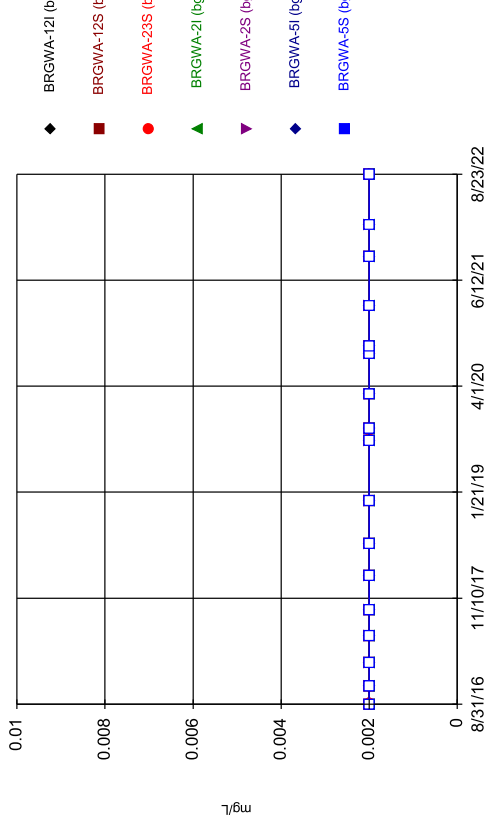
Constituent: Thallium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



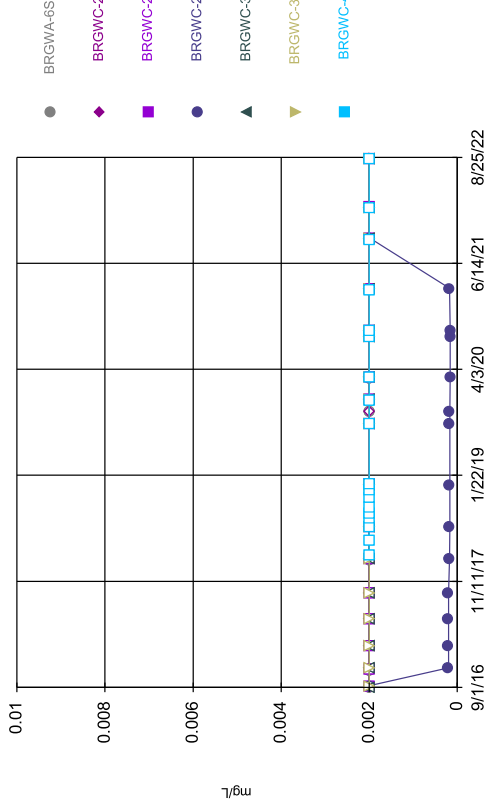
Constituent: Thallium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



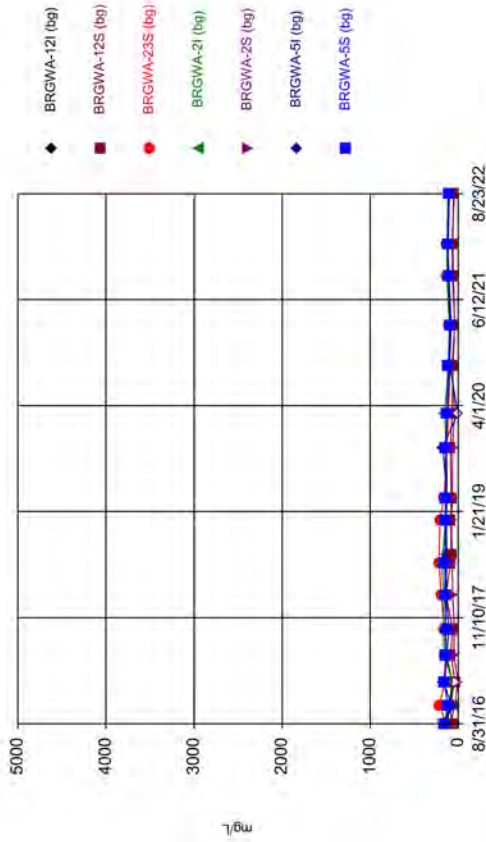
Constituent: Thallium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



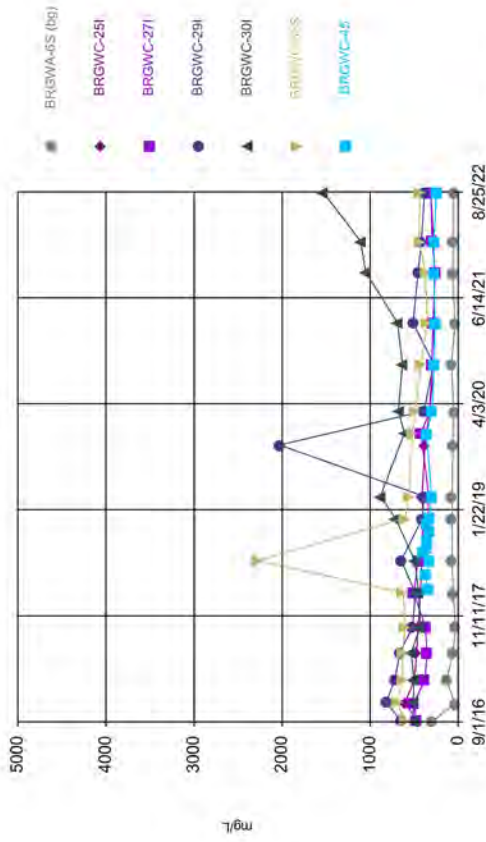
Constituent: Thallium Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



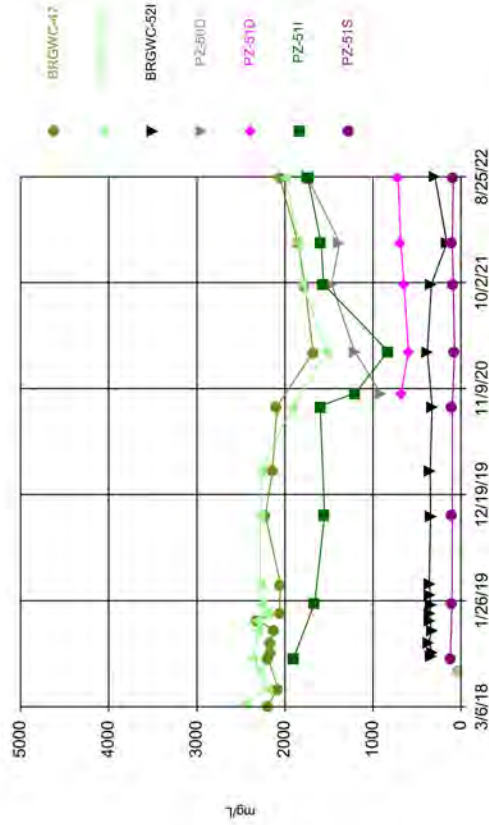
Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



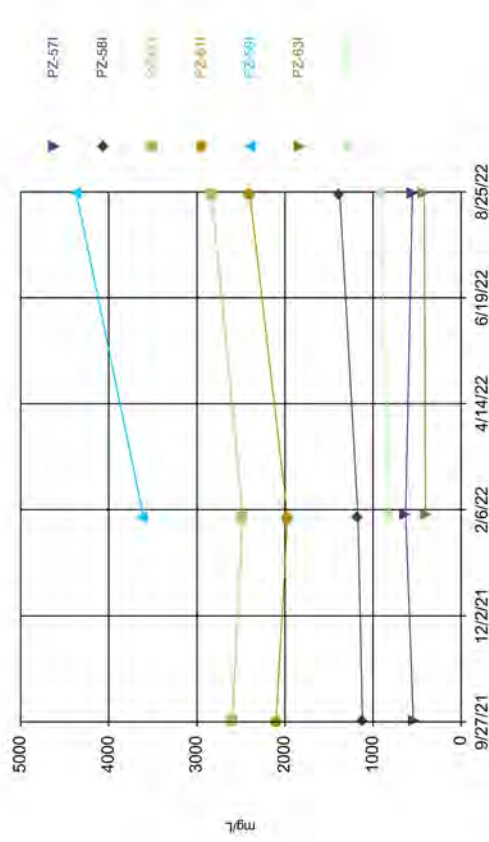
Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:43 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.003						
9/6/2016					<0.003		
9/8/2016		<0.003	<0.003	<0.003		<0.003	
11/15/2016	<0.003						
11/17/2016		<0.003					
11/18/2016			<0.003				
11/21/2016				<0.003	<0.003	<0.003	
2/20/2017	<0.003						
2/21/2017		<0.003	<0.003				
2/22/2017				<0.003	<0.003	<0.003	
6/12/2017	<0.003						
6/13/2017		<0.003	<0.003				
6/14/2017				0.0007 (J)	<0.003	<0.003	
9/26/2017	<0.003						
9/27/2017		<0.003	<0.003	<0.003	<0.003	<0.003	
2/13/2018	<0.003						
2/14/2018		<0.003	<0.003	<0.003	<0.003	<0.003	
3/6/2018							<0.003
5/1/2018							<0.003
6/26/2018	<0.003	<0.003					
6/27/2018			<0.003	<0.003		<0.003	
6/28/2018					<0.003		<0.003
7/31/2018							<0.003
8/23/2018							<0.003
9/19/2018							<0.003
10/29/2018							<0.003
11/28/2018							<0.003
12/18/2018	<0.003	<0.003		<0.003	<0.003		
12/19/2018						<0.003	
12/20/2018			<0.003				0.0024 (J)
8/27/2019	<0.003	<0.003			<0.003	<0.003	
8/28/2019			<0.003	<0.003			0.00046 (J)
10/15/2019	<0.003	<0.003					
10/16/2019				<0.003			
12/3/2019							0.00088 (J)
12/4/2019			<0.003		<0.003	<0.003	
3/3/2020	<0.003						
3/4/2020		<0.003	<0.003	<0.003			
3/5/2020					<0.003	0.0014 (J)	0.0016 (J)
8/18/2020	<0.003						
8/19/2020		<0.003	<0.003	<0.003	<0.003	<0.003	
8/20/2020							0.0031
9/15/2020	<0.003	<0.003		<0.003			
9/16/2020			<0.003		<0.003	<0.003	0.0012 (J)
3/1/2021	<0.003						
3/2/2021		<0.003					0.0014 (J)
3/3/2021			<0.003	<0.003	<0.003		
3/4/2021						<0.003	
9/22/2021	<0.003						
9/23/2021							<0.003
9/28/2021		<0.003	<0.003	<0.003	<0.003	<0.003	
2/1/2022	<0.003						

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		<0.003			0.0013 (J)	<0.003	<0.003
2/3/2022				<0.003			
2/4/2022			<0.003				
8/23/2022	<0.003	<0.003					
8/24/2022				<0.003	<0.003		
8/25/2022			<0.003			<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.003						
3/15/2018		<0.003					
5/1/2018	<0.003 (D)	<0.003					
6/27/2018	<0.003						
6/28/2018		<0.003					
8/1/2018	<0.003	<0.003					
8/10/2018			<0.003				
8/23/2018	<0.003		0.00085 (J)				
9/19/2018	<0.003		<0.003				
10/29/2018	<0.003	<0.003	<0.003				
11/28/2018	<0.003	<0.003	<0.003				
12/19/2018	<0.003	<0.003					
12/20/2018			<0.003				
1/16/2019		<0.003					
1/17/2019			<0.003				
1/18/2019							<0.003
1/19/2019						<0.003	
2/13/2019			<0.003				
8/28/2019	<0.003						
8/29/2019		0.00052 (J)	<0.003				
10/16/2019	<0.003	<0.003	<0.003				
10/18/2019						<0.003	<0.003
3/4/2020	<0.003	<0.003	0.00043 (J)				
8/20/2020	<0.003	<0.003	<0.003			0.0017 (J)	<0.003
9/16/2020	0.00035 (J)						
9/17/2020		0.00041 (J)	<0.003			<0.003	0.00043 (J)
3/2/2021	<0.003						
3/3/2021					0.0013 (J)		0.0018 (J)
3/4/2021		0.00092 (J)	0.00091 (J)			0.00079 (J)	
3/5/2021				0.00056 (J)			
9/23/2021	<0.003						
9/27/2021		<0.003				0.0012 (J)	<0.003
9/28/2021			<0.003	<0.003	<0.003		
2/2/2022	<0.003		<0.003			<0.003	<0.003
2/3/2022		<0.003		<0.003	<0.003		
8/23/2022	<0.003						
8/24/2022		<0.003			<0.003	<0.003	<0.003
8/25/2022			<0.003	<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				<0.003			
9/28/2021	<0.003	<0.003	<0.003				
2/2/2022				<0.003			
2/3/2022		<0.003	<0.003		<0.003		
2/4/2022	<0.003					<0.003	<0.003
8/24/2022		<0.003	<0.003	<0.003			
8/25/2022	<0.003				<0.003	<0.003	<0.003

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.005						
9/6/2016					<0.005		
9/8/2016		<0.005	<0.005	<0.005		<0.005	
11/15/2016	<0.005						
11/17/2016		<0.005					
11/18/2016			<0.005				
11/21/2016				0.0019 (J)	<0.005	<0.005	
2/20/2017	<0.005						
2/21/2017		<0.005	<0.005				
2/22/2017				<0.005	<0.005	<0.005	
6/12/2017	<0.005						
6/13/2017		0.0006 (J)	0.0009 (J)				
6/14/2017				0.002 (J)	<0.005	<0.005	
9/26/2017	0.0007 (J)						
9/27/2017		<0.005	0.0007 (J)	0.0016 (J)	<0.005	<0.005	
2/13/2018	<0.005						
2/14/2018		<0.005	<0.005	<0.005	<0.005	<0.005	
3/6/2018							<0.005 (X)
5/1/2018							0.0021 (J)
6/26/2018	<0.005	0.00072 (J)					
6/27/2018			<0.005	<0.005		<0.005	
6/28/2018					<0.005 (X)		<0.005 (X)
7/31/2018							<0.005
8/23/2018							0.00075 (J)
9/19/2018							<0.005
10/29/2018							<0.005
11/28/2018							0.00096 (J)
12/18/2018	<0.005 (X)	0.00091 (J)		<0.005	<0.005		
12/19/2018						<0.005	
12/20/2018			<0.005				<0.005
8/27/2019	<0.005	<0.005			<0.005	<0.005	
8/28/2019			0.0014 (J)	0.00051 (J)			0.00058 (J)
10/15/2019	<0.005	0.00052 (J)					
10/16/2019				0.00065 (J)			
12/3/2019							0.0007 (J)
12/4/2019			0.0011 (J)		0.00056 (J)	0.00053 (J)	
3/3/2020	0.0018 (J)						
3/4/2020		<0.005	<0.005	0.00044 (J)			
3/5/2020					<0.005	<0.005	<0.005
8/18/2020	<0.005						
8/19/2020		<0.005	<0.005	<0.005	<0.005	<0.005	
8/20/2020							<0.005
9/15/2020	<0.005	<0.005		<0.005			
9/16/2020			<0.005		<0.005	<0.005	<0.005
3/1/2021	<0.005						
3/2/2021		<0.005					<0.005
3/3/2021			<0.005	0.0015 (J)	<0.005		
3/4/2021						<0.005	
9/22/2021	<0.005						
9/23/2021							<0.005
9/28/2021		<0.005	<0.005	<0.005	<0.005	<0.005	
2/1/2022	<0.005						

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		<0.005			<0.005	<0.005	<0.005
2/3/2022				<0.005			
2/4/2022			<0.005				
8/23/2022	<0.005	<0.005					
8/24/2022				<0.005	0.00283 (J)		
8/25/2022			<0.005			<0.005	<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.005 (X)						
3/15/2018		0.0014 (J)					
5/1/2018	0.0018 (JD)	<0.005					
6/27/2018	0.0016 (J)						
6/28/2018		<0.005					
8/1/2018	0.0028 (J)	0.00074 (J)					
8/10/2018			<0.005				
8/23/2018	<0.005		<0.005				
9/19/2018	<0.005		0.0013 (J)				
10/29/2018	0.0012 (J)	<0.005	0.0038 (J)				
11/28/2018	0.0019 (J)	<0.005	0.0016 (J)				
12/19/2018	0.00075 (J)	<0.005					
12/20/2018			0.0032 (J)				
1/16/2019		<0.005					
1/17/2019			0.0032 (J)				
1/18/2019							<0.005
1/19/2019						<0.005	
2/13/2019			<0.005				
8/28/2019	0.0018 (J)						
8/29/2019		<0.005	0.00067 (J)				
10/16/2019	<0.005	<0.005	0.0026 (J)				
10/18/2019						<0.005	<0.005
3/4/2020	0.00049 (J)	0.00046 (J)	0.0047 (J)				
8/20/2020	0.00089 (J)	<0.005	0.0031 (J)			<0.005	<0.005
9/16/2020	<0.005						
9/17/2020		<0.005	<0.005			<0.005	<0.005
3/2/2021	<0.005						
3/3/2021					0.0014 (J)		<0.005
3/4/2021		<0.005	0.003 (J)			<0.005	
3/5/2021				0.00087 (J)			
9/23/2021	0.002 (J)						
9/27/2021		<0.005				<0.005	<0.005
9/28/2021			<0.005	<0.005	<0.005		
2/2/2022	0.0056		<0.005			<0.005	0.002 (J)
2/3/2022		<0.005		0.0012 (J)	0.0015 (J)		
8/23/2022	0.00228 (J)						
8/24/2022		0.0025 (J)			0.00308 (J)	0.00222 (J)	<0.005
8/25/2022			<0.005	0.00235 (J)			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.0023 (J)			
9/28/2021	<0.005	<0.005	<0.005				
2/2/2022				<0.005			
2/3/2022		<0.005	<0.005		0.017		
2/4/2022	<0.005					<0.005	<0.005
8/24/2022		0.00245 (J)	0.00358 (J)	0.00295 (J)			
8/25/2022	<0.005				0.0221	<0.005	<0.005

Time Series

Constituent: Barium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.0239	0.0099 (J)	0.0273	0.0495
9/1/2016	0.0454	0.0528					
9/6/2016			0.0624				
11/15/2016							0.0512
11/16/2016	0.0623	0.0509		0.0147	0.0102	0.0365	
11/17/2016			0.109				
2/20/2017						0.0336	0.0586
2/21/2017	0.0644	0.0531	0.095	0.0109	0.0094 (J)		
6/12/2017				0.0094 (J)		0.0322	0.0567
6/13/2017		0.0543	0.0861		0.0094 (J)		
6/14/2017	0.0726						
9/26/2017	0.0765	0.0547	0.104	0.0156	0.0096 (J)	0.0364	0.0586
2/13/2018				0.0134	0.0102	0.054	0.054
2/14/2018	0.0786	0.0603	0.129				
6/26/2018	0.063	0.059	0.13	0.014	0.0093 (J)	0.032	0.063
12/18/2018	0.067	0.056	0.13	0.0076 (J)	0.01	0.038	0.045
8/27/2019	0.058	0.057		0.012	0.0095 (J)	0.028	0.056
8/29/2019			0.076				
10/15/2019	0.06	0.053	0.069	0.013	0.0091 (J)	0.032	0.049
3/3/2020	0.076	0.06		0.017	0.011	0.028	0.051
3/4/2020			0.087				
8/18/2020	0.053	0.058	0.067	0.01 (J)	0.01	0.022	0.04
9/15/2020	0.059	0.058	0.086	0.0083 (J)	0.0094 (J)	0.022	0.038
3/1/2021				0.0074			
3/2/2021	0.053	0.063	0.097		0.0094	0.023	0.037
9/21/2021	0.074	0.06				0.025	0.038
9/22/2021			0.07	0.0075	0.0097		
2/1/2022	0.057	0.064	0.08	0.0066	0.01	0.028	0.04
8/23/2022	0.0602	0.0607	0.0573	0.00954	0.012	0.0241	0.0379

Time Series

Constituent: Barium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	0.0142						
9/6/2016					0.0206		
9/8/2016		0.0378	0.0184	0.0199		0.0593	
11/15/2016	0.0126						
11/17/2016		0.0448					
11/18/2016			0.0173				
11/21/2016				0.0221 (J)	0.0237 (J)	0.0532 (BR)	
2/20/2017	0.0142						
2/21/2017		0.0447	0.015				
2/22/2017				0.0179	0.0219	0.0498	
6/12/2017	0.0134						
6/13/2017		0.0351	0.0143				
6/14/2017				0.0157	0.0197	0.0421	
9/26/2017	0.0133						
9/27/2017		0.0383	0.017	0.0165	0.0213	0.0411	
2/13/2018	0.0145						
2/14/2018		0.0327	0.0166	0.0163	0.0236	0.0417	
3/6/2018							0.1
5/1/2018							0.084
6/26/2018	0.014	0.031					
6/27/2018			0.015	0.017		0.038	
6/28/2018					0.023		0.067
7/31/2018							0.087 (J+X)
8/23/2018							0.084
9/19/2018							0.086
10/29/2018							0.098 (J+X)
11/28/2018							0.11
12/18/2018	0.013	0.03		0.017	0.029		
12/19/2018						0.036	
12/20/2018			0.015				0.093
8/27/2019	0.013	0.027			0.027	0.032	
8/28/2019			0.019	0.02			0.11
10/15/2019	0.013	0.027					
10/16/2019				0.019			
12/3/2019							0.099
12/4/2019			0.016		0.021	0.028	
3/3/2020	0.019						
3/4/2020		0.026	0.015	0.018			
3/5/2020					0.025	0.026	0.078
8/18/2020	0.014						
8/19/2020		0.027	0.016	0.019	0.026	0.025	
8/20/2020							0.083
9/15/2020	0.013	0.024		0.017			
9/16/2020			0.016		0.022	0.024	0.085
3/1/2021	0.016						
3/2/2021		0.026					0.061
3/3/2021			0.016	0.021	0.028		
3/4/2021						0.024	
9/22/2021	0.014						
9/23/2021							0.064
9/28/2021		0.023	0.013	0.017	0.035	0.02	
2/1/2022	0.014						

Time Series

Constituent: Barium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		0.023			0.031	0.023	0.063
2/3/2022				0.016			
2/4/2022			0.015				
8/23/2022	0.014	0.0259					
8/24/2022				0.0175	0.0389		
8/25/2022			0.0161			0.0231	0.0574

Time Series

Constituent: Barium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	0.0519						
3/15/2018		0.021					
5/1/2018	0.057 (D)	0.024					
6/27/2018	0.046						
6/28/2018		0.021					
8/1/2018	0.043 (J+X)	0.02 (J+X)					
8/10/2018			0.038				
8/23/2018	0.038		0.03 (JX)				
9/19/2018	0.036		0.03				
10/29/2018	0.041 (J+X)	0.019 (J+X)	0.025 (J+X)				
11/28/2018	0.039	0.02	0.017				
12/19/2018	0.04	0.02					
12/20/2018			0.013				
1/16/2019		0.02					
1/17/2019			0.017				
1/18/2019							0.031
1/19/2019						0.017	
2/13/2019			0.025				
8/28/2019	0.035						
8/29/2019		0.018	0.017				
10/16/2019	0.032	0.017	0.015				
10/18/2019						0.014	0.032
3/4/2020	0.038	0.019	0.022				
8/20/2020	0.035	0.019	0.017			0.013	0.03
9/16/2020	0.028						
9/17/2020		0.02	0.02			0.015	0.033
3/2/2021	0.036						
3/3/2021					0.08		0.037
3/4/2021		0.025	0.019			0.016	
3/5/2021				0.043			
9/23/2021	0.031						
9/27/2021		0.017				0.014	0.025
9/28/2021			0.013	0.034	0.057		
2/2/2022	0.028		0.013			0.015	0.027
2/3/2022		0.016		0.033	0.057		
8/23/2022	0.0285						
8/24/2022		0.0166			0.0584	0.0154	0.0223
8/25/2022			0.0179	0.0257			

Time Series

Constituent: Barium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.029			
9/28/2021	0.022	0.017	0.022				
2/2/2022				0.015			
2/3/2022		0.016	0.021		0.013		
2/4/2022	0.024					0.037	0.058
8/24/2022		0.0181	0.0226	0.0133			
8/25/2022	0.0219				0.0121 (J)	0.023	0.0259

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.0005						
9/6/2016					<0.0005		
9/8/2016		<0.0005	0.0002 (J)	0.0011 (J)		<0.0005	
11/15/2016	<0.0005						
11/17/2016		<0.0005					
11/18/2016			0.0002 (J)				
11/21/2016				0.0012 (J)	<0.0005	<0.0005	
2/20/2017	<0.0005						
2/21/2017		<0.0005	0.0002 (J)				
2/22/2017				0.0014 (J)	<0.0005	<0.0005	
6/12/2017	<0.0005						
6/13/2017		<0.0005	0.0002 (J)				
6/14/2017				0.0012 (J)	<0.0005	<0.0005	
9/26/2017	<0.0005						
9/27/2017		<0.0005	0.0001 (J)	0.001 (J)	<0.0005	<0.0005	
2/13/2018	<0.0005						
2/14/2018		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
3/6/2018							<0.0005
5/1/2018							<0.0005
6/26/2018	<0.0005	<0.0005					
6/27/2018			0.00014 (J)	0.0008 (J)		<0.0005	
6/28/2018					<0.0005		<0.0005
7/31/2018							<0.0005
8/23/2018							7.9E-05 (J)
9/19/2018							<0.0005
10/29/2018							<0.0005
11/28/2018							<0.0005
12/18/2018	<0.0005	<0.0005		0.00071 (J)	<0.0005		
12/19/2018						<0.0005	
12/20/2018			<0.0005 (X)				<0.0005
8/27/2019	<0.0005	<0.0005			<0.0005	<0.0005	
8/28/2019			0.00012 (J)	0.0008 (J)			<0.0005
10/15/2019	<0.0005	<0.0005					
10/16/2019				0.00072 (J)			
10/17/2019			<0.0005		<0.0005	<0.0005	<0.0005
12/3/2019							<0.0005
12/4/2019			0.00012 (J)		<0.0005	<0.0005	
3/3/2020	<0.0005						
3/4/2020		<0.0005	0.00012 (J)	0.00073 (J)			
3/5/2020					<0.0005	<0.0005	<0.0005
8/18/2020	<0.0005						
8/19/2020		<0.0005	9.9E-05 (J)	0.00074 (J)	<0.0005	<0.0005	
8/20/2020							4.6E-05 (J)
9/15/2020	<0.0005	<0.0005		0.00071 (J)			
9/16/2020			0.00011 (J)		<0.0005	<0.0005	<0.0005
3/1/2021	<0.0005						
3/2/2021		<0.0005					<0.0005
3/3/2021			7.1E-05 (J)	0.00094	<0.0005		
3/4/2021						<0.0005	
9/22/2021	<0.0005						
9/23/2021							<0.0005
9/28/2021		<0.0005	<0.0005	0.00079	<0.0005	<0.0005	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/1/2022	<0.0005						
2/2/2022		<0.0005			<0.0005	<0.0005	<0.0005
2/3/2022				0.00083			
2/4/2022			5.4E-05 (J)				
8/23/2022	<0.0005	<0.0005					
8/24/2022				0.000845	<0.0005		
8/25/2022			<0.0005			<0.0005	<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.0005						
3/15/2018		<0.0005					
5/1/2018	<0.0005 (D)	<0.0005					
6/27/2018	<0.0005						
6/28/2018		0.003 (J)					
8/1/2018	<0.0005	0.0025 (J)					
8/10/2018			<0.0005				
8/23/2018	5.5E-05 (J)		<0.0005				
9/19/2018	<0.0005		<0.0005				
10/29/2018	<0.0005	0.0042	<0.0005				
11/28/2018	5.6E-05 (J)	0.0029 (J)	<0.0005				
12/19/2018	<0.0005 (X)	0.0043					
12/20/2018			<0.0005				
1/16/2019		0.0038					
1/17/2019			<0.0005				
1/18/2019							<0.0005
1/19/2019						6.4E-05 (J)	
2/13/2019			<0.0005				
8/28/2019	<0.0005						
8/29/2019		0.0029 (J)	<0.0005				
10/16/2019	<0.0005	0.0027 (J)	<0.0005				
10/18/2019						<0.0005	<0.0005
3/4/2020	<0.0005	0.0052	<0.0005				
8/20/2020	4.7E-05 (J)	0.0044	<0.0005			7.7E-05 (J)	<0.0005
9/16/2020	<0.0005						
9/17/2020		0.0065	<0.0005			9.6E-05 (J)	<0.0005
3/2/2021	<0.0005						
3/3/2021					<0.0005		<0.0005
3/4/2021		0.0059	<0.0005			9.7E-05 (J)	
3/5/2021				<0.0005			
9/23/2021	<0.0005						
9/27/2021		0.006				7.1E-05 (J)	<0.0005
9/28/2021			<0.0005	5.9E-05 (J)	<0.0005		
2/2/2022	<0.0005		<0.0005			7.1E-05 (J)	<0.0005
2/3/2022		0.0071		<0.0005	<0.0005		
8/23/2022	<0.0005						
8/24/2022		0.00831			<0.0005	<0.0005	<0.0005
8/25/2022			<0.0005	0.000269 (J)			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.0017			
9/28/2021	0.00031 (J)	0.025	0.065				
2/2/2022				0.0015			
2/3/2022		0.027	0.072		0.12		
2/4/2022	0.00054					<0.0005	<0.0005
8/24/2022		0.0335	0.0703	0.00198			
8/25/2022	0.000393 (J)				0.1	<0.0005	0.000219 (J)

Time Series

Constituent: Boron (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.0072 (J)	<0.015	<0.015	<0.015
9/1/2016	0.0093 (J)	<0.015					
9/6/2016			0.0362 (J)				
11/15/2016							0.0085 (J)
11/16/2016	0.0127 (J)	0.0081 (J)		0.0117 (J)	0.0109 (J)	0.0187 (J)	
11/17/2016			0.0617				
2/20/2017						0.0066 (J)	0.0093 (J)
2/21/2017	0.0071 (J)	<0.015	0.0245 (J)	0.0088 (J)	<0.015		
6/12/2017				0.0133 (J)		<0.015	<0.015
6/13/2017		<0.015	<0.015		<0.015		
6/14/2017	0.0078 (J)						
9/26/2017	<0.015	<0.015	<0.015	0.0093 (J)	<0.015	<0.015	<0.015
2/13/2018				0.0141 (J)	<0.015	<0.015	<0.015
2/14/2018	0.0068 (J)	<0.015	0.0314 (J)				
6/26/2018	0.008 (J)	<0.015	0.062	0.012 (J)	<0.015	0.0042 (J)	0.0056 (J)
12/18/2018	0.0083 (J)	0.0053 (J)	0.055	0.0086 (J)	<0.015	<0.015	0.0062 (J)
3/19/2019	0.008 (J)	<0.015	0.068	0.00565 (JD)	<0.015	<0.015	<0.015
10/15/2019	0.006 (J)	<0.015	0.022 (J)	0.0067 (J)	<0.015	<0.015	0.006 (J)
3/3/2020	0.01 (J)	0.0065 (J)		0.0082 (J)	<0.015	<0.015	<0.015
3/4/2020			0.044 (J)				
9/15/2020	0.0071 (J)	<0.015	0.033 (J)	<0.015	<0.015	<0.015	<0.015
3/1/2021				<0.015			
3/2/2021	0.0057 (J)	<0.015	0.042		<0.015	0.0053 (J)	0.0071 (J)
9/21/2021	<0.015	<0.015				<0.015	<0.015
9/22/2021			0.047	<0.015	<0.015		
2/1/2022	<0.015	<0.015	0.046	<0.015	<0.015	<0.015	<0.015
8/23/2022	0.00653 (J)	<0.015	0.0498	0.00592 (J)	0.00532 (J)	<0.015	0.00538 (J)

Time Series

Constituent: Boron (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.015						
9/6/2016					1.96		
9/8/2016		1.03	1.63	1.35		1.28	
11/15/2016	0.0123 (J)						
11/17/2016		1.7					
11/18/2016			1.91				
11/21/2016				1.74	1.68	1.19	
2/20/2017	0.0157 (J)						
2/21/2017		1.55	1.39				
2/22/2017				1.5	1.48	1.43	
6/12/2017	<0.015						
6/13/2017		1.77	1.62				
6/14/2017				1.6	1.71	1.57	
9/26/2017	<0.015						
9/27/2017		1.75	1.16	1.83	1.61	1.51	
2/13/2018	<0.015						
2/14/2018		1.47	1.17	1.8	1.47	1.6	
3/6/2018							0.0198 (J)
5/1/2018							0.015 (J)
6/26/2018	0.0041 (J)	1.8					
6/27/2018			1.4 (J+X)	1.8 (J+X)		1.5 (J+X)	
6/28/2018					1.4		<0.015 (X)
7/31/2018							0.035 (J)
8/23/2018							0.022 (J)
9/19/2018							0.021 (J)
10/29/2018							0.021 (J)
11/28/2018							<0.015 (X)
12/18/2018	<0.015	1.5		1.5	1.6		
12/19/2018						1.6	
12/20/2018			1.4				0.028 (J)
3/19/2019	<0.015		1.1				
3/20/2019		1.5 (D)		1.5	1.7	1.4	0.043
10/15/2019	0.01 (J)	1.2					
10/16/2019				1.2			
10/17/2019			0.97		1.7	1.5	0.064
12/3/2019							0.027 (J)
12/4/2019			0.89		1.6	1.6	
3/3/2020	<0.015						
3/4/2020		1.2	0.81	1.1			
3/5/2020					1.5	1.5	0.044 (J)
9/15/2020	<0.015	1.2		1.1			
9/16/2020			1.2		1.7	1.4	0.028 (J)
3/1/2021	<0.015						
3/2/2021		1.1					0.044
3/3/2021			0.91	1	1.4		
3/4/2021						1.1	
9/22/2021	<0.015						
9/23/2021							0.029 (J)
9/28/2021		1.1	0.95	0.9	1.7	0.91	
2/1/2022	<0.015						
2/2/2022		1.1			1.9	1	0.034 (J)
2/3/2022				0.93			

Time Series

Constituent: Boron (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/4/2022			1				
8/23/2022	<0.015	1.38					
8/24/2022				1.13	2.15		
8/25/2022			1.03			1.07	0.0458

Time Series

Constituent: Boron (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	0.428						
3/15/2018		0.32					
5/1/2018	0.435 (D)	0.32					
6/27/2018	0.49 (J+X)						
6/28/2018		0.34					
8/1/2018	0.39	0.28					
8/2/2018							0.016 (J)
8/3/2018						0.3	
8/10/2018			1.3				
8/23/2018	0.39		1.4				
9/19/2018	0.43		1.7				
10/29/2018	0.4	0.3	1.3				
11/28/2018	0.51	0.35	1.5				
12/19/2018	0.41	0.35					
12/20/2018			1.6				
1/16/2019		0.37					
1/17/2019			1.5				
1/18/2019							0.0057 (J)
1/19/2019						0.39	
2/13/2019			1.7				
3/19/2019	0.41						
3/20/2019		0.34	1.6 (D)				
10/16/2019	0.36	0.31	1.3				
10/18/2019						0.38	0.0057 (J)
3/4/2020	0.49	0.32	1.4				
9/16/2020	0.47						
9/17/2020		0.36	1.9			0.43	0.0063 (J)
10/27/2020				0.15	0.029 (J)	0.37	
3/2/2021	0.58						
3/3/2021					0.028 (J)		0.0096 (J)
3/4/2021		0.31	1.4			0.36	
3/5/2021				0.2			
9/23/2021	0.47						
9/27/2021		0.32				0.39	<0.015
9/28/2021			1.4	0.24	0.023 (J)		
2/2/2022	0.48		1.5			0.42	<0.015
2/3/2022		0.31		0.22	0.034 (J)		
8/23/2022	0.547						
8/24/2022		0.406			0.036	0.459	0.00563 (J)
8/25/2022			1.56	0.278			

Time Series

Constituent: Boron (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.26			
9/28/2021	0.48	0.36	0.23				
2/2/2022				0.32			
2/3/2022		0.38	0.25		0.055 (J)		
2/4/2022	0.51					0.67	0.5
8/24/2022		0.464	0.293	0.277			
8/25/2022	0.496				0.055	0.672	0.473

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.001						
9/6/2016					<0.001		
9/8/2016		<0.001	7E-05 (J)	<0.001		<0.001	
11/15/2016	<0.001						
11/17/2016		<0.001					
11/18/2016			9E-05 (J)				
11/21/2016				<0.001	8E-05 (J)	8E-05 (J)	
2/20/2017	<0.001						
2/21/2017		<0.001	<0.001				
2/22/2017				<0.001	<0.001	0.0001 (J)	
6/12/2017	<0.001						
6/13/2017		<0.001	<0.001				
6/14/2017				<0.001	<0.001	<0.001	
9/26/2017	<0.001						
9/27/2017		<0.001	<0.001	<0.001	<0.001	<0.001	
2/13/2018	<0.001						
2/14/2018		<0.001	<0.001	<0.001	<0.001	<0.001	
3/6/2018							<0.001
5/1/2018							<0.001
6/26/2018	<0.001	<0.001					
6/27/2018			<0.001	<0.001		0.00011 (J)	
6/28/2018					<0.001		<0.001
7/31/2018							<0.001
8/23/2018							<0.001
9/19/2018							<0.001
10/29/2018							9.8E-05 (J)
11/28/2018							<0.001
12/18/2018	<0.001	<0.001		<0.001	<0.001		
12/19/2018						<0.001 (X)	
12/20/2018			<0.001				<0.001 (X)
8/27/2019	<0.001	<0.001			<0.001	<0.001	
8/28/2019			<0.001	<0.001			<0.001
10/15/2019	<0.001	<0.001					
10/16/2019				<0.001			
10/17/2019			<0.001		<0.001	<0.001	<0.001
12/3/2019							0.00011 (J)
12/4/2019			<0.001		<0.001	<0.001	
3/3/2020	<0.001						
3/4/2020		<0.001	<0.001	<0.001			
3/5/2020					<0.001	<0.001	<0.001
8/18/2020	<0.001						
8/19/2020		<0.001	<0.001	<0.001	<0.001	<0.001	
8/20/2020							0.00014 (J)
9/15/2020	<0.001	<0.001		<0.001			
9/16/2020			<0.001		<0.001	<0.001	<0.001
3/1/2021	<0.001						
3/2/2021		<0.001					0.0002 (J)
3/3/2021			<0.001	<0.001	<0.001		
3/4/2021						<0.001	
9/22/2021	<0.001						
9/23/2021							<0.001
9/28/2021		<0.001	<0.001	<0.001	<0.001	<0.001	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/1/2022	<0.001						
2/2/2022		<0.001			0.00014 (J)	<0.001	<0.001
2/3/2022				<0.001			
2/4/2022			<0.001				
8/23/2022	<0.001	<0.001					
8/24/2022				<0.001	<0.001		
8/25/2022			<0.001			<0.001	<0.001

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.001						
3/15/2018		0.038					
5/1/2018	<0.001 (D)	0.011					
6/27/2018	0.00014 (J)						
6/28/2018		0.087					
8/1/2018	0.00011 (J)	0.042					
8/2/2018							<0.001
8/3/2018						0.0015	
8/10/2018			<0.001				
8/23/2018	0.00018 (J)		<0.001				
9/19/2018	0.00015 (J)		<0.001				
10/29/2018	0.00019 (J)	0.083	<0.001				
11/28/2018	0.00022 (J)	0.031	<0.001				
12/19/2018	<0.001	0.042					
12/20/2018			<0.001				
1/16/2019		0.028					
1/17/2019			<0.001				
1/18/2019							<0.001
1/19/2019						0.0016	
2/13/2019			<0.001				
8/28/2019	0.00017 (J)						
8/29/2019		0.0071	<0.001				
10/16/2019	0.00018 (J)	0.014	<0.001				
10/18/2019						0.00083 (J)	<0.001
3/4/2020	0.00024 (J)	0.013	<0.001				
8/20/2020	<0.001	0.0079	<0.001			0.0019 (J)	<0.001
9/16/2020	<0.001						
9/17/2020		0.021	<0.001			0.033	<0.001
10/27/2020				<0.001	<0.001	0.0051	
3/2/2021	<0.001						
3/3/2021					<0.001		<0.001
3/4/2021		0.019	<0.001			0.017	
3/5/2021				<0.001			
9/23/2021	<0.001						
9/27/2021		0.0095				0.0031	<0.001
9/28/2021			<0.001	<0.001	<0.001		
2/2/2022	0.00015 (J)		<0.001			0.0043	<0.001
2/3/2022		0.0085		<0.001	<0.001		
8/23/2022	<0.001						
8/24/2022		0.00818			<0.001	0.00478	<0.001
8/25/2022			<0.001	<0.001			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.00081			
9/28/2021	0.00064	0.0042	0.016				
2/2/2022				0.00014 (J)			
2/3/2022		0.0038	0.016		0.006		
2/4/2022	0.00072					<0.001	0.0004 (J)
8/24/2022		0.0046	0.017	0.000859 (J)			
8/25/2022	<0.001				0.00536	<0.001	0.000618 (J)

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				12.6	4.09	13.5	19.6
9/1/2016	8.98	4.61					
9/6/2016			12.8				
11/15/2016							21.7
11/16/2016	15.4	4.17		12.1	4.25	14.9	
11/17/2016			19.2				
2/20/2017						13.9	21.1
2/21/2017	17.4	5	15.1	11.4	4.02		
6/12/2017				9.34		13.7	21.5
6/13/2017		4.98	10.2		3.84		
6/14/2017	18.1						
9/26/2017	19.3	4.49	15	14.3	3.31	14.4	24
2/13/2018				<25	3.94	<25	<25
2/14/2018	<25	<25	<25				
6/26/2018	15.5 (J)	6.4	18.5 (J)	16 (J)	3.6	13.5 (J)	23.5 (J)
7/31/2018	18.2 (J)	6.1					
12/18/2018	18.7 (J)	5.5	16.8 (J)	14.5 (J)	3.8	16.4 (J)	19.8 (J)
3/19/2019	15.9 (J)	5.9	13.5 (J)	14.3 (JD)	3.9	12.3 (J)	21.4 (J)
10/15/2019	15.9	6.2	8.6	15.1	3.7	14.4	20
3/3/2020	19.4	6.8		20	4	14.9	23.2
3/4/2020			11.5				
9/15/2020	14.5	5.7	10.7	14.1	3.9	12.7	16.8
3/1/2021				15.4			
3/2/2021	11.7	5.4	11.6		4	13.2	16.8
9/21/2021	16.4	5.4				14.1	19.1
9/22/2021			9.2	15.9	4.3		
2/1/2022	14.2	5.3	10.7	14.4	4.4	14.5	19.1
8/23/2022	15.8	6.09	8.09	13.9	4.65	14.3	18.2

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	3.3						
9/6/2016					63.3		
9/8/2016		59.4	87.2	93.9		60.5	
11/15/2016	3.44						
11/17/2016		78.4					
11/18/2016			82.4				
11/21/2016				99.1	60.7	31.1	
2/20/2017	3.52						
2/21/2017		80.9	75.1				
2/22/2017				105	62.1	67.3	
6/12/2017	3.11						
6/13/2017		62	61				
6/14/2017				91.3	63.5	60.2	
9/26/2017	3.15						
9/27/2017		65.8	72.6	84	63.5	68.4	
2/13/2018	3.65						
2/14/2018		58.8	74.1	72.1	62.8	70.2	
3/6/2018							39.5
5/1/2018							45.5
6/26/2018	3.3	55.5					
6/27/2018			68.2	61.1		67.1	
6/28/2018					73.3		41.9
7/31/2018							41.5
8/23/2018							42.3
9/19/2018							41.9
10/29/2018							40.8
11/28/2018							45.1
12/18/2018	3.5	54.7		52.9	102		
12/19/2018						61.2	
12/20/2018			63.9				39
3/19/2019	3.6		60.2				
3/20/2019		53.95 (D)		55.4	141	52.8	31.2
10/15/2019	3.5	48.3					
10/16/2019				54			
12/3/2019							43.7
12/4/2019			76.8		92.6	52.7	
3/3/2020	5						
3/4/2020		52	72.3	59.3			
3/5/2020					119	52.1	37.9
9/15/2020	3.7	40.1		55.1			
9/16/2020			62.5		106	43.1	39.7
3/1/2021	4.2						
3/2/2021		44.1					33.9
3/3/2021			58.2	73.3	122		
3/4/2021						35.7	
9/22/2021	4.1						
9/23/2021							32
9/28/2021		38.4	50.4	59.5	212	33.9	
2/1/2022	4.2						
2/2/2022		44.3			232	44.2	33.8
2/3/2022				58.7			
2/4/2022			61.7				

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
8/23/2022	3.97	51.5					
8/24/2022				61	316		
8/25/2022			64			48.5	33.5

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	326						
3/15/2018		233					
5/1/2018	302 (D)	225					
6/27/2018	340						
6/28/2018		242					
8/1/2018	358	246					
8/10/2018			410 (O)				
8/23/2018	323		33.9				
9/19/2018	321		42.3				
10/29/2018	326	236	39.8				
11/28/2018	354	254	38.2				
12/19/2018	330	252					
12/20/2018			43.2				
1/16/2019		248					
1/17/2019			39.4				
1/18/2019							9.1
1/19/2019						196	
2/13/2019			36.9				
3/19/2019	335						
3/20/2019		222	40.85 (D)				
10/16/2019	338	241	48.4				
10/18/2019						177	7.1
3/4/2020	353	245	49.5				
9/16/2020	309						
9/17/2020		206	35.4			168	7.7
10/27/2020				159	132	183	
3/2/2021	353						
3/3/2021					119		7.9
3/4/2021		214	47.5			182	
3/5/2021				207			
9/23/2021	336						
9/27/2021		196				187	7.5
9/28/2021			39.5	225	113		
2/2/2022	320		40.1			187	7.8
2/3/2022		220		222	122		
8/23/2022	323						
8/24/2022		215			118	197	7.94
8/25/2022			38.3	210			

Time Series

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				230			
9/28/2021	51.1	108	274				
2/2/2022				215			
2/3/2022		120	279		213		
2/4/2022	67.6					42.2	102
8/24/2022		146	281	214			
8/25/2022	53				267	45.1	104

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				2.3	2	4.4	3.6
9/1/2016	3.3	3.5					
9/6/2016			5.8				
11/15/2016							4
11/16/2016	3.6	3.6		2	1.8	4.4	
11/17/2016			4.3				
2/20/2017						4.8	3.9
2/21/2017	3.2	3.2	3.5	2	1.8		
6/12/2017				2.1		4.2	3.8
6/13/2017		3.3	3.2		1.7		
6/14/2017	3.1						
9/26/2017	3.3	3.3	3.5	2	1.8	4.4	4.1
2/13/2018				2.1	1.7	4.7	4.1
2/14/2018	3.1	3.5	3.8				
6/26/2018	3.4	3.4	3.8	2.4	2.2	4.5	4.1
7/31/2018	2.6	2.9					
12/18/2018	2.8	2.9	3.9	1.8	1.9	4.5	3.8
3/19/2019	3.2	3.5	3.8	2.45 (D)	2	4.5	4.2
10/15/2019	3.1	3.4	3.5	2.2	1.9	4.2	3.7
3/3/2020	2.6	3.2		1.9	1.9	3.9	3.6
3/4/2020			3.3				
9/15/2020	2.4	3.5	3.1	1.9	1.7	3.7	3.7
3/1/2021				1.8			
3/2/2021	2.6	3.7	3.5		1.7	3.8	3.7
9/21/2021	2.1	3.5				3.2	3.2
9/22/2021			2.8	1.7	1.5		
2/1/2022	2.2	3.6	3.2	1.8	1.6	3.5	3.4
8/23/2022	2.5	5.46	3.16	2.02	2.18	3.64	3.59

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	2.5						
9/6/2016					6.7		
9/8/2016		5.5	6	6.4		6.8	
11/15/2016	2.3						
11/17/2016		7.7					
11/18/2016			6.3				
11/21/2016				6.9	6.5	7.8	
2/20/2017	2.4						
2/21/2017		7.3	5.1				
2/22/2017				6.2	5.6	7	
6/12/2017	2.2						
6/13/2017		7.5	4.7				
6/14/2017				7.2	5.7	7.1	
9/26/2017	2.3						
9/27/2017		7.9	4.9	8.7	6	7.2	
2/13/2018	2.3						
2/14/2018		6.7	5.6	7.2	5.9	7.4	
3/6/2018							56.6
5/1/2018							58.5
6/26/2018	2.6	6.7					
6/27/2018			5.9	6.3		7.1	
6/28/2018					7 (J-X)		50.2 (J-X)
7/31/2018							59
8/23/2018							54
9/19/2018							58.4
10/29/2018							62.6
11/28/2018							58.1
12/18/2018	2.3	6.2		5.4	5.8		
12/19/2018						7 (J-X)	
12/20/2018			5.6 (J-X)				47.2 (J-X)
3/19/2019	2.6		5.8				
3/20/2019		6.3 (D)		5.6	5.8	7.3	27.7
10/15/2019	2.4	5					
10/16/2019				6.9			
12/3/2019							52.8
12/4/2019			5.6		5	6.6	
3/3/2020	2.9						
3/4/2020		5	5.1	5.8			
3/5/2020					4.3	6	37.1
9/15/2020	2.3	4.9		5.5			
9/16/2020			5.4		4.4	5.6	54.9
3/1/2021	2.1						
3/2/2021		4.5					25.8
3/3/2021			4.5	5.6	4		
3/4/2021						4.6	
9/22/2021	2.1						
9/23/2021							29.3
9/28/2021		4.2	3.7	5.4	3.4	3.6	
2/1/2022	2.1						
2/2/2022		4.2			4	3.8	23.4
2/3/2022				6.1			
2/4/2022			4.6				

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
8/23/2022	2.39	5.38					
8/24/2022				5.84	4.91		
8/25/2022			4.65			3.96	14.9

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	8.4						
3/15/2018		23.3					
5/1/2018	5.7 (JXD)	23.4					
6/27/2018	4.4						
6/28/2018		24 (J-X)					
8/1/2018	5.2	25.7					
8/10/2018			6.9				
8/23/2018	3.6		7.5				
9/19/2018	4.1		6.6				
10/29/2018	4.3	24.9	7.8				
11/28/2018	5.1	24	7.2				
12/19/2018	4.5 (J-X)	23.3 (J-X)					
12/20/2018			6.6 (J-X)				
1/16/2019		24.1					
1/17/2019			6.4				
1/18/2019							4.6
1/19/2019						11.6	
2/13/2019			6.5				
3/19/2019	4.7						
3/20/2019		23.5	6.7 (D)				
10/16/2019	4.6	21.9	7				
10/18/2019						10.9	4.7
3/4/2020	4.2	21.6	6.1				
9/16/2020	4.1						
9/17/2020		20.1	6.3			10.5	4.6
10/27/2020				5.6	6.3	11	
3/2/2021	4.8						
3/3/2021					18.9		4.5
3/4/2021		18.9	5.6			12.2	
3/5/2021				8			
9/23/2021	4.3						
9/27/2021		16.2				9.4	3.8
9/28/2021			5.5	13	12.8		
2/2/2022	4.2		6.1			9.7	4.2
2/3/2022		17.4		12.5	15.2		
8/23/2022	4.49						
8/24/2022		15.8			17.5	9.64	4.58
8/25/2022			6.27	26.2			

Time Series

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				20			
9/28/2021	5.9	9.6	27.2				
2/2/2022				19.2			
2/3/2022		11.9	30.7		36.5		
2/4/2022	7.2					6.2	9.8
8/24/2022		10.7	26.7	19.2			
8/25/2022	8.41				53	6.15	9.97

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.001 (J)	0.0034 (J)	0.0058 (J)	0.0028 (J)
9/1/2016	0.0009 (J)	0.0013 (J)					
9/6/2016			<0.01				
11/15/2016							0.003 (J)
11/16/2016	0.0015 (J)	0.0012 (J)		<0.01	0.0029 (J)	0.0051 (J)	
11/17/2016			<0.01				
2/20/2017						0.0049 (J)	0.0047 (J)
2/21/2017	0.001 (J)	0.0017 (J)	<0.01	<0.01	0.0036 (J)		
6/12/2017				0.0005 (J)		0.0052 (J)	0.0041 (J)
6/13/2017		0.0019 (J)	<0.01		0.0038 (J)		
6/14/2017	0.0012 (J)						
9/26/2017	0.0014 (J)	0.0018 (J)	<0.01	0.0005 (J)	0.0045 (J)	0.0039 (J)	0.0037 (J)
2/13/2018				<0.01	<0.01	<0.01	<0.01
2/14/2018	<0.01	<0.01	<0.01				
6/26/2018	<0.01	0.0022 (J)	<0.01	<0.01	0.008 (J)	0.0053 (J)	0.0043 (J)
12/18/2018	0.0016 (J)	0.0022 (J)	<0.01	<0.01	0.012	0.0032 (J)	0.0054 (J)
8/27/2019	0.0023 (J)	0.0024 (J)		0.0004 (J)	0.0083 (J)	0.0055 (J)	0.0043 (J)
8/29/2019			0.0016 (J)				
10/15/2019	0.0021 (J)	0.0023 (J)	0.0017 (J)	<0.01	0.0083 (J)	0.0047 (J)	0.0055 (J)
3/3/2020	0.0026 (J)	0.0028 (J)		0.00047 (J)	0.0098 (J)	0.0069 (J)	0.0057 (J)
3/4/2020			0.0019 (J)				
8/18/2020	0.0023 (J)	0.0029 (J)	0.0017 (J)	0.00096 (J)	0.0085 (J)	0.0069 (J)	0.005 (J)
9/15/2020	0.00096 (J)	0.0025 (J)	0.0019 (J)	<0.01	0.0082 (J)	0.0069 (J)	0.0048 (J)
3/1/2021				<0.01			
3/2/2021	0.002 (J)	0.0021 (J)	0.002 (J)		0.0074	0.0064	0.0044 (J)
9/21/2021	0.0023 (J)	0.0024 (J)				0.0064	0.0044 (J)
9/22/2021			0.0026 (J)	<0.01	0.0091		
2/1/2022	0.0027 (J)	0.0029 (J)	0.0028 (J)	0.0013 (J)	0.0092	0.0066	0.0052
8/23/2022	<0.01	<0.01	<0.01	<0.01	0.00908 (J)	0.00647 (J)	0.00435 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	0.0147						
9/6/2016					<0.01		
9/8/2016		<0.01	0.001 (J)	<0.01		<0.01	
11/15/2016	0.0154 (B)						
11/17/2016		<0.01					
11/18/2016			<0.01				
11/21/2016				<0.01	<0.01	<0.01	
2/20/2017	0.014						
2/21/2017		<0.01	<0.01				
2/22/2017				<0.01	<0.01	0.0012 (J)	
6/12/2017	0.016						
6/13/2017		<0.01	<0.01				
6/14/2017				<0.01	<0.01	0.0009 (J)	
9/26/2017	0.0144						
9/27/2017		<0.01	<0.01	<0.01	<0.01	0.0011 (J)	
2/13/2018	0.0144						
2/14/2018		<0.01	<0.01	<0.01	<0.01	<0.01	
3/6/2018							<0.01
5/1/2018							<0.01
6/26/2018	0.015	<0.01					
6/27/2018			<0.01	<0.01		<0.01	
6/28/2018					<0.01		<0.01
7/31/2018							<0.01
8/23/2018							<0.01
9/19/2018							<0.01
10/29/2018							<0.01
11/28/2018							<0.01
12/18/2018	0.015	<0.01		<0.01	<0.01		
12/19/2018						<0.01	
12/20/2018			0.003 (J)				<0.01
8/27/2019	0.015	0.0016 (J)			0.0051 (J)	0.0019 (J)	
8/28/2019			<0.01	<0.01			<0.01
10/15/2019	0.014	0.00098 (J)					
10/16/2019				<0.01			
12/3/2019							<0.01
12/4/2019			<0.01		<0.01	0.0014 (J)	
3/3/2020	0.011						
3/4/2020		<0.01	<0.01	0.02			
3/5/2020					<0.01	0.0014 (J)	0.00053 (J)
8/18/2020	0.015						
8/19/2020		<0.01	<0.01	<0.01	<0.01	0.0021 (J)	
8/20/2020							0.001 (J)
9/15/2020	0.014	<0.01		<0.01			
9/16/2020			<0.01		0.014	0.0025 (J)	0.0014 (J)
3/1/2021	0.011						
3/2/2021		<0.01					<0.01
3/3/2021			<0.01	<0.01	<0.01		
3/4/2021						0.002 (J)	
9/22/2021	0.014						
9/23/2021							<0.01
9/28/2021		<0.01	<0.01	<0.01	<0.01	0.0021 (J)	
2/1/2022	0.015						

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		<0.01			<0.01	0.0021 (J)	<0.01
2/3/2022				<0.01			
2/4/2022			<0.01				
8/23/2022	0.0143	<0.01					
8/24/2022				<0.01	<0.01		
8/25/2022			<0.01			<0.01	<0.01

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.01						
3/15/2018		<0.01					
5/1/2018	<0.01 (D)	<0.01					
6/27/2018	<0.01						
6/28/2018		0.0023 (J)					
8/1/2018	<0.01	0.0046 (J)					
8/10/2018			0.0017 (J)				
8/23/2018	<0.01		<0.01				
9/19/2018	<0.01		<0.01				
10/29/2018	<0.01	<0.01	<0.01				
11/28/2018	<0.01	<0.01	<0.01				
12/19/2018	0.0018 (J)	<0.01					
12/20/2018			<0.01				
1/16/2019		<0.01					
1/17/2019			<0.01				
1/18/2019							<0.01
1/19/2019						<0.01	
2/13/2019			<0.01				
8/28/2019	0.00092 (J)						
8/29/2019		<0.01	<0.01				
10/16/2019	<0.01	0.0005 (J)	<0.01				
10/18/2019						<0.01	0.00042 (J)
3/4/2020	0.00078 (J)	0.00071 (J)	<0.01				
8/20/2020	0.00064 (J)	0.00065 (J)	<0.01			<0.01	0.00063 (J)
9/16/2020	<0.01						
9/17/2020		0.00098 (J)	<0.01			0.00098 (J)	<0.01
3/2/2021	<0.01						
3/3/2021					<0.01		<0.01
3/4/2021		0.001 (J)	<0.01			0.0008 (J)	
3/5/2021				<0.01			
9/23/2021	<0.01						
9/27/2021		<0.01				<0.01	<0.01
9/28/2021			<0.01	<0.01	<0.01		
2/2/2022	<0.01		<0.01			<0.01	<0.01
2/3/2022		<0.01		<0.01	<0.01		
8/23/2022	<0.01						
8/24/2022		<0.01			<0.01	<0.01	<0.01
8/25/2022			<0.01	<0.01			

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.0077			
9/28/2021	<0.01	<0.01	<0.01				
2/2/2022				<0.01			
2/3/2022		<0.01	<0.01		0.0032 (J)		
2/4/2022	<0.01					<0.01	<0.01
8/24/2022		<0.01	<0.01	<0.01			
8/25/2022	<0.01				0.00324 (J)	<0.01	<0.01

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.0016 (J)	0.0034 (J)	0.0013 (J)	<0.001
9/1/2016	<0.001	<0.001					
9/6/2016			0.0028 (J)				
11/15/2016							<0.001
11/16/2016	<0.001	<0.001		0.0006 (J)	0.003 (J)	<0.01 (o)	
11/17/2016			0.0072 (J)				
2/20/2017						0.0012 (J)	0.0009 (J)
2/21/2017	<0.001	<0.001	0.0045 (J)	<0.001	0.0028 (J)		
6/12/2017				<0.001		0.0011 (J)	0.0006 (J)
6/13/2017		<0.001	0.0036 (J)		0.0025 (J)		
6/14/2017	<0.001						
9/26/2017	<0.001	<0.001	0.0037 (J)	<0.001	0.002 (J)	0.0016 (J)	0.0005 (J)
2/13/2018				<0.001	<0.001	<0.01 (o)	<0.001
2/14/2018	<0.001	<0.001	0.0135				
6/26/2018	<0.001	<0.001	0.0098 (J)	<0.001	0.0019 (J)	0.0009 (J)	0.00052 (J)
7/31/2018	<0.001	<0.001					
12/18/2018	<0.001	<0.001	0.0057 (J)	<0.001	0.0032 (J)	0.00062 (J)	<0.001
8/27/2019	<0.001	<0.001		<0.001	0.0012 (J)	0.00068 (J)	0.00042 (J)
8/29/2019			0.0015 (J)				
10/15/2019	<0.001	<0.001	0.0011 (J)	<0.001	0.00097 (J)	0.00083 (J)	<0.001
3/3/2020	<0.001	<0.001		<0.001	0.0015 (J)	0.00043 (J)	<0.001
3/4/2020			0.0012 (J)				
8/18/2020	<0.001	<0.001	0.00067 (J)	<0.001	0.0014 (J)	0.00048 (J)	<0.001
9/15/2020	<0.001	<0.001	0.00076 (J)	<0.001	0.001 (J)	0.0005 (J)	<0.001
3/1/2021				<0.001			
3/2/2021	<0.001	<0.001	<0.001		0.001 (J)	0.00053 (J)	<0.001
9/21/2021	<0.001	<0.001				0.00071 (J)	<0.001
9/22/2021			<0.001	0.0015 (J)	<0.001		
2/1/2022	<0.001	<0.001	0.00052 (J)	0.00079 (J)	0.0011 (J)	0.0007 (J)	<0.001
8/23/2022	<0.001	<0.001	0.000308 (J)	0.000767 (J)	0.000844 (J)	0.000553 (J)	<0.001

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.001						
9/6/2016					0.0006 (J)		
9/8/2016		0.0073 (J)	0.0149	0.0122		0.0025 (J)	
11/15/2016	<0.001						
11/17/2016		0.0086 (J)					
11/18/2016			0.0131				
11/21/2016				0.0122	<0.001	0.001 (J)	
2/20/2017	<0.001						
2/21/2017		0.0079 (J)	0.0099 (J)				
2/22/2017				0.0136	0.0016 (J)	<0.001	
6/12/2017	0.0003 (J)						
6/13/2017		0.0083 (J)	0.0094 (J)				
6/14/2017				0.0113	0.0015 (J)	<0.001	
9/26/2017	0.0003 (J)						
9/27/2017		0.0087 (J)	0.0095 (J)	0.0094 (J)	0.0007 (J)	<0.001	
2/13/2018	<0.001						
2/14/2018		<0.001	0.0112	<0.001	<0.001	<0.001	
3/6/2018							0.0162
5/1/2018							0.015
6/26/2018	<0.001	0.006 (J)					
6/27/2018			0.0093 (J)	0.0069 (J)		<0.001	
6/28/2018					0.00078 (J)		0.01
7/31/2018							0.0098 (J)
8/23/2018							0.0093 (J)
9/19/2018							0.0084 (J)
10/29/2018							0.0064 (J)
11/28/2018							0.0071 (J)
12/18/2018	<0.001	0.0055 (J)		0.0067 (J)	0.0011 (J)		
12/19/2018						<0.001	
12/20/2018			0.0081 (J)				0.069
8/27/2019	<0.001	0.0042 (J)			0.0014 (J)	<0.001	
8/28/2019			0.01	0.0061			0.011
10/15/2019	<0.001	0.0043 (J)					
10/16/2019				0.0058			
10/17/2019			0.011 (J)		<0.001	<0.001	0.0098 (J)
12/3/2019							0.0076
12/4/2019			0.0086		0.0012 (J)	<0.001	
3/3/2020	0.0011 (J)						
3/4/2020		0.0039 (J)	0.008	0.007			
3/5/2020					0.0011 (J)	<0.001	0.0091
8/18/2020	0.00061 (J)						
8/19/2020		0.0039 (J)	0.0078	0.0065	0.0008 (J)	<0.001	
8/20/2020							0.022
9/15/2020	<0.001	0.0035 (J)		0.0064			
9/16/2020			0.008		0.0008 (J)	<0.001	0.0049 (J)
3/1/2021	<0.001						
3/2/2021		0.003 (J)					0.0057
3/3/2021			0.0062	0.0095	0.0015 (J)		
3/4/2021						<0.001	
9/22/2021	0.00078 (J)						
9/23/2021							0.0049 (J)
9/28/2021		0.0029 (J)	0.0047 (J)	0.0069	0.001 (J)	<0.001	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/1/2022	<0.001						
2/2/2022		0.0027 (J)			0.0012 (J)	<0.001	0.0054
2/3/2022				0.0077			
2/4/2022			0.0076				
8/23/2022	<0.001	0.00342					
8/24/2022				0.0066	0.00163		
8/25/2022			0.0079			<0.001	0.00357

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.001						
3/15/2018		1.3					
5/1/2018	0.0125 (D)	1.4					
6/27/2018	0.0076 (J)						
6/28/2018		1.3					
8/1/2018	0.004 (J)	1.4					
8/2/2018							0.0079 (J)
8/3/2018						0.041	
8/10/2018			0.0043 (J)				
8/23/2018	0.0016 (J)		0.0026 (J)				
9/19/2018	0.0018 (J)		0.0028 (J)				
10/29/2018	0.0014 (J)	1.4	0.0015 (J)				
11/28/2018	0.0016 (J)	1.4	0.0012 (J)				
12/19/2018	0.0014 (J)	1.5					
12/20/2018			<0.001				
1/16/2019		1.4					
1/17/2019			<0.001				
1/18/2019							0.0082 (J)
1/19/2019						0.018	
2/13/2019			<0.001				
8/28/2019	0.00037 (J)						
8/29/2019		1.3	0.00063 (J)				
10/16/2019	0.00032 (J)	1.4	<0.001				
10/18/2019						0.017	0.0063
3/4/2020	0.0011 (J)	1.5	<0.001				
8/20/2020	0.00043 (J)	1.4	<0.001			0.02	0.0039 (J)
9/16/2020	0.00053 (J)						
9/17/2020		1.4	0.00046 (J)			0.022	0.0062
10/27/2020				0.0037 (J)	0.00041 (J)	0.02	
3/2/2021	0.0005 (J)						
3/3/2021					0.0004 (J)		0.005
3/4/2021		1.4	<0.001			0.019	
3/5/2021				0.0038 (J)			
9/23/2021	<0.001						
9/27/2021		1.3				0.02	0.0022 (J)
9/28/2021			<0.001	0.2	<0.001		
2/2/2022	<0.001		<0.001			0.023	0.0028 (J)
2/3/2022		1.5		0.1	<0.001		
8/23/2022	<0.001						
8/24/2022		1.42			0.000306 (J)	0.0239	0.00193
8/25/2022			<0.001	0.506			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.45			
9/28/2021	0.055	0.39	3.5				
2/2/2022				0.51			
2/3/2022		0.43	3.4		1.6		
2/4/2022	0.094					0.019	0.27
8/24/2022		0.503	3.57	0.562			
8/25/2022	0.0194				1.46	0.0232	0.37

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.351 (U)	1 (U)	0.62 (U)	0.603 (U)
9/1/2016	0.428 (U)	0.566 (U)					
9/6/2016			0.585 (U)				
11/15/2016							0.645 (U)
11/16/2016	0.799 (U)	0.863 (U)		0.824 (U)	0.43 (U)	0.493 (U)	
11/17/2016			0.804 (U)				
2/20/2017						0.534 (U)	1.36
2/21/2017	1.75 (U)	0.318 (U)	0.595 (U)	1.01 (U)	0.96 (U)		
6/12/2017				0.532 (U)		0.254 (U)	0.566 (U)
6/13/2017		0.163 (U)	0.618 (U)		0.645 (U)		
6/14/2017	2.66						
9/26/2017	0.841 (U)	0.56 (U)	1.26 (U)	0.845 (U)	0.299 (U)	0.62 (U)	0.762 (U)
2/13/2018				0.176 (U)	1.01 (U)	0.0914 (U)	0.349 (U)
2/14/2018	1.13 (UX)	0.537 (U)	1.2 (U)				
6/26/2018	1.42 (J+X)	1.31 (UX)	1.34 (U)	1.02 (U)	1.26 (J+X)	1.11 (U)	0.614 (U)
12/18/2018	0.855 (U)	1.31 (J+X)	1.13 (U)	0.487 (U)	0.44 (U)	0.42 (U)	0.445 (U)
8/27/2019	1.31	1.32		1.11	1.47	1.19	1.44
8/29/2019			1.45 (U)				
10/15/2019	1.13 (U)	1.05 (U)	1.69	1.02 (U)	0.807 (U)	0.714 (U)	0.467 (U)
3/3/2020	1.29 (U)	1.68		1.18 (U)	0.818 (U)	0.996 (U)	1.5
3/4/2020			1.45				
8/18/2020	0.988 (U)	0.969 (U)	0.784 (U)	0.0861 (U)	1.22 (U)	0.53 (U)	0.581 (U)
9/15/2020	0.762 (U)	0.359 (U)	1.04 (U)	0.0583 (U)	0.579 (U)	0.215 (U)	0.55 (U)
3/1/2021				0.127 (U)			
3/2/2021	0.901	0.925	1.12		0.342 (U)	0.409 (U)	0.362 (U)
9/21/2021	1.33	0.468 (U)				0.182 (U)	0.86 (U)
9/22/2021			1.4	0.349 (U)	1.33 (U)		
2/1/2022	0.833 (U)	0.659 (U)	1.15	0.233 (U)	0.251 (U)	1.23	0.23 (U)
8/23/2022	0.558	1.69	1.59	1.7	0.531	2.3	0.735

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	1.33						
9/6/2016					1.01 (U)		
9/8/2016		0.862 (U)	1.74	1.13		0.706 (U)	
11/15/2016	0.412 (U)						
11/17/2016		1.2 (U)					
11/18/2016			0.571 (U)				
11/21/2016				1.59	0.201 (U)	0.0569 (U)	
2/20/2017	0.633 (U)						
2/21/2017		1.31	1.28 (U)				
2/22/2017				1.64	0.57 (U)	1.07 (U)	
6/12/2017	0.112 (U)						
6/13/2017		0.738 (U)	0.521 (U)				
6/14/2017				1.32	0.726 (U)	0.459 (U)	
9/26/2017	0.167 (U)						
9/27/2017		0.583 (U)	0.595 (U)	1.7	0.884 (U)	0.807 (U)	
2/13/2018	0.347 (U)						
2/14/2018		1.41 (J+X)	1.18 (U)	1.89 (J+X)	1.14 (U)	1.67 (J+X)	
3/6/2018							1.25 (U)
5/1/2018							0.423 (U)
6/26/2018	0.903 (U)	0.968 (U)					
6/27/2018			1.3 (U)	1.66 (J+X)		1.34 (UX)	
6/28/2018					1.4 (UX)		0.283 (U)
7/31/2018							0.243 (U)
8/23/2018							1.1 (U)
9/19/2018							0.369 (U)
10/29/2018							0.401 (U)
11/28/2018							0.901 (U)
12/18/2018	0.353 (U)	1.13 (U)		0.759 (U)	0.661 (U)		
12/19/2018						1.21 (U)	
12/20/2018			0.527 (U)				0.657 (U)
8/27/2019	0.65 (U)	0.91 (U)			1.35	0.86 (U)	
8/28/2019			0.643 (U)	1.76			0.528 (U)
10/15/2019	0.402 (U)	1.06 (U)					
10/16/2019				1.69 (U)			
10/17/2019			1.07 (U)		1.25 (U)	1.2 (U)	0.977 (U)
3/3/2020	0.397 (U)						
3/4/2020		1.34	1.18	1.23			
3/5/2020					1.35	0.483 (U)	0.921 (U)
8/18/2020	0.453 (U)						
8/19/2020		0.467 (U)	0.684 (U)	0.876 (U)	1 (U)	0.482 (U)	
8/20/2020							0.501 (U)
9/15/2020	0.474 (U)	0.205 (U)		1.23 (U)			
9/16/2020			0.175 (U)		0.43 (U)	0.195 (U)	0.254 (U)
3/1/2021	0.215 (U)						
3/2/2021		0.161 (U)					0.107 (U)
3/3/2021			0.829 (U)	1.31 (U)	0.415 (U)		
3/4/2021						0.32 (U)	
9/22/2021	0.943 (U)						
9/23/2021							0.619 (U)
9/28/2021		4.44	3.58	1.49	0.749 (U)	0.947 (U)	
2/1/2022	0.349 (U)						
2/2/2022		0.64 (U)			1.21 (U)	0.0265 (U)	0.219 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/3/2022				0.798 (U)			
2/4/2022			0.335 (U)				
8/23/2022	0.203	1.9					
8/24/2022				1.97	3.26		
8/25/2022			1.79			1.32	1.65

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	1.75 (J+X)						
3/15/2018		1.31					
5/1/2018	2.02 (J+XD)	1.69 (J+X)					
6/27/2018	0.878 (U)						
6/28/2018		1.04 (U)					
8/1/2018	0.638 (U)	1.67					
8/10/2018			1.91				
8/23/2018	1.14 (U)		1.86 (J+X)				
9/19/2018	1.45 (UX)		1.64 (UX)				
10/29/2018	1.09 (U)	0.992 (U)	1.36 (U)				
11/28/2018	1.67 (UX)	1.76 (UX)	1.07 (U)				
12/19/2018	1.3	2.15 (J+X)					
12/20/2018			0.892 (U)				
1/16/2019		1.39					
1/17/2019			1.1 (U)				
1/18/2019							1.22
1/19/2019						1.86	
2/13/2019			1.68				
8/28/2019	0.804 (U)						
8/29/2019		1.33	1.44				
10/16/2019	1.28 (U)	2.51	2.13				
10/18/2019						11.7 (U)	17.1 (U)
3/4/2020	0.862 (U)	1.73	2.3				
8/20/2020	1.64	2.78	2.97			0.937 (U)	1.19
9/16/2020	0.51 (U)						
9/17/2020		0.717 (U)	2.04			1.76	0.952 (U)
3/2/2021	0.571 (U)						
3/3/2021					2.54		0.599 (U)
3/4/2021		1.22	2.04			0.966 (U)	
3/5/2021				2.11			
9/23/2021	0.527 (U)						
9/27/2021		2.07				0.771 (U)	0.00107 (U)
9/28/2021			3.28	1.05	1.89		
2/2/2022	0.145 (U)		2.33			0.992 (U)	0.0266 (U)
2/3/2022		1.15		1	2.23		
8/23/2022	3.74						
8/24/2022		1.87			3.33	0.625	1.2
8/25/2022			4.97	2.26			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				1.14 (U)			
9/28/2021	0.0352 (U)	1.66	2.79				
2/2/2022				1.16			
2/3/2022		1.33	2.46		0.766 (U)		
2/4/2022	0.229 (U)					0.768	0.874
8/24/2022		1.16	3.5	2.91			
8/25/2022	0.773				1.02	1.52	1.88

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.11 (J)	0.05 (J)	0.07 (J)	0.19 (J)
9/1/2016	0.2 (J)	0.05 (J)					
9/6/2016			0.42				
11/15/2016							0.13 (J)
11/16/2016	0.14 (J)	0.03 (J)		0.08 (J)	0.07 (J)	0.07 (J)	
11/17/2016			0.15 (J)				
2/20/2017						0.06 (J)	0.08 (J)
2/21/2017	0.16 (J)	0.04 (J)	0.1 (J)	0.14 (J)	0.05 (J)		
6/12/2017				0.16 (J)		0.008 (J)	0.07 (J)
6/13/2017		0.008 (J)	0.07 (J)		0.04 (J)		
6/14/2017	0.09 (J)						
9/26/2017	0.1 (J)	<0.1	<0.1	0.14 (J)	<0.1	<0.1	0.04 (J)
2/13/2018				<0.1	<0.1	<0.1	<0.1
2/14/2018	<0.1	<0.1	<0.1				
6/26/2018	0.079 (J)	0.042 (J)	0.053 (J)	0.085 (J)	0.048 (J)	0.045 (J)	0.072 (J)
12/18/2018	<0.1	<0.1	<0.1	0.085 (J)	<0.1	<0.1	<0.1
3/19/2019	<0.1	<0.1	<0.1	0.0655 (JD)	0.037 (J)	<0.1	0.06 (J)
8/27/2019	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1
8/29/2019			0.084 (J)				
10/15/2019	0.047 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	0.045 (J)
3/3/2020	0.056 (J)	<0.1		0.066 (J)	0.05 (J)	<0.1	0.057 (J)
3/4/2020			<0.1				
8/18/2020	0.052 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
9/15/2020	0.062 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	0.051 (J)
3/1/2021				<0.1			
3/2/2021	0.061 (J)	<0.1	<0.1		<0.1	<0.1	<0.1
9/21/2021	0.071 (J)	<0.1				<0.1	0.056 (J)
9/22/2021			0.069 (J)	<0.1	<0.1		
2/1/2022	0.055 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
8/23/2022	0.151	0.129	0.157	<0.1	<0.1	<0.1	<0.1

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/28/2021		0.15	0.16	0.081 (J)	0.11	<0.1	
2/1/2022	<0.1						
2/2/2022		0.15			0.1	<0.1	<0.1
2/3/2022				0.11			
2/4/2022			0.14				
8/23/2022	<0.1	0.186					
8/24/2022				0.103	0.318		
8/25/2022			0.234			0.138	0.166

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	1.1						
3/15/2018		0.84 (JX)					
5/1/2018	0.595 (D)	0.91					
6/27/2018	0.27 (J)						
6/28/2018		1.1 (J+X)					
8/1/2018	0.48	2					
8/10/2018			1.6 (O)				
8/23/2018	0.34		0.32				
9/19/2018	0.23 (J)		0.22 (J)				
10/29/2018	<0.1	0.24 (J)	0.14 (J)				
11/28/2018	0.063 (J)	0.41	0.24 (J)				
12/19/2018	0.28 (J)	0.54					
12/20/2018			0.3				
1/16/2019		1.1					
1/17/2019			0.23 (J)				
1/18/2019							0.13 (J)
1/19/2019						<0.1	
2/13/2019			<0.1				
3/19/2019	<0.1						
3/20/2019		0.21 (J)	0.135 (JD)				
8/28/2019	<0.1						
8/29/2019		0.41	0.087 (J)				
10/16/2019	0.076 (J)	0.39	0.22 (J)				
10/18/2019						<0.1	0.09 (J)
3/4/2020	<0.1	0.14 (J)	0.1 (J)				
8/20/2020	<0.1	0.39	0.23			<0.1	0.056 (J)
9/16/2020	<0.1						
9/17/2020		0.46	0.074 (J)			<0.1	0.062 (J)
10/27/2020				0.28	0.21	<0.1	
3/2/2021	<0.1						
3/3/2021					0.28		0.083 (J)
3/4/2021		0.6	0.28			0.061 (J)	
3/5/2021				0.16			
9/23/2021	<0.1						
9/27/2021		0.43				<0.1	0.072 (J)
9/28/2021			0.12	0.11	0.26		
2/2/2022	<0.1		0.098 (J)			<0.1	0.053 (J)
2/3/2022		0.42		0.15	0.27		
8/23/2022	<0.1						
8/24/2022		0.497			0.318	0.148	0.131
8/25/2022			0.157	0.106			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.067 (J)			
9/28/2021	0.085 (J)	0.97	1.6				
2/2/2022				<0.1			
2/3/2022		1.8	2.3		2.7		
2/4/2022	0.096 (J)					0.14	0.071 (J)
8/24/2022		1.09	1.32	0.103			
8/25/2022	0.235				1.8	0.235	<0.1

Time Series

Constituent: Lead (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	0.0001 (J)						
9/6/2016					<0.002		
9/8/2016		<0.002	<0.002	0.0004 (J)		<0.002	
11/15/2016	<0.002						
11/17/2016		<0.002					
11/18/2016			<0.002				
11/21/2016				0.0006 (J)	<0.002	<0.002	
2/20/2017	<0.002						
2/21/2017		<0.002	<0.002				
2/22/2017				0.0005 (J)	<0.002	<0.002	
6/12/2017	8E-05 (J)						
6/13/2017		<0.002	<0.002				
6/14/2017				0.0004 (J)	<0.002	<0.002	
9/26/2017	<0.002						
9/27/2017		<0.002	<0.002	0.0006 (J)	<0.002	<0.002	
2/13/2018	<0.002						
2/14/2018		<0.002	<0.002	<0.005 (o)	<0.002	<0.002	
3/6/2018							<0.002
5/1/2018							<0.002
6/26/2018	<0.002	<0.002					
6/27/2018			<0.002	0.00032 (J)		<0.002	
6/28/2018					<0.002		<0.002
7/31/2018							<0.002
8/23/2018							<0.002
9/19/2018							<0.002
10/29/2018							<0.002
11/28/2018							<0.002
12/18/2018	<0.002	<0.002		0.00038 (J)	<0.002		
12/19/2018						<0.002	
12/20/2018			<0.002				<0.002
8/27/2019	<0.002	0.00011 (J)			<0.002	<0.002	
8/28/2019			<0.002	0.00027 (J)			<0.002
10/15/2019	<0.002	<0.002					
10/16/2019				0.00027 (J)			
12/3/2019							<0.002
12/4/2019			6.3E-05 (J)		<0.002	<0.002	
3/3/2020	7.3E-05 (J)						
3/4/2020		<0.002	<0.002	0.0003 (J)			
3/5/2020					<0.002	<0.002	0.00026 (J)
8/18/2020	<0.002						
8/19/2020		<0.002	<0.002	0.00025 (J)	<0.002	<0.002	
8/20/2020							0.00021 (J)
9/15/2020	<0.002	<0.002		0.00029 (J)			
9/16/2020			<0.002		0.00011 (J)	<0.002	5.3E-05 (J)
3/1/2021	<0.002						
3/2/2021		<0.002					<0.002
3/3/2021			<0.002	0.00033 (J)	<0.002		
3/4/2021						<0.002	
9/22/2021	<0.002						
9/23/2021							<0.002
9/28/2021		<0.002	<0.002	<0.002	<0.002	<0.002	
2/1/2022	<0.002						

Time Series

Constituent: Lead (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		<0.002			<0.002	<0.002	<0.002
2/3/2022				<0.002			
2/4/2022			<0.002				
8/23/2022	<0.002	<0.002					
8/24/2022				<0.002	<0.002		
8/25/2022			<0.002			<0.002	<0.002

Time Series

Constituent: Lead (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.002						
3/15/2018		<0.002					
5/1/2018	<0.002 (D)	<0.002					
6/27/2018	<0.002						
6/28/2018		0.00054 (J)					
8/1/2018	<0.002	<0.002					
8/10/2018			<0.002				
8/23/2018	<0.002		<0.002				
9/19/2018	<0.002		<0.002				
10/29/2018	<0.002	0.0003 (J)	<0.002				
11/28/2018	<0.002	<0.002	<0.002				
12/19/2018	<0.002	<0.002					
12/20/2018			<0.002				
1/16/2019		<0.002					
1/17/2019			<0.002				
1/18/2019							<0.002
1/19/2019						<0.002	
2/13/2019			<0.002				
8/28/2019	<0.002						
8/29/2019		4.9E-05 (J)	<0.002				
10/16/2019	<0.002	8.5E-05 (J)	<0.002				
10/18/2019						<0.002	<0.002
3/4/2020	0.00012 (J)	0.0001 (J)	<0.002				
8/20/2020	4.8E-05 (J)	6.7E-05 (J)	<0.002			<0.002	<0.002
9/16/2020	6.6E-05 (J)						
9/17/2020		0.00015 (J)	<0.002			0.00036 (J)	<0.002
3/2/2021	<0.002						
3/3/2021					0.00013 (J)		<0.002
3/4/2021		0.00016 (J)	4.2E-05 (J)			0.00017 (J)	
3/5/2021				5.6E-05 (J)			
9/23/2021	<0.002						
9/27/2021		<0.002				<0.002	<0.002
9/28/2021			<0.002	<0.002	<0.002		
2/2/2022	<0.002		<0.002			<0.002	<0.002
2/3/2022		<0.002		<0.002	<0.002		
8/23/2022	<0.002						
8/24/2022		<0.002			<0.002	<0.002	<0.002
8/25/2022			<0.002	<0.002			

Time Series

Constituent: Lead (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.0019			
9/28/2021	<0.002	<0.002	<0.002				
2/2/2022				<0.002			
2/3/2022		<0.002	<0.002		<0.002		
2/4/2022	<0.002					<0.002	<0.002
8/24/2022		0.000894 (J)	<0.002	0.00113 (J)			
8/25/2022	<0.002				<0.002	<0.002	<0.002

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.0268 (J)	<0.01	<0.01	<0.01
9/1/2016	0.0061 (J)	<0.01					
9/6/2016			0.0028 (J)				
11/15/2016							<0.01
11/16/2016	0.0054 (J)	<0.01		0.0201 (J)	<0.01	0.0033 (J)	
11/17/2016			0.0063 (J)				
2/20/2017						<0.01	<0.01
2/21/2017	0.0058 (J)	<0.01	0.0052 (J)	0.0128 (J)	<0.01		
6/12/2017				0.0245 (J)		0.0019 (J)	<0.01
6/13/2017		<0.01	0.0061 (J)		<0.01		
6/14/2017	0.0054 (J)						
9/26/2017	0.0037 (J)	<0.01	0.0087 (J)	0.0549	<0.01	0.0022 (J)	<0.01
2/13/2018				0.0595	<0.01	0.0041 (J)	<0.01
2/14/2018	0.0038 (J)	<0.01	0.0104 (J)				
6/26/2018	0.0045 (J)	<0.01	0.0095 (J)	0.089	<0.01	0.0025 (J)	<0.01
12/18/2018	0.0038 (J)	<0.01	0.0091 (J)	0.024 (J)	<0.01	0.0032 (J)	<0.01
8/27/2019	0.0039 (J)	<0.01		0.035	<0.01	0.0019 (J)	<0.01
8/29/2019			0.007 (J)				
10/15/2019	0.0037 (J)	<0.01	0.0069 (J)	0.028 (J)	<0.01	0.002 (J)	<0.01
3/3/2020	0.0033 (J)	<0.01		0.055	<0.01	0.0013 (J)	<0.01
3/4/2020			0.0074 (J)				
8/18/2020	0.0039 (J)	<0.01	0.0099 (J)	0.054	<0.01	0.00095 (J)	<0.01
9/15/2020	0.0037 (J)	<0.01	0.011 (J)	0.033	<0.01	0.001 (J)	<0.01
3/1/2021				0.027 (J)			
3/2/2021	0.0045 (J)	<0.01	0.0093 (J)		<0.01	0.00081 (J)	<0.01
9/21/2021	0.0037 (J)	<0.01				0.0012 (J)	<0.01
9/22/2021			0.0074 (J)	0.021 (J)	<0.01		
2/1/2022	0.0037 (J)	<0.01	0.008 (J)	0.023 (J)	<0.01	0.0011 (J)	<0.01
8/23/2022	0.00451 (J)	<0.01	0.00792 (J)	0.0262	<0.01	<0.01	<0.01

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	0.003 (J)						
9/6/2016					0.0117 (J)		
9/8/2016		<0.01	0.0021 (J)	0.004 (J)		<0.01	
11/15/2016	0.0033 (J)						
11/17/2016		<0.01					
11/18/2016			<0.01				
11/21/2016				0.0039 (J)	0.0108 (J)	<0.01	
2/20/2017	0.0025 (J)						
2/21/2017		<0.01	<0.01				
2/22/2017				0.0043 (J)	0.0103 (J)	0.0023 (J)	
6/12/2017	0.0027 (J)						
6/13/2017		<0.01	0.0017 (J)				
6/14/2017				0.0036 (J)	0.0101 (J)	0.0022 (J)	
9/26/2017	0.0023 (J)						
9/27/2017		<0.01	0.0016 (J)	0.0038 (J)	0.0116 (J)	0.0021 (J)	
2/13/2018	0.0027 (J)						
2/14/2018		<0.01	0.0018 (J)	0.0034 (J)	0.0115 (J)	0.0023 (J)	
3/6/2018							0.0031 (J)
5/1/2018							0.0038 (J)
6/26/2018	0.0029 (J)	<0.01					
6/27/2018			0.0016 (J)	0.0034 (J)		0.0023 (J)	
6/28/2018					0.013 (J)		0.0028 (J)
7/31/2018							<0.25 (o)
8/23/2018							0.0033 (J)
9/19/2018							0.0033 (J)
10/29/2018							0.003 (J)
11/28/2018							0.0035 (J)
12/18/2018	0.0026 (J)	<0.01		0.0032 (J)	0.014 (J)		
12/19/2018						0.0018 (J)	
12/20/2018			0.0015 (J)				0.003 (J)
8/27/2019	0.0028 (J)	<0.01			0.016 (J)	0.0022 (J)	
8/28/2019			0.0016 (J)	0.0033 (J)			0.0034 (J)
10/15/2019	0.0024 (J)	<0.01					
10/16/2019				0.0029 (J)			
12/3/2019							0.0033 (J)
12/4/2019			0.0014 (J)		0.013 (J)	0.0022 (J)	
3/3/2020	0.0026 (J)						
3/4/2020		<0.01	0.0014 (J)	0.0029 (J)			
3/5/2020					0.016 (J)	0.0022 (J)	0.003 (J)
8/18/2020	0.0026 (J)						
8/19/2020		<0.01	0.0014 (J)	0.0029 (J)	0.018 (J)	0.002 (J)	
8/20/2020							0.0034 (J)
9/15/2020	0.0027 (J)	<0.01		0.003 (J)			
9/16/2020			0.0014 (J)		0.016 (J)	0.0022 (J)	0.0036 (J)
3/1/2021	0.0036 (J)						
3/2/2021		<0.01					0.0043 (J)
3/3/2021			0.0012 (J)	0.0032 (J)	0.014 (J)		
3/4/2021						0.002 (J)	
9/22/2021	0.0035 (J)						
9/23/2021							0.0023 (J)
9/28/2021		<0.01	0.0011 (J)	0.0029 (J)	0.023 (J)	0.0021 (J)	
2/1/2022	0.0029 (J)						

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		<0.01			0.021 (J)	0.0035 (J)	0.0022 (J)
2/3/2022				0.0026 (J)			
2/4/2022			0.001 (J)				
8/23/2022	0.00314 (J)	<0.01					
8/24/2022				0.00304 (J)	0.0238		
8/25/2022			<0.01			0.0043 (J)	<0.01

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	0.0399 (J)						
3/15/2018		0.038 (J)					
5/1/2018	0.0475 (JD)	0.042 (J)					
6/27/2018	0.044 (J)						
6/28/2018		0.04 (J)					
8/1/2018	0.039 (J)	0.036 (J)					
8/10/2018			0.0087 (J)				
8/23/2018	0.044 (J)		0.0089 (J)				
9/19/2018	0.043 (J)		0.005 (J)				
10/29/2018	0.039 (J)	0.041 (J)	0.0048 (J)				
11/28/2018	0.044 (J)	0.041 (J)	0.0052 (J)				
12/19/2018	0.043 (J)	0.043 (J)					
12/20/2018			0.0042 (J)				
1/16/2019		0.042 (J)					
1/17/2019			0.0039 (J)				
1/18/2019							0.0012 (J)
1/19/2019						0.019 (J)	
2/13/2019			<0.01				
8/28/2019	0.044						
8/29/2019		0.039	0.0052 (J)				
10/16/2019	0.038	0.034	0.0023 (J)				
10/18/2019						0.019 (J)	<0.01
3/4/2020	0.042	0.042	0.002 (J)				
8/20/2020	0.044	0.04	0.0022 (J)			0.019 (J)	<0.01
9/16/2020	0.039						
9/17/2020		0.052	0.0058 (J)			0.021 (J)	<0.01
3/2/2021	0.044						
3/3/2021					0.0093 (J)		<0.01
3/4/2021		0.05	0.003 (J)			0.026 (J)	
3/5/2021				0.019 (J)			
9/23/2021	0.042						
9/27/2021		0.038				0.02 (J)	<0.01
9/28/2021			0.0035 (J)	0.02 (J)	0.0096 (J)		
2/2/2022	0.04		0.0041 (J)			0.021 (J)	<0.01
2/3/2022		0.038		0.024 (J)	0.0096 (J)		
8/23/2022	0.0474						
8/24/2022		0.0428			0.0042 (J)	0.0222	<0.01
8/25/2022			0.0162	0.0255			

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.0095 (J)			
9/28/2021	0.018 (J)	0.041	0.1				
2/2/2022				0.011 (J)			
2/3/2022		0.041	0.098		0.19		
2/4/2022	0.026 (J)					0.007 (J)	0.01 (J)
8/24/2022		0.0488	0.101	0.00913 (J)			
8/25/2022	0.0231				0.164	0.00509 (J)	0.00617 (J)

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.0002						
9/6/2016					<0.0002		
9/8/2016		<0.0002	<0.0002	<0.0002		<0.0002	
11/15/2016	<0.0002						
11/17/2016		<0.0002					
11/18/2016			<0.0002				
11/21/2016				<0.0002	<0.0002	<0.0002	
2/20/2017	<0.0002						
2/21/2017		<0.0002	<0.0002				
2/22/2017				<0.0002	<0.0002	<0.0002	
6/12/2017	<0.0002						
6/13/2017		<0.0002	5E-05 (J)				
6/14/2017				7E-05 (J)	7E-05 (J)	9E-05 (J)	
9/26/2017	<0.0002						
9/27/2017		4E-05 (J)	4.7E-05 (J)	4E-05 (J)	4E-05 (J)	0.0001 (J)	
2/13/2018	<0.0002						
2/14/2018		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
3/6/2018							<0.0002
5/1/2018							<0.0002
6/26/2018	<0.0002	<0.0002					
6/27/2018			<0.0002	<0.0002		<0.0002	
6/28/2018					<0.0002		<0.0002
7/31/2018							<0.0002
8/23/2018							<0.0002
9/19/2018							<0.0002
10/29/2018							<0.0002
11/28/2018							<0.0002
12/18/2018	<0.0002	<0.0002		<0.0002	<0.0002		
12/19/2018						<0.0002	
12/20/2018			<0.0002				<0.0002
8/27/2019	<0.0002	<0.0002			<0.0002	<0.0002	
8/28/2019			<0.0002	<0.0002			<0.0002
8/18/2020	<0.0002						
8/19/2020		8.3E-05 (J)	<0.0002	9.8E-05 (J)	8.2E-05 (J)	8.2E-05 (J)	
8/20/2020							<0.0002
9/15/2020	<0.0002	<0.0002		<0.0002			
9/16/2020			<0.0002		<0.0002	<0.0002	<0.0002
3/1/2021	<0.0002						
3/2/2021		<0.0002					<0.0002
3/3/2021			<0.0002	<0.0002	<0.0002		
3/4/2021						<0.0002	
9/22/2021	0.0001 (J)						
9/23/2021							<0.0002
9/28/2021		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
2/1/2022	<0.0002						
2/2/2022		<0.0002			<0.0002	<0.0002	<0.0002
2/3/2022				<0.0002			
2/4/2022			<0.0002				
8/23/2022	<0.0002	<0.0002					
8/24/2022				<0.0002	<0.0002		
8/25/2022			<0.0002			<0.0002	<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.0002						
3/15/2018		<0.0002					
5/1/2018	<0.0002 (D)	<0.0002					
6/27/2018	<0.0002						
6/28/2018		<0.0002					
8/1/2018	<0.0002	<0.0002					
8/10/2018			<0.0002				
8/23/2018	<0.0002		<0.0002				
9/19/2018	<0.0002		<0.0002				
10/29/2018	<0.0002	<0.0002	<0.0002				
11/28/2018	<0.0002	<0.0002	<0.0002				
12/19/2018	<0.0002	<0.0002					
12/20/2018			<0.0002				
1/16/2019		<0.0002					
1/17/2019			<0.0002				
1/18/2019							<0.0002
1/19/2019						<0.0002	
2/13/2019			<0.0002				
8/28/2019	<0.0002						
8/29/2019		<0.0002	<0.0002				
10/18/2019						<0.0002	<0.0002
8/20/2020	<0.0002	<0.0002	<0.0002			9.9E-05 (J)	<0.0002
9/16/2020	<0.0002						
9/17/2020		<0.0002	<0.0002			<0.0002	<0.0002
3/2/2021	<0.0002						
3/3/2021					<0.0002		<0.0002
3/4/2021		<0.0002	<0.0002			<0.0002	
3/5/2021				<0.0002			
9/23/2021	<0.0002						
9/27/2021		<0.0002				<0.0002	<0.0002
9/28/2021			<0.0002	<0.0002	<0.0002		
2/2/2022	<0.0002		<0.0002			<0.0002	<0.0002
2/3/2022		<0.0002		<0.0002	<0.0002		
8/23/2022	<0.0002						
8/24/2022		<0.0002			<0.0002	<0.0002	<0.0002
8/25/2022			<0.0002	<0.0002			

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				<0.0002			
9/28/2021	<0.0002	<0.0002	<0.0002				
2/2/2022				<0.0002			
2/3/2022		<0.0002	<0.0002		<0.0002		
2/4/2022	<0.0002					<0.0002	<0.0002
8/24/2022		<0.0002	<0.0002	<0.0002			
8/25/2022	<0.0002				<0.0002	<0.0002	<0.0002

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				0.0021 (J)	<0.001	0.004 (J)	<0.001
9/1/2016	0.002 (J)	<0.001					
9/6/2016			0.0028 (J)				
11/15/2016							<0.001
11/16/2016	<0.001	<0.001		<0.001	<0.001	0.0038 (J)	
11/17/2016			<0.001				
2/20/2017						0.0055 (J)	<0.001
2/21/2017	<0.001	<0.001	<0.001	0.0021 (J)	<0.001		
6/12/2017				0.0021 (J)		0.005 (J)	<0.001
6/13/2017		<0.001	<0.001		<0.001		
6/14/2017	<0.001						
9/26/2017	<0.001	<0.001	<0.001	0.0011 (J)	<0.001	0.0053 (J)	<0.001
2/13/2018				0.0019 (J)	<0.001	0.008 (J)	<0.001
2/14/2018	<0.001	<0.001	<0.001				
6/26/2018	<0.001	<0.001	<0.001	<0.001	<0.001	0.0041 (J)	<0.001
12/18/2018	<0.001	<0.001	<0.001	<0.001	<0.001	0.0048 (J)	<0.001
8/27/2019	<0.001	<0.001		<0.001	<0.001	0.0028 (J)	<0.001
8/29/2019			<0.001				
10/15/2019	<0.001	<0.001	<0.001	<0.001	<0.001	0.0035 (J)	<0.001
3/3/2020				<0.001	<0.001	0.0023 (J)	<0.001
8/18/2020	<0.001	<0.001	<0.001	0.0011 (J)	<0.001	0.0015 (J)	<0.001
9/15/2020	<0.001	<0.001	<0.001	0.0007 (J)	<0.001	0.0015 (J)	<0.001
3/1/2021				<0.001			
3/2/2021	<0.001	<0.001	<0.001		<0.001	0.0015 (J)	<0.001
9/21/2021	<0.001	<0.001				0.002 (J)	<0.001
9/22/2021			<0.001	0.0012 (J)	<0.001		
2/1/2022	<0.001	<0.001	<0.001	0.0013 (J)	<0.001	0.002 (J)	<0.001
8/23/2022	0.000413 (J)	<0.001	<0.001	0.0024	<0.001	0.00151	<0.001

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.001						
9/6/2016					<0.001		
9/8/2016		<0.001	<0.001	<0.001		<0.001	
11/15/2016	<0.001						
11/17/2016		<0.001					
11/18/2016			<0.001				
11/21/2016				<0.001	<0.001	<0.001	
2/20/2017	<0.001						
2/21/2017		<0.001	<0.001				
2/22/2017				<0.001	<0.001	<0.001	
6/12/2017	<0.001						
6/13/2017		<0.001	<0.001				
6/14/2017				<0.001	<0.001	<0.001	
9/26/2017	<0.001						
9/27/2017		<0.001	<0.001	<0.001	<0.001	<0.001	
2/13/2018	<0.001						
2/14/2018		<0.001	<0.001	<0.001	<0.001	<0.001	
3/6/2018							<0.001
5/1/2018							<0.001
6/26/2018	<0.001	<0.001					
6/27/2018			<0.001	<0.001		<0.001	
6/28/2018					<0.001		<0.001
7/31/2018							<0.001
8/23/2018							<0.001
9/19/2018							<0.001
10/29/2018							<0.001
11/28/2018							<0.001
12/18/2018	<0.001	<0.001		<0.001	<0.001		
12/19/2018						<0.001	
12/20/2018			<0.001				<0.001
8/27/2019	<0.001	<0.001			<0.001	<0.001	
8/28/2019			<0.001	<0.001			<0.001
10/15/2019	<0.001	<0.001					
10/16/2019				<0.001			
12/3/2019							<0.001
12/4/2019			<0.001		<0.001	<0.001	
3/3/2020	<0.001						
8/18/2020	<0.001						
8/19/2020		0.00081 (J)	<0.001	<0.001	0.00078 (J)	<0.001	
8/20/2020							0.00076 (J)
9/15/2020	<0.001	0.0008 (J)		<0.001			
9/16/2020			<0.001		0.0022 (J)	<0.001	<0.001
3/1/2021	<0.001						
3/2/2021		0.001 (J)					<0.001
3/3/2021			<0.001	<0.001	<0.001		
3/4/2021						<0.001	
9/22/2021	<0.001						
9/23/2021							<0.001
9/28/2021		0.00089 (J)	<0.001	<0.001	0.001 (J)	<0.001	
2/1/2022	<0.001						
2/2/2022		0.0011 (J)			0.0012 (J)	<0.001	<0.001
2/3/2022				<0.001			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/4/2022			<0.001				
8/23/2022	<0.001	0.00105					
8/24/2022				<0.001	0.00141		
8/25/2022			<0.001			<0.001	0.000424 (J)

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.001						
3/15/2018		<0.001					
5/1/2018	<0.001 (D)	0.0022 (J)					
6/27/2018	<0.001						
6/28/2018		<0.001					
8/1/2018	<0.001	0.0033 (J)					
8/10/2018			0.0032 (J)				
8/23/2018	<0.001		0.005 (J)				
9/19/2018	<0.001		0.0061 (J)				
10/29/2018	<0.001	<0.001	0.0065 (J)				
11/28/2018	<0.001	<0.001	0.0027 (J)				
12/19/2018	<0.001	<0.001					
12/20/2018			<0.001				
1/16/2019		<0.001					
1/17/2019			<0.001				
1/18/2019							<0.001
1/19/2019						<0.001	
2/13/2019			<0.001				
8/28/2019	<0.001						
8/29/2019		<0.001	<0.001				
10/16/2019	<0.001	<0.001	<0.001				
10/18/2019						<0.001	<0.001
8/20/2020	<0.001	<0.001	0.0012 (J)			<0.001	<0.001
9/16/2020	<0.001						
9/17/2020		<0.001	0.0007 (J)			<0.001	<0.001
3/2/2021	<0.001						
3/3/2021					0.0068 (J)		<0.001
3/4/2021		<0.001	0.001 (J)			<0.001	
3/5/2021				0.0017 (J)			
9/23/2021	<0.001						
9/27/2021		<0.001				<0.001	<0.001
9/28/2021			<0.001	0.0021 (J)	0.0029 (J)		
2/2/2022	<0.001		<0.001			<0.001	<0.001
2/3/2022		<0.001		0.0012 (J)	0.0017 (J)		
8/23/2022	0.000296 (J)						
8/24/2022		<0.001			0.00171	0.000313 (J)	<0.001
8/25/2022			0.000471 (J)	0.00109			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				<0.001			
9/28/2021	<0.001	<0.001	<0.001				
2/2/2022				<0.001			
2/3/2022		<0.001	<0.001		<0.001		
2/4/2022	<0.001					0.00092 (J)	0.0011 (J)
8/24/2022		<0.001	<0.001	<0.001			
8/25/2022	<0.001				<0.001	0.000741 (J)	0.000286 (J)

Time Series

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				7.16	6.2	6.53	6.59
9/1/2016	6.71	6					
9/6/2016			6.49				
11/15/2016							6.67
11/16/2016	6.15	6		6.96	6.12	6.4	
11/17/2016			5.79				
2/20/2017						6.44	6.65
2/21/2017	6.52	6.09	6.15	7.15	6.24		
6/12/2017				7.31		6.4	6.64
6/13/2017	6.42	6.03	5.87		6.19		
6/14/2017	6.51						
9/26/2017	6.42	5.85	5.82	7.02	6.15	6.31	6.58
2/13/2018				7.44	6.18	6.62	6.72
2/14/2018	6.48	5.99	5.83				
6/26/2018	6.2	5.86	5.73	6.93	6.05	6.29	6.43
7/31/2018	6.37	5.99					
12/18/2018	6.5	6.08	5.78	6.76	5.92	6.57	6.7
3/19/2019	6.28	5.71	5.28	6.87	6.18	6.45	6.63
8/27/2019	6.35	6		6.79	6.09	6.37	6.49
8/29/2019			5.64				
10/15/2019	6.8	6.61	5.7	6.57	6.06	6.77	7.01
3/3/2020	6.33	5.94		6.71	6.1	6.29	6.49
3/4/2020			5.7				
8/18/2020	6.25	5.75	5.56	6.59	6.06	6.29	6.41
9/15/2020	6.01	6	5.72	6.64	6.01	6.27	6.25
3/1/2021				6.66			
3/2/2021	6.11	5.92	5.75		6.2	6.47	6.42
9/21/2021	6.53	5.87				6.32	6.36
9/22/2021			5.72	6.78	6.06		
2/1/2022	6.4	5.81	5.65	6.83	5.95	6.38	6.39
8/23/2022	6.39	5.9	5.66	6.67	5.95	6.24	6.36

Time Series

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	6.49						
9/6/2016					6.23		
9/8/2016		6.07	5.51	4.62		5.89	
11/15/2016	6.59						
11/16/2016		5.96					
11/18/2016			5.53				
11/21/2016				4.44	6.23	5.56	
2/20/2017	6.61						
2/21/2017		5.98	5.63				
2/22/2017				4.42	6.16	5.87	
6/13/2017		5.96	5.57				
6/14/2017				4.45	6.16	5.83	
9/26/2017	6.47						
9/27/2017		5.85	5.53	4.33	6.16	5.87	
2/13/2018	6.54						
2/14/2018		5.94	5.83	4.42	6.24	6.01	
3/15/2018							5.26
5/1/2018							6.14
6/26/2018	6.23	5.87					
6/27/2018			5.53	4.37		5.83	
6/28/2018					6.21		5.88
7/31/2018							6.07
9/19/2018							5.9
10/29/2018							5.93
11/28/2018							5.99
12/18/2018	6.71	5.84		4.38	6.18		
12/19/2018						5.79	
12/20/2018			5.78				6.04
3/19/2019	6.18		5.75				
3/20/2019		6.03		4.4	6.24	5.88	6.1
8/27/2019	6.35	6.01			6.17	5.85	
8/28/2019			5.51	4.39			5.86
10/15/2019	6.36	6					
10/16/2019				4.79			
10/17/2019			6.01 (D)		6.43	6.09	5.93
3/3/2020	6.59						
3/4/2020		6.02	5.8	4.5			
3/5/2020					5.99	5.74	5.95
5/12/2020						5.88	
8/18/2020	6.33						
8/19/2020		6.32	5.81	4.67	6.36	5.97	
8/20/2020							5.86
9/15/2020	6.43	6		4.53			
9/16/2020			5.81		6.29	5.79	5.27
3/1/2021	6.7						
3/2/2021		6.1					6.17
3/3/2021			5.9	4.46	6.29		
3/4/2021						5.98	
9/22/2021	6.48						
9/23/2021							5.95
9/28/2021		5.97	5.82	4.23	6.33	5.82	
2/1/2022	6.54						

Time Series

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		6.23			6.34	5.99	5.92
2/3/2022				4.23			
2/4/2022			5.97				
8/23/2022	6.51	6.11					
8/24/2022				4.39	6.38		
8/25/2022			6.03			6.06	5.74

Time Series

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/15/2018		5.26					
5/1/2018	5.85	5.38					
6/27/2018	5.87						
6/28/2018		5.03					
8/1/2018	5.79	5.22					
8/2/2018							6.18
8/3/2018						5.47	
8/10/2018			6.28				
8/23/2018			6.75				
9/19/2018	5.71		6.48				
10/29/2018	5.76	5.19	6.77				
11/28/2018	5.74	5.28	6.44				
12/19/2018	5.8	5.15					
12/20/2018			6.75				
1/16/2019		5.14					
1/17/2019			6.41				
1/18/2019							6.19
1/19/2019						5.45	
2/13/2019			6.42				
3/6/2019		6.15					
3/19/2019	5.89						
3/20/2019		5.32	6.59				
8/28/2019	5.74						
8/29/2019		5.2	6.27				
10/16/2019	5.9	5.36	7				
10/18/2019						5.79	6.44
3/4/2020	5.76	5.2	6.54				
8/20/2020	5.75	5.26	6.85			5.57	6.15
9/16/2020	5.76						
9/17/2020		4.41	6.12			4.93	5.77
10/27/2020				6.47	6.79	5.49	
3/2/2021	5.59						
3/3/2021					7.1		5.41
3/4/2021		4.34	5.87			4.57	
3/5/2021				7.06			
9/23/2021	5.74						
9/27/2021		5.05				5.34	6.04
9/28/2021			6.81	6.23	7.18		
2/2/2022	5.75		6.35			5.44	6.19
2/3/2022		5.2		6.24	6.77		
8/23/2022	5.61						
8/24/2022		5.01			7.15	5.49	6.12
8/25/2022			6.21	6.11			

Time Series

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				5.02			
9/28/2021	5.37	4	4.77				
2/2/2022				5.25			
2/3/2022		3.9	4.73		3.71		
2/4/2022	5.28					5.89	5.79
8/24/2022		3.81	4.55	5.14			
8/25/2022	5.91				3.72	5.65	5.5

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.005						
9/6/2016					<0.005		
9/8/2016		<0.005	0.0043 (J)	0.0039 (J)		<0.005	
11/15/2016	<0.005						
11/17/2016		<0.005					
11/18/2016			0.0047 (J)				
11/21/2016				0.0058 (J)	<0.005	<0.005	
2/20/2017	<0.005						
2/21/2017		<0.005	0.0025 (J)				
2/22/2017				0.005 (J)	<0.005	0.0017 (J)	
6/12/2017	<0.005						
6/13/2017		<0.005	0.0036 (J)				
6/14/2017				0.0074 (J)	0.0045 (J)	<0.005	
9/26/2017	<0.005						
9/27/2017		<0.005	0.004 (J)	0.0068 (J)	0.0034 (J)	0.0019 (J)	
2/13/2018	<0.005						
2/14/2018		<0.005	<0.005	<0.005	<0.005	<0.005	
3/6/2018							<0.005
5/1/2018							<0.005
6/26/2018	<0.005	<0.005					
6/27/2018			0.0014 (J)	<0.005		0.0017 (J)	
6/28/2018					<0.005		<0.005
7/31/2018							<0.005
8/23/2018							<0.005
9/19/2018							<0.005
10/29/2018							<0.005
11/28/2018							<0.005
12/18/2018	<0.005	<0.005		<0.005	<0.005		
12/19/2018						0.0059 (J)	
12/20/2018			<0.005				<0.005
8/27/2019	<0.005	<0.005			0.0038 (J)	0.057	
8/28/2019			0.0017 (J)	<0.005			<0.005
10/15/2019	<0.005	<0.005					
10/16/2019				<0.005			
12/3/2019							0.0029 (J)
12/4/2019			0.0036 (J)		0.0018 (J)	0.1	
3/3/2020	<0.005						
3/4/2020		<0.005	0.0022 (J)	0.0018 (J)			
3/5/2020					<0.005	0.1	<0.005
5/12/2020						0.0989	
8/18/2020	<0.005						
8/19/2020		<0.005	<0.005	<0.005	<0.005	0.099	
8/20/2020							<0.005
9/15/2020	<0.005	<0.005		<0.005			
9/16/2020			0.0042 (J)		<0.005	0.12	<0.005
3/1/2021	<0.005						
3/2/2021		0.0021 (J)					<0.005
3/3/2021			0.0031 (J)	0.0042 (J)	<0.005		
3/4/2021						0.14	
9/22/2021	<0.005						
9/23/2021							<0.005
9/28/2021		<0.005	<0.005	0.0022 (J)	<0.005	0.13	

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/1/2022	<0.005						
2/2/2022		<0.005			<0.005	0.21	<0.005
2/3/2022				<0.005			
2/4/2022			<0.005				
8/23/2022	<0.005	<0.005					
8/24/2022				<0.005	<0.005		
8/25/2022			<0.005			0.218	<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.005						
3/15/2018		<0.005					
5/1/2018	<0.005 (D)	<0.005					
6/27/2018	<0.005						
6/28/2018		<0.005					
8/1/2018	0.0015 (J)	0.0031 (J)					
8/10/2018			<0.005				
8/23/2018	<0.005 (X)		<0.005				
9/19/2018	0.002 (J)		<0.005				
10/29/2018	<0.005	0.002 (J)	<0.005				
11/28/2018	<0.005	0.0017 (J)	<0.005				
12/19/2018	<0.005	<0.005					
12/20/2018			<0.005				
1/16/2019		<0.005					
1/17/2019			<0.005				
1/18/2019							<0.005
1/19/2019						<0.005	
2/13/2019			<0.005				
8/28/2019	<0.005						
8/29/2019		<0.005	<0.005				
10/16/2019	0.0017 (J)	0.002 (J)	<0.005				
10/18/2019						<0.005	<0.005
3/4/2020	<0.005	0.0026 (J)	<0.005				
8/20/2020	0.0016 (J)	0.0037 (J)	<0.005			<0.005	<0.005
9/16/2020	0.002 (J)						
9/17/2020		<0.005	<0.005			<0.005	<0.005
3/2/2021	0.0028 (J)						
3/3/2021					<0.005		<0.005
3/4/2021		0.0039 (J)	<0.005			<0.005	
3/5/2021				<0.005			
9/23/2021	<0.005						
9/27/2021		0.0022 (J)				<0.005	<0.005
9/28/2021			<0.005	<0.005	<0.005		
2/2/2022	<0.005		<0.005			<0.005	<0.005
2/3/2022		<0.005		<0.005	<0.005		
8/23/2022	<0.005						
8/24/2022		0.00176 (J)			<0.005	<0.005	<0.005
8/25/2022			<0.005	<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				0.0079			
9/28/2021	<0.005	0.0034 (J)	0.0049 (J)				
2/2/2022				0.0031 (J)			
2/3/2022		0.0016 (J)	0.0026 (J)		0.09		
2/4/2022	<0.005					<0.005	<0.005
8/24/2022		0.00348 (J)	0.00417 (J)	0.0051			
8/25/2022	<0.005				0.113	<0.005	<0.005

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				7.5	0.38 (J)	2.7	0.81 (J)
9/1/2016	2.7	1.7					
9/6/2016			38				
11/15/2016							<1 (J)
11/16/2016	3.6	1.2		6.6	<1 (J)	3.4	
11/17/2016			84				
2/20/2017						3.9 (B-01)	1 (B-01)
2/21/2017	3	1.1	39	6.1	1.5		
6/12/2017				5		3.7	0.94 (J)
6/13/2017		1.1	35		0.67 (J)		
6/14/2017	2.6						
9/26/2017	2.5	1.3	89	5.4	0.62 (J)	4.1	0.92 (J)
2/13/2018				4.7 (J)	<1	6.6	<1
2/14/2018	2.1 (J)	<1	82.2				
6/26/2018	2	0.84 (J)	84.2	6.2	0.69 (J)	3.5	0.91 (J)
7/31/2018	1.9	0.63 (J)					
12/18/2018	2.1	0.66 (J)	83.4	5.9	0.72 (J)	4.3	0.68 (J)
3/19/2019	2.2	0.75 (J)	65	6 (D)	0.78 (J)	3	0.74 (J)
10/15/2019	1.9	0.61 (J)	30	5.2	0.47 (J)	3.8	0.68 (J)
3/3/2020	1.8	0.51 (J)		7.1	0.93 (J)	2.8	0.71 (J)
3/4/2020			38.6				
9/15/2020	1.7	<1	41.5	5.9	<1	1.7	<1
3/1/2021				4.7			
3/2/2021	1.7	0.51 (J)	54		<1	2.2	<1
9/21/2021	1.7	0.51 (J)				2.3	<1
9/22/2021			34.6	5.2	<1		
2/1/2022	1.4	<1	36.8	5.4	<1	2	<1
8/23/2022	1.84	0.636	24.4	5.66	0.452	2.21	0.521

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	0.6 (J)						
9/6/2016					310		
9/8/2016		280	300	460		370	
11/15/2016	0.68 (J)						
11/17/2016		200					
11/18/2016			320				
11/21/2016				500	300	420	
2/20/2017	0.98 (J)						
2/21/2017		360	270				
2/22/2017				570	280	380	
6/12/2017	0.54 (J)						
6/13/2017		290	230				
6/14/2017				440	290	400	
9/26/2017	0.53 (J)						
9/27/2017		310	260	380	260	400	
2/13/2018	<1						
2/14/2018		260	232	280	250	383	
3/6/2018							111
5/1/2018							112
6/26/2018	0.54 (J)	231					
6/27/2018			205	281		372	
6/28/2018					276		109
7/31/2018							107
8/23/2018							108
9/19/2018							117
10/29/2018							127
11/28/2018							133
12/18/2018	0.39 (J)	231		293	440		
12/19/2018						370	
12/20/2018			200				113
3/19/2019	0.68 (J)		199				
3/20/2019		235 (D)		278	623	409	127
10/15/2019	0.48 (J)	174					
10/16/2019				266			
12/3/2019							105
12/4/2019			241		327	293	
3/3/2020	2.5						
3/4/2020		165	205	238			
3/5/2020					369	269	106
9/15/2020	<1	126		241			
9/16/2020			190		334	255	103
3/1/2021	0.74 (J)						
3/2/2021		139					98.3
3/3/2021			172	341	371		
3/4/2021						185	
9/22/2021	<1						
9/23/2021							97.5
9/28/2021		112	137	250	612	189	
2/1/2022	<1						
2/2/2022		117			580	210	90.1
2/3/2022				274			
2/4/2022			172				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
8/23/2022	0.479	158					
8/24/2022				298	935		
8/25/2022			176			254	114

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	1560						
3/15/2018		1590					
5/1/2018	1465 (D)	1550					
6/27/2018	1450						
6/28/2018		1530					
8/1/2018	1560	1580					
8/2/2018							8.9
8/3/2018						1170	
8/10/2018			183				
8/23/2018	1470		145				
9/19/2018	1500		178				
10/29/2018	1720	1750	157				
11/28/2018	1730	1780	189				
12/19/2018	1520	1650					
12/20/2018			150				
1/16/2019		589 (O)					
1/17/2019			157				
1/18/2019							0.64 (J)
1/19/2019						1140	
2/13/2019			169				
3/19/2019	1100						
3/20/2019		1740	186.5 (D)				
10/16/2019	1560	1590	155				
10/18/2019						<1	0.76 (J)
3/4/2020	1380	1370	129				
9/16/2020	1360						
9/17/2020		1330	165			1030	0.53 (J)
10/27/2020				492	357	893	
3/2/2021	1360						
3/3/2021					360		0.66 (J)
3/4/2021		1250	114			909	
3/5/2021				698			
9/23/2021	1240						
9/27/2021		1180				933	<1
9/28/2021			132	866	294		
2/2/2022	1170		126			889	<1
2/3/2022		1270		903	339		
8/23/2022	1410						
8/24/2022		1400			377	1240	0.872
8/25/2022			142	1060			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				1420			
9/28/2021	259	628	1670				
2/2/2022				1230			
2/3/2022		767	2020		2600		
2/4/2022	336					195	451
8/24/2022		840	1770	1800			
8/25/2022	294				2900	234	571

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	<0.002						
9/6/2016					<0.002		
9/8/2016		<0.002	<0.002	<0.002		<0.002	
11/15/2016	<0.002						
11/17/2016		<0.002					
11/18/2016			<0.002				
11/21/2016				0.0002 (J)	<0.002	<0.002	
2/20/2017	<0.002						
2/21/2017		<0.002	<0.002				
2/22/2017				0.0002 (J)	<0.002	<0.002	
6/12/2017	<0.002						
6/13/2017		<0.002	<0.002				
6/14/2017				0.0002 (J)	<0.002	<0.002	
9/26/2017	<0.002						
9/27/2017		<0.002	<0.002	0.0002 (J)	<0.002	<0.002	
2/13/2018	<0.002						
2/14/2018		<0.002	<0.002	0.00018 (J)	<0.002	<0.002	
3/6/2018							<0.002
5/1/2018							<0.002
6/26/2018	<0.002	<0.002					
6/27/2018			<0.002	0.00017 (J)		<0.002	
6/28/2018					<0.002		<0.002
7/31/2018							<0.002
8/23/2018							<0.002
9/19/2018							<0.002
10/29/2018							<0.002
11/28/2018							<0.002
12/18/2018	<0.002	<0.002		0.00017 (J)	<0.002		
12/19/2018						<0.002	
12/20/2018			<0.002				<0.002
8/27/2019	<0.002	<0.002			<0.002	<0.002	
8/28/2019			<0.002	0.00017 (J)			<0.002
10/15/2019	<0.002	<0.002					
10/16/2019				0.00017 (J)			
12/3/2019							<0.002
12/4/2019			<0.002		<0.002	<0.002	
3/3/2020	<0.002						
3/4/2020		<0.002	<0.002	0.00016 (J)			
3/5/2020					<0.002	<0.002	<0.002
8/18/2020	<0.002						
8/19/2020		<0.002	<0.002	0.00016 (J)	<0.002	<0.002	
8/20/2020							<0.002
9/15/2020	<0.002	<0.002		0.00016 (J)			
9/16/2020			<0.002		<0.002	<0.002	<0.002
3/1/2021	<0.002						
3/2/2021		<0.002					<0.002
3/3/2021			<0.002	0.00018 (J)	<0.002		
3/4/2021						<0.002	
9/22/2021	<0.002						
9/23/2021							<0.002
9/28/2021		<0.002	<0.002	<0.002	<0.002	<0.002	
2/1/2022	<0.002						

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
2/2/2022		<0.002			<0.002	<0.002	<0.002
2/3/2022				<0.002			
2/4/2022			<0.002				
8/23/2022	<0.002	<0.002					
8/24/2022				<0.002	<0.002		
8/25/2022			<0.002			<0.002	<0.002

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	<0.002						
3/15/2018		<0.002					
5/1/2018	<0.002 (D)	<0.002					
6/27/2018	<0.002						
6/28/2018		<0.002					
8/1/2018	<0.002	<0.002					
8/10/2018			<0.002				
8/23/2018	<0.002		<0.002				
9/19/2018	<0.002		<0.002				
10/29/2018	<0.002	<0.002	<0.002				
11/28/2018	<0.002	<0.002	<0.002				
12/19/2018	<0.002	<0.002					
12/20/2018			<0.002				
1/16/2019		<0.002					
1/17/2019			<0.002				
1/18/2019							<0.002
1/19/2019						<0.002	
2/13/2019			<0.002				
8/28/2019	<0.002						
8/29/2019		<0.002	<0.002				
10/16/2019	<0.002	<0.002	<0.002				
10/18/2019						<0.002	<0.002
3/4/2020	<0.002	<0.002	<0.002				
8/20/2020	<0.002	<0.002	<0.002			<0.002	<0.002
9/16/2020	<0.002						
9/17/2020		<0.002	<0.002			<0.002	<0.002
3/2/2021	<0.002						
3/3/2021					<0.002		<0.002
3/4/2021		<0.002	<0.002			<0.002	
3/5/2021				<0.002			
9/23/2021	<0.002						
9/27/2021		<0.002				<0.002	<0.002
9/28/2021			<0.002	<0.002	<0.002		
2/2/2022	<0.002		<0.002			<0.002	<0.002
2/3/2022		<0.002		<0.002	<0.002		
8/23/2022	<0.002						
8/24/2022		<0.002			<0.002	<0.002	<0.002
8/25/2022			<0.002	<0.002			

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				<0.002			
9/28/2021	<0.002	<0.002	<0.002				
2/2/2022				<0.002			
2/3/2022		<0.002	<0.002		<0.002		
2/4/2022	<0.002					<0.002	<0.002
8/24/2022		<0.002	<0.002	<0.002			
8/25/2022	<0.002				<0.002	<0.002	<0.002

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)
8/31/2016				151	88	138	154
9/1/2016	142	69					
9/6/2016			146				
11/15/2016							123
11/16/2016	100	100		69	41	77	
11/17/2016			211				
2/20/2017						170	158
2/21/2017	71	37	151	68	<10		
6/12/2017				161		132	142
6/13/2017		84	130		53		
6/14/2017	140						
9/26/2017	149	68	160	167	45	108	138
2/13/2018				165	63	141	150
2/14/2018	137	138	194				
6/26/2018	142	90	221	188	71	133	154
7/31/2018	133	83					
12/18/2018	135	85	208	145 (X)	78 (X)	138 (X)	147
3/19/2019	132 (JX)	82 (JX)	161 (JX)	146.5 (D)	68	130	146
10/15/2019	134	89	124	140	66	175	144
3/3/2020	115	72		155	41	<10	130
3/4/2020			118				
9/15/2020	95	60	109	116	69	100	116
3/1/2021				98			
3/2/2021	93	43	105		43	80	96
9/21/2021	117	56				108	104
9/22/2021			128	129	66		
2/1/2022	114	63	130	126	72	129	124
8/23/2022	104	55	103	117	45	107	101

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/1/2016	299						
9/6/2016					505		
9/8/2016		460	478	654		607	
11/15/2016	41						
11/17/2016		611					
11/18/2016			503				
11/21/2016				819	515	695	
2/20/2017	133						
2/21/2017		497	380				
2/22/2017				721	504	635	
6/12/2017	61						
6/13/2017		474	354				
6/14/2017				661	536	635	
9/26/2017	29						
9/27/2017		457	376	518	432	601	
2/13/2018	61						
2/14/2018		431	503 (JX)	487	448	628	
3/6/2018							346
5/1/2018							374
6/26/2018	71	414					
6/27/2018			458 (X)	648 (X)		2280	
6/28/2018					494		333
7/31/2018							393
8/23/2018							350
9/19/2018							353
10/29/2018							329
11/28/2018							358
12/18/2018	70 (X)	401		407	715		
12/19/2018						605	
12/20/2018			344				322
3/19/2019	72		334 (JX)				
3/20/2019		410.5 (D)		391	885	564	302
10/15/2019	63	380					
10/16/2019				2030			
12/3/2019							362
12/4/2019			422		612	526	
3/3/2020	54						
3/4/2020		330	326	391			
3/5/2020					681	489	297
9/15/2020	79	272		281			
9/16/2020			301		634	428	275
3/1/2021	39						
3/2/2021		280					264
3/3/2021			288	515	690		
3/4/2021						350	
9/22/2021	62						
9/23/2021							277
9/28/2021		270	262	457	1050	375	
2/1/2022	61						
2/2/2022		283			1110	443	276
2/3/2022				419			
2/4/2022			301				

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
8/23/2022	52	315					
8/24/2022				383	1540		
8/25/2022			311			437	248

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/6/2018	2200						
3/15/2018		2440					
5/1/2018	2080 (D)	2190					
6/27/2018	31 (OX)						
6/28/2018		2290					
8/1/2018	2190	2360					
8/2/2018							123
8/3/2018						1900	
8/10/2018			344				
8/23/2018	2160		333				
9/19/2018	2160		364				
10/29/2018	2130	2300	334				
11/28/2018	2320	2300	357				
12/19/2018	2060	2190					
12/20/2018			355				
1/16/2019		2270					
1/17/2019			347				
1/18/2019							103
1/19/2019						1660	
2/13/2019			350				
3/19/2019	2050 (JX)						
3/20/2019		2280	360 (D)				
10/16/2019	2220	2280	346				
10/18/2019						1550	99
3/4/2020	2140	2270	351				
9/16/2020	2090						
9/17/2020		1910	329			1600	101
10/27/2020				914	680	1200	
3/2/2021	1680						
3/3/2021					598		76
3/4/2021		1520	383			830	
3/5/2021				1210			
9/23/2021	1770						
9/27/2021		1800				1560	88
9/28/2021			336	1470	650		
2/2/2022	1850		160			1590	98
2/3/2022		1850		1380	686		
8/23/2022	2060						
8/24/2022		1990			715	1740	90
8/25/2022			296	1750			

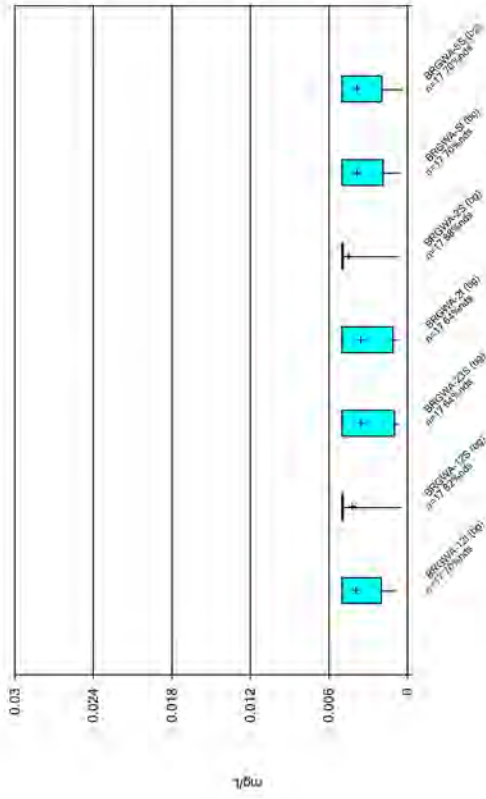
Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 3:45 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-59I	PZ-63I	PZ-62I
9/27/2021				2100			
9/28/2021	542	1120	2600				
2/2/2022				1970			
2/3/2022		1170	2480		3610		
2/4/2022	630					403	818
8/24/2022		1380	2830	2400			
8/25/2022	554				4370	419	918

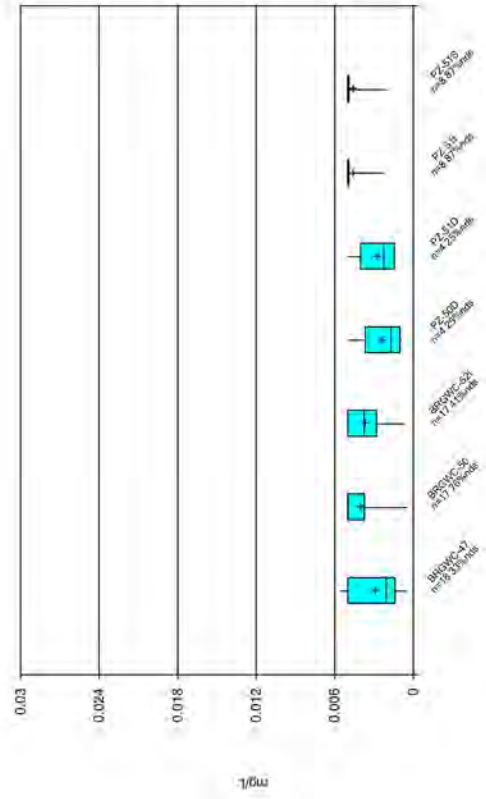
FIGURE B.

Box & Whiskers Plot



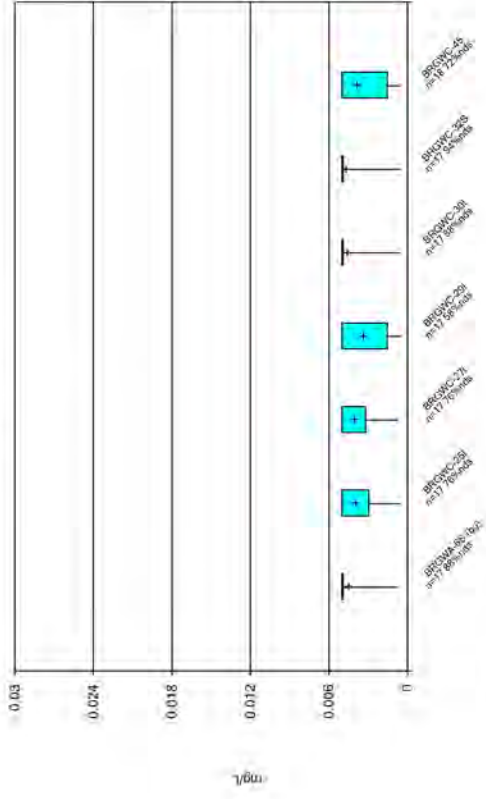
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



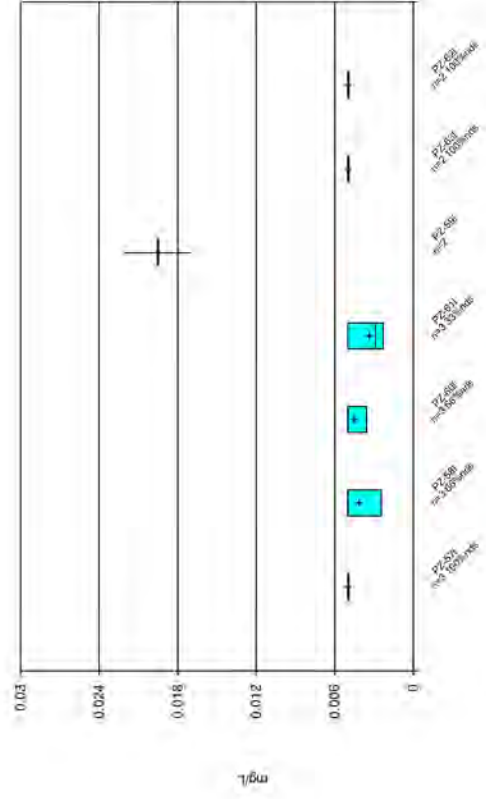
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



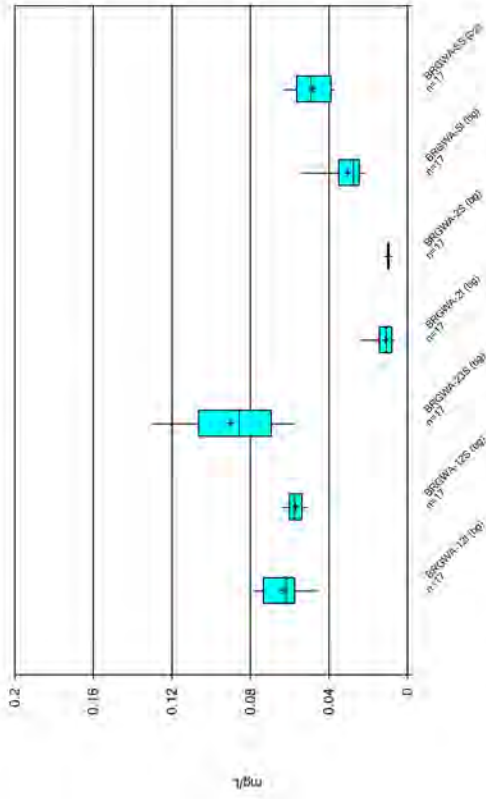
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



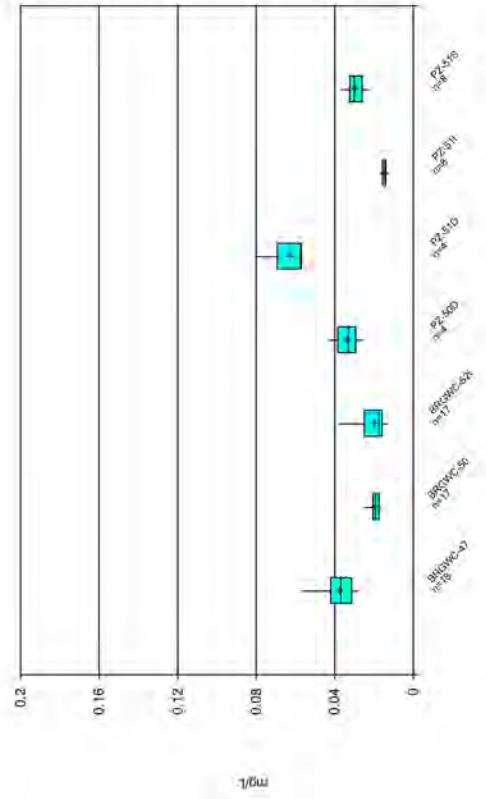
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Box & Whiskers Plot



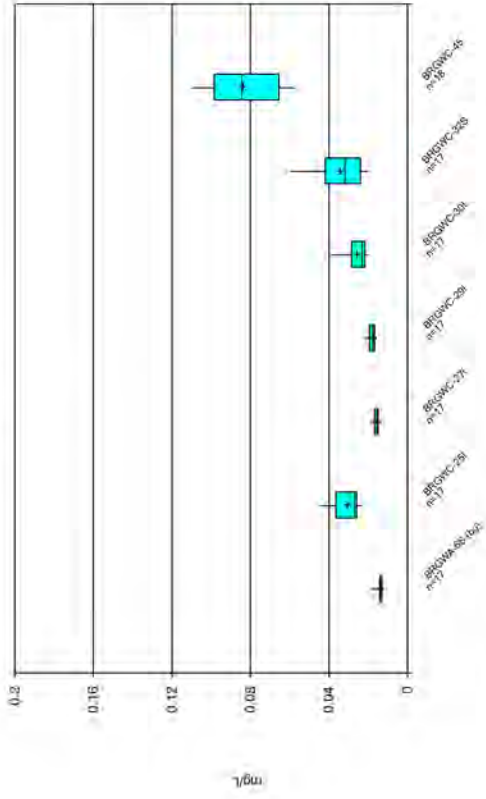
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



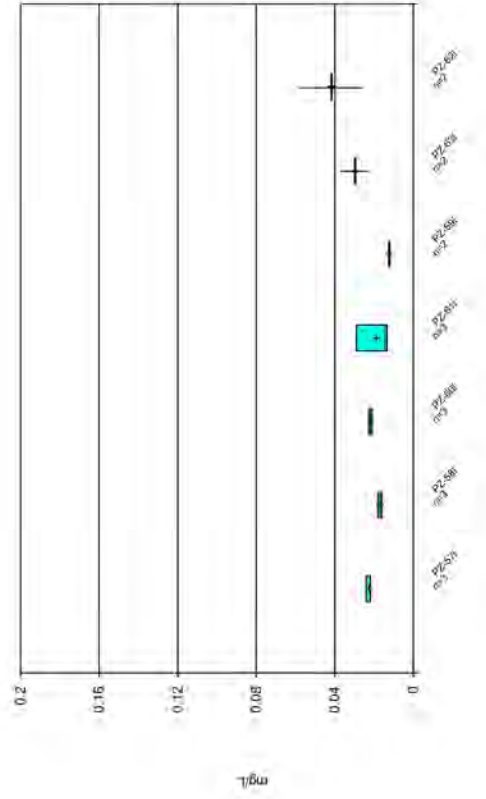
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Box & Whiskers Plot



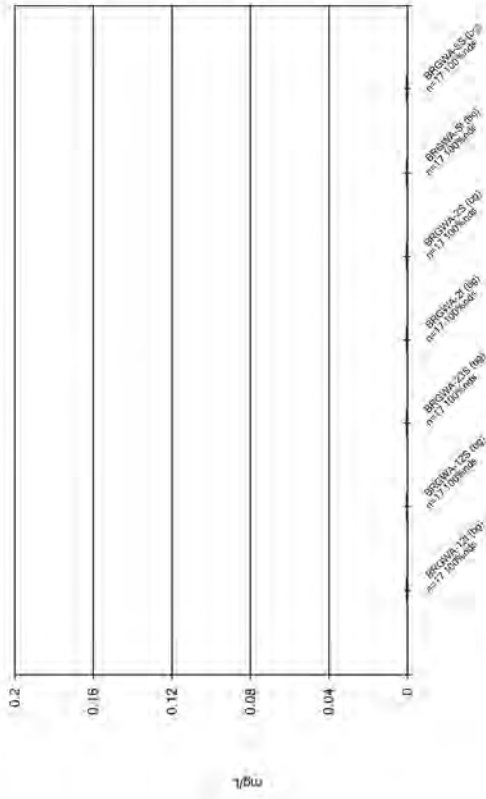
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



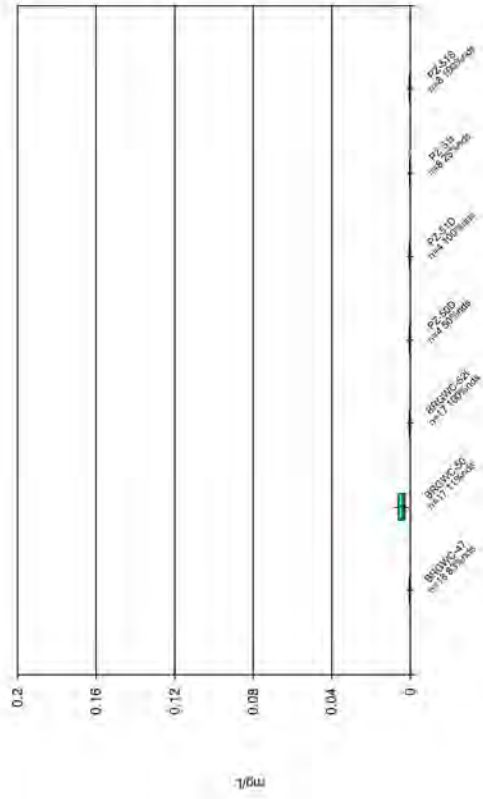
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



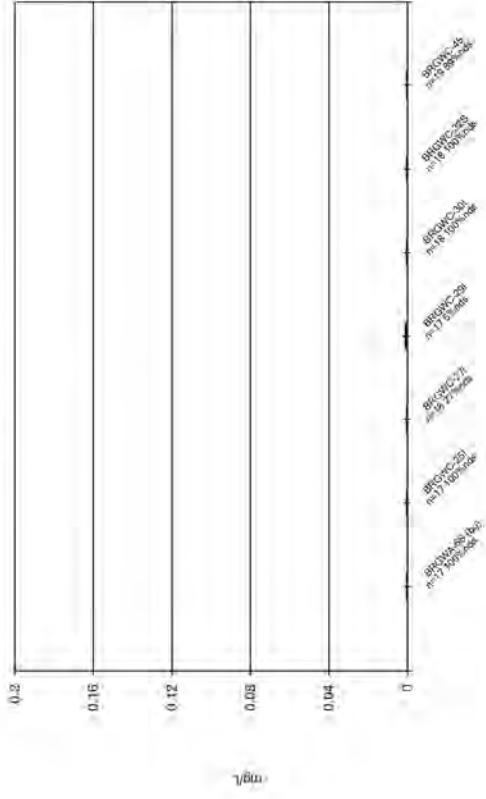
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



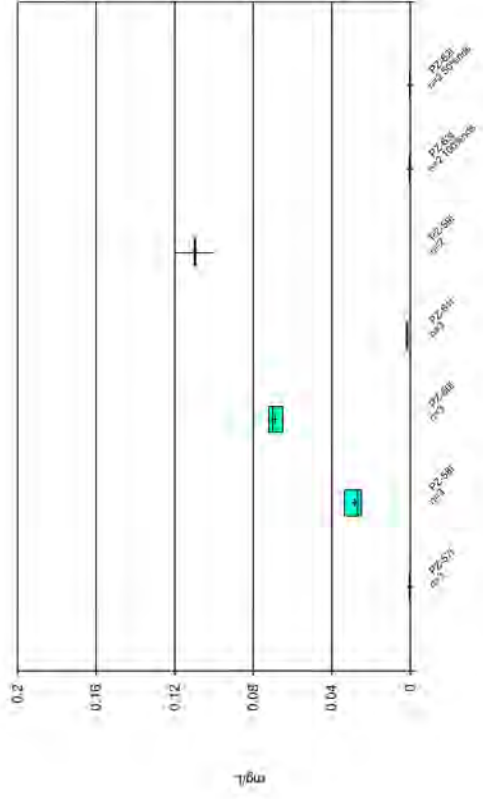
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



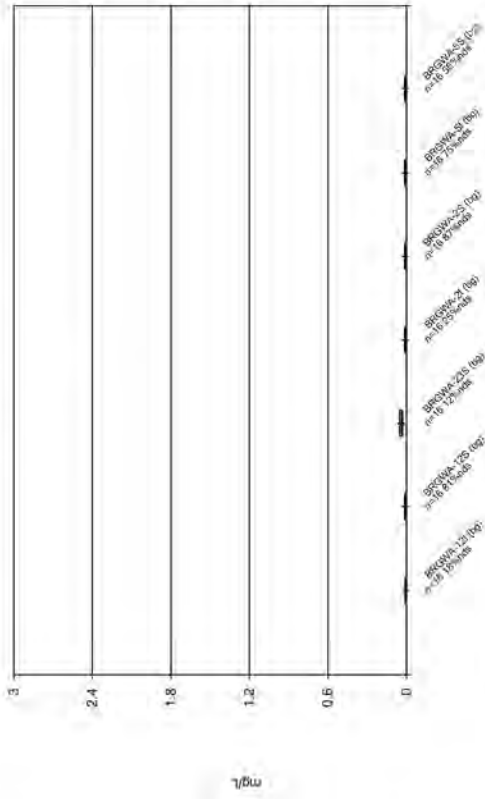
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



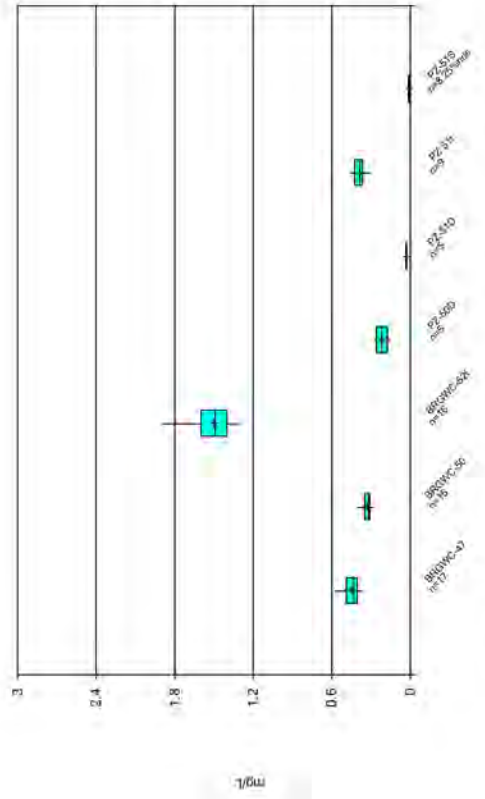
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



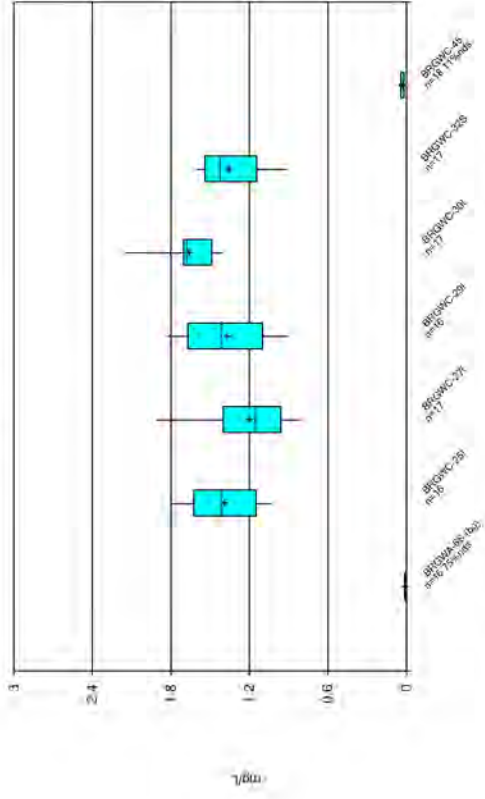
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



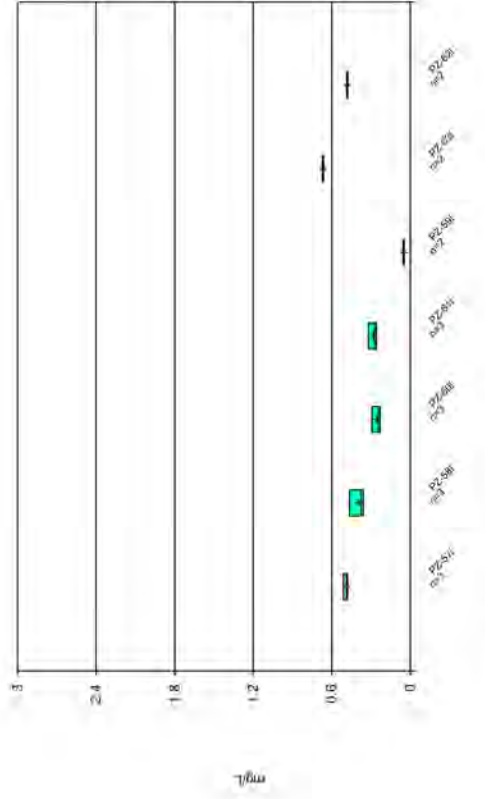
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



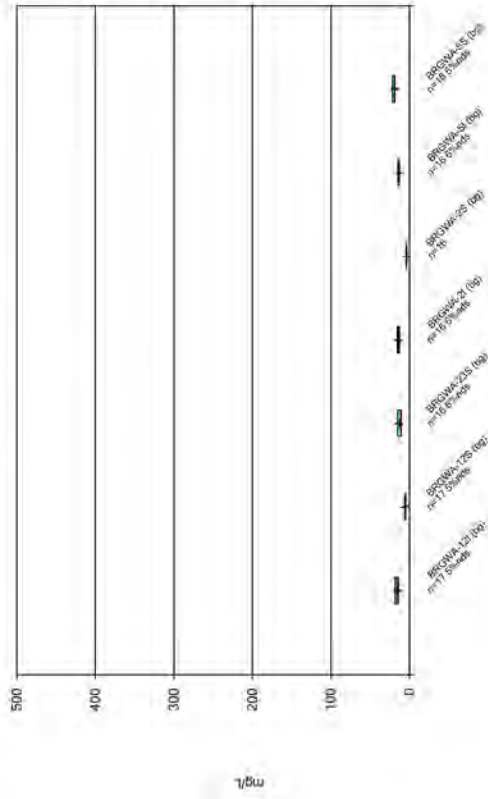
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



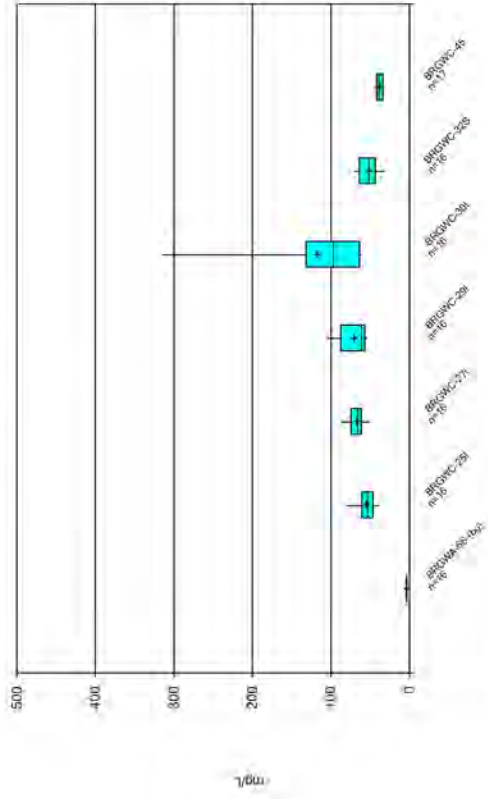
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



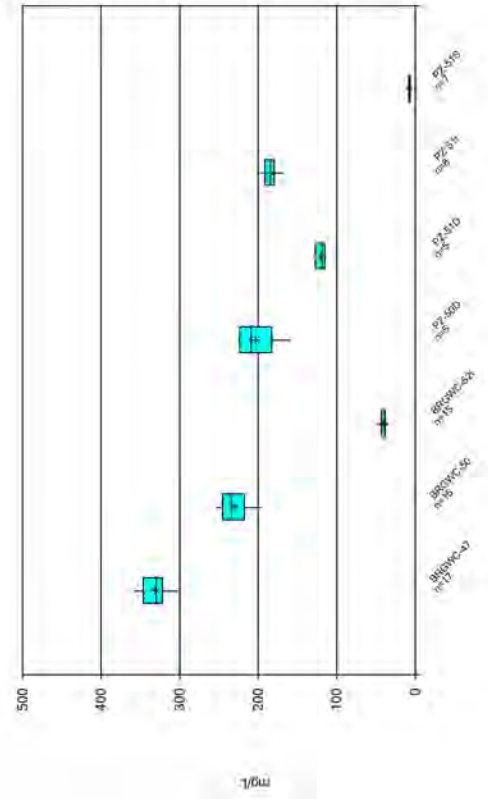
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



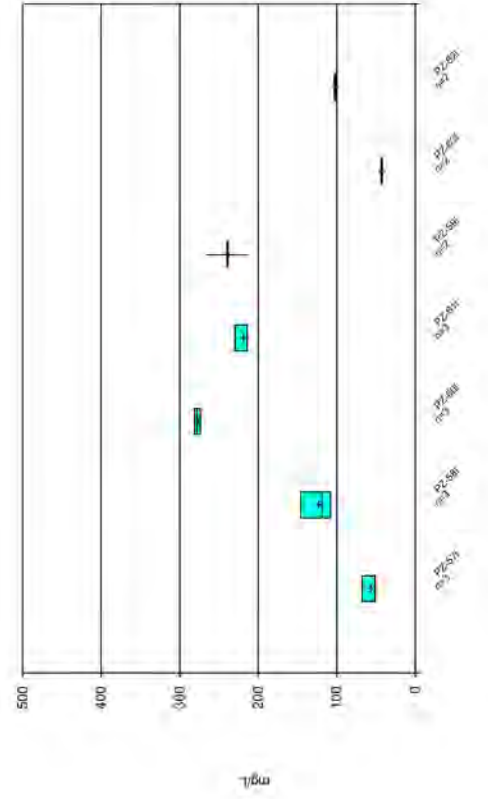
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



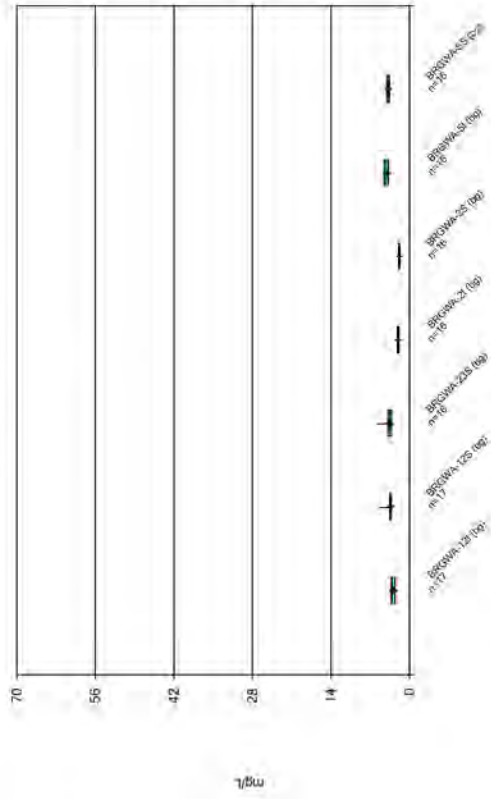
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



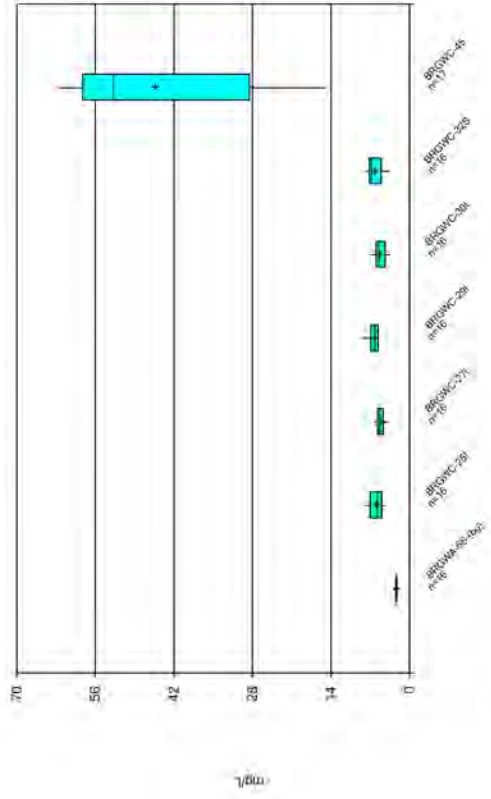
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



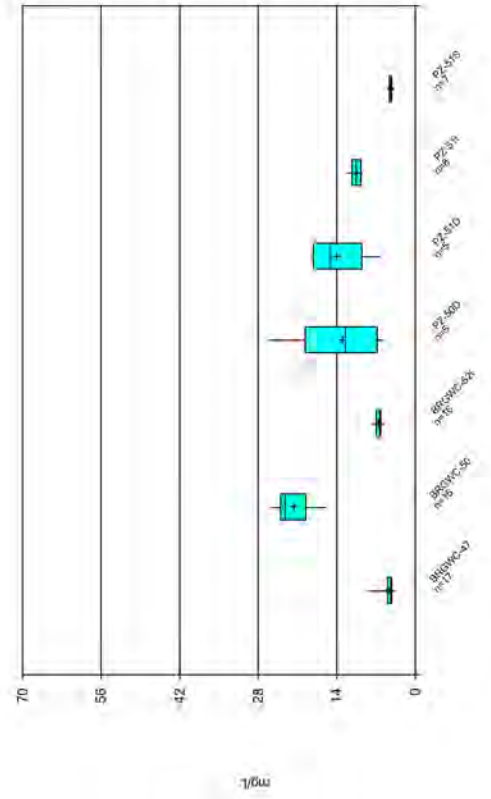
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



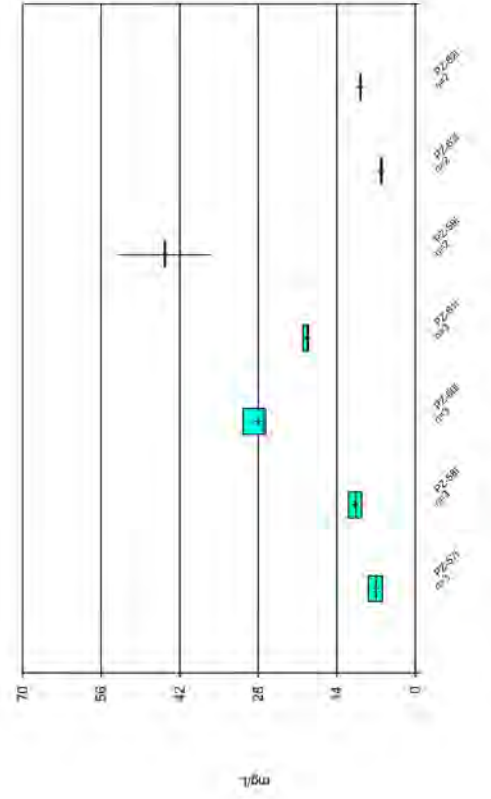
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



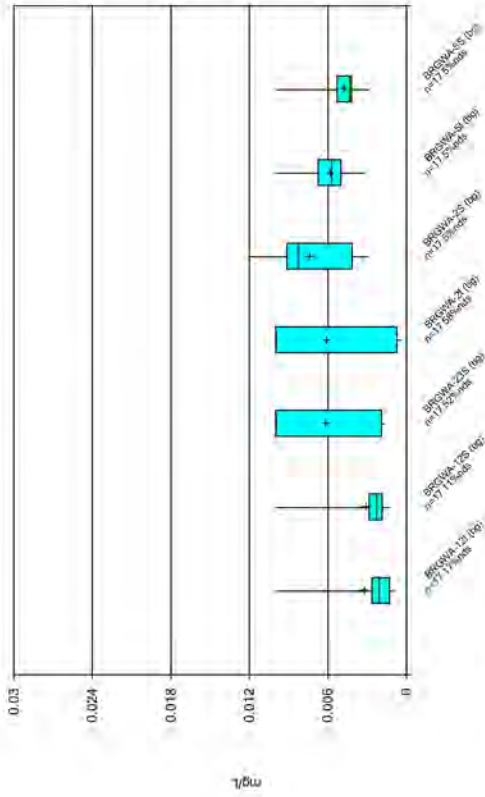
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



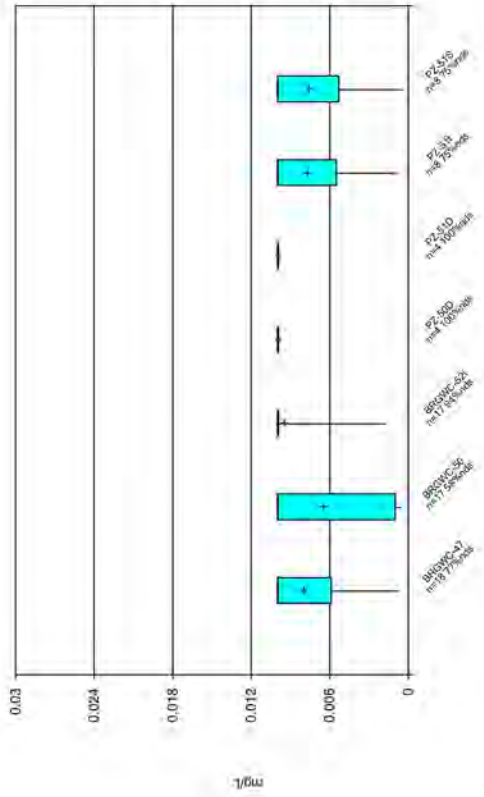
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



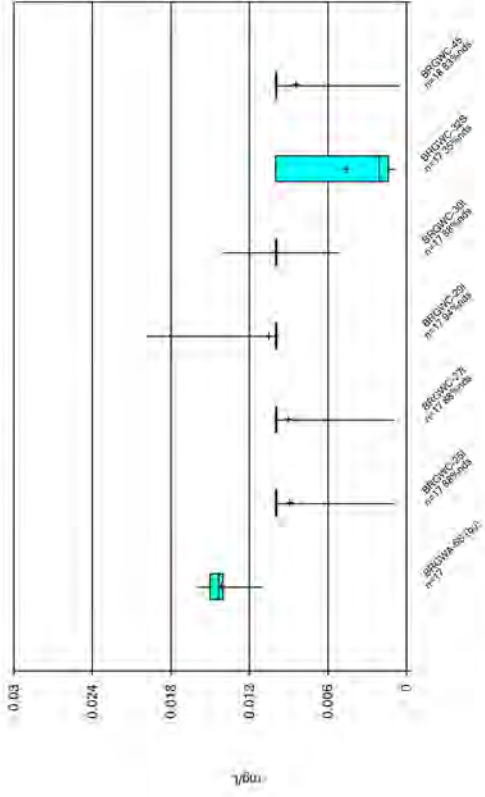
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



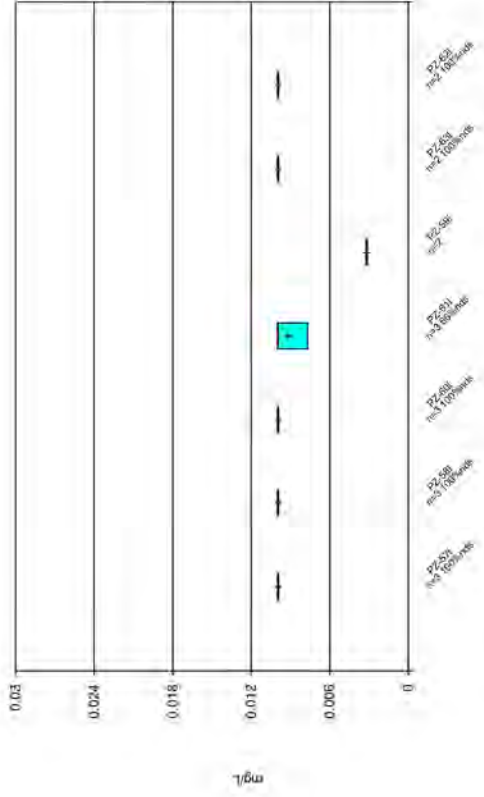
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



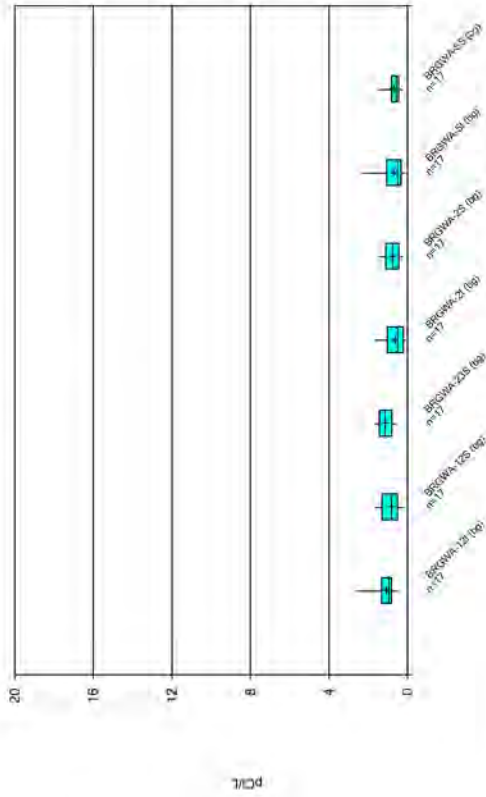
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



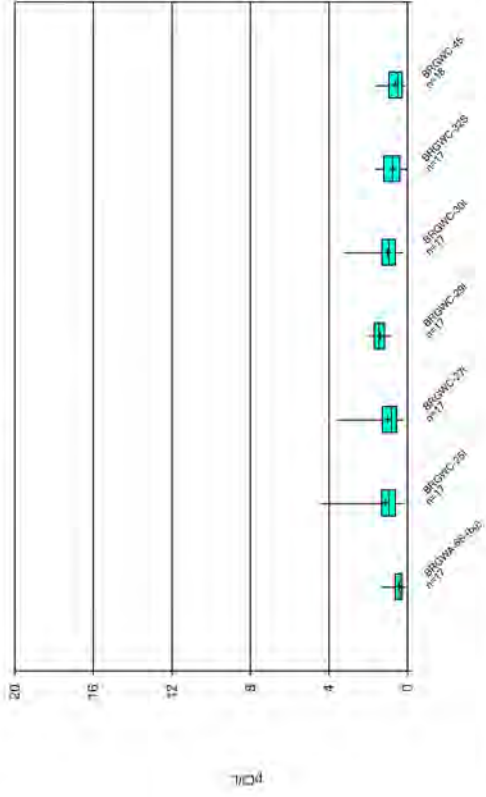
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



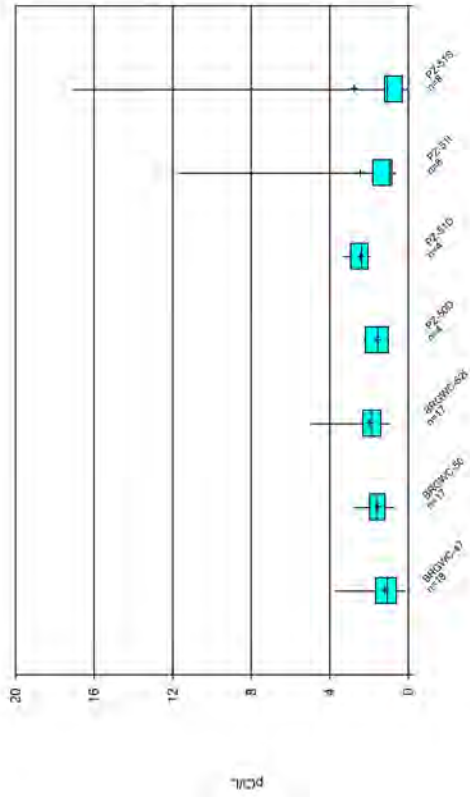
Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 3:46 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



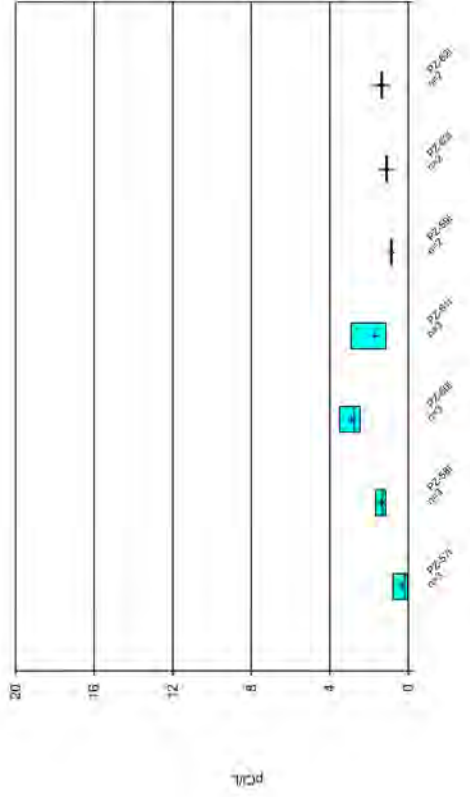
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



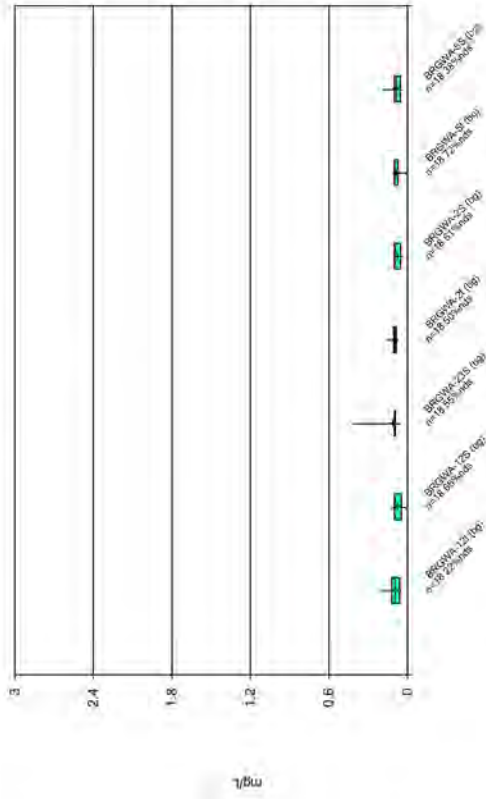
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



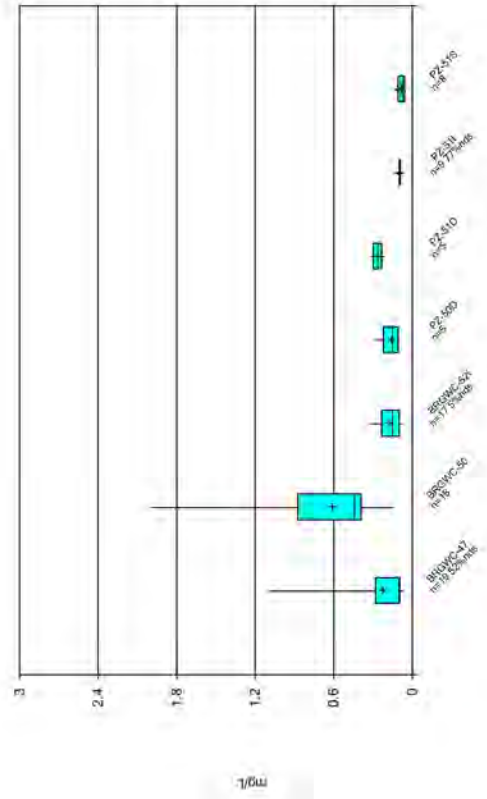
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



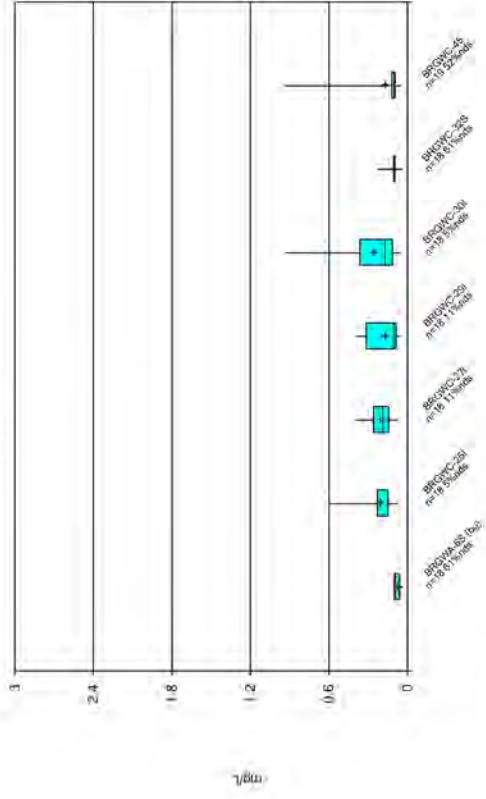
Constituent: Fluoride Analysis Run 11/4/2022 3:46 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



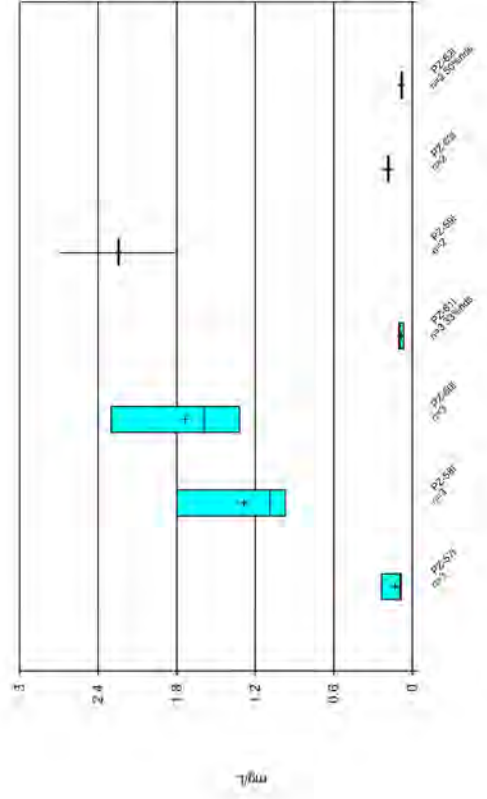
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



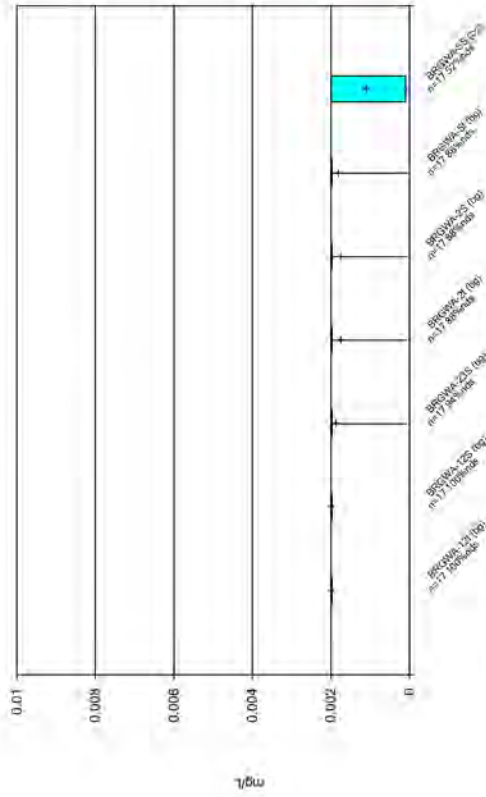
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



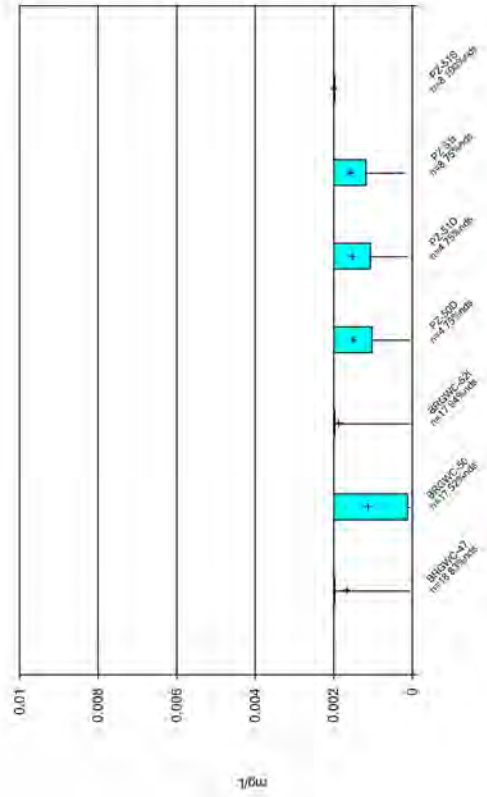
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



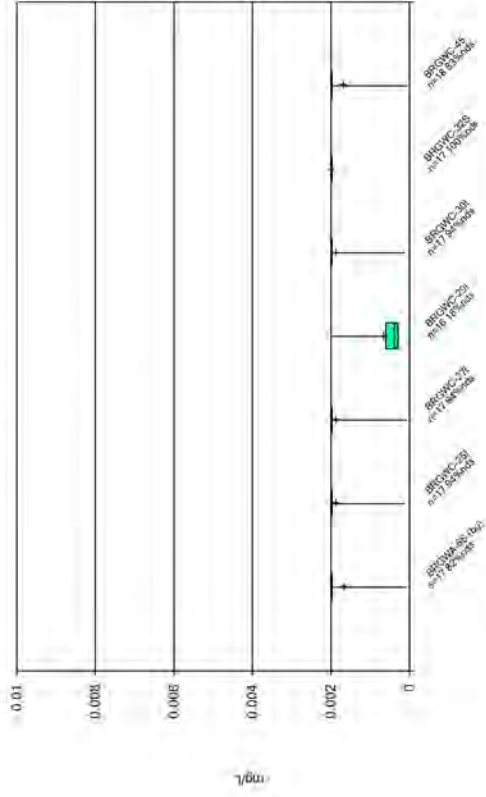
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



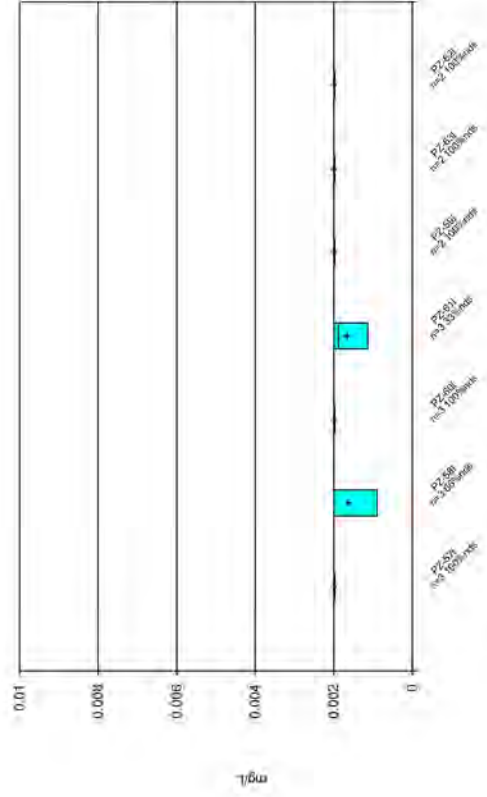
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



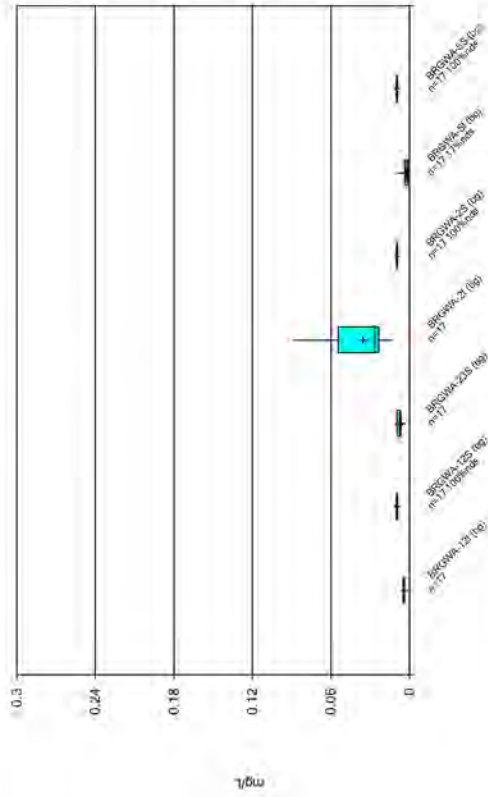
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



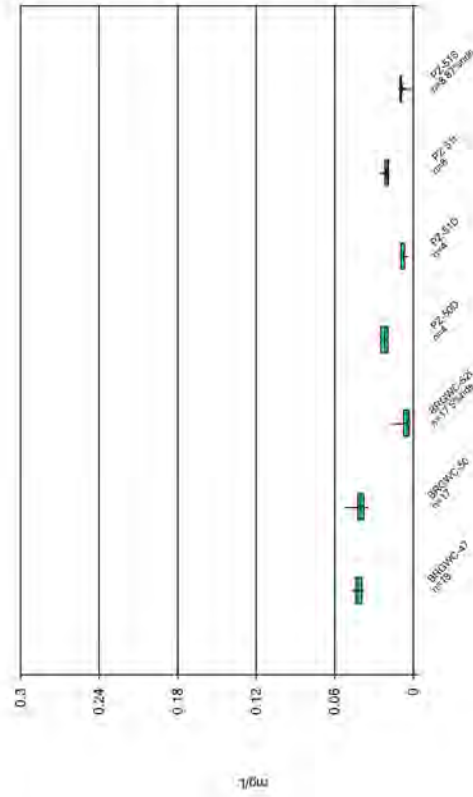
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



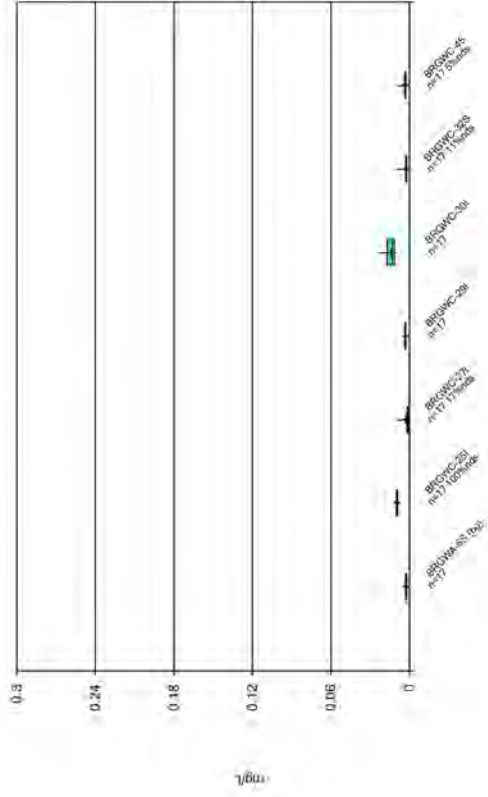
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



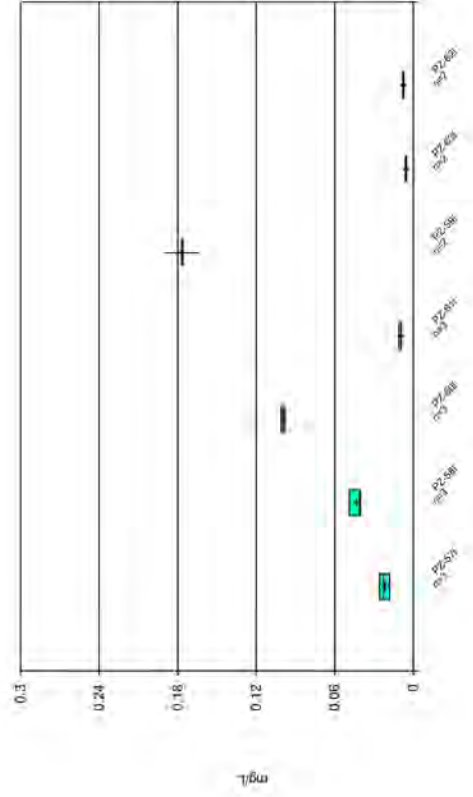
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



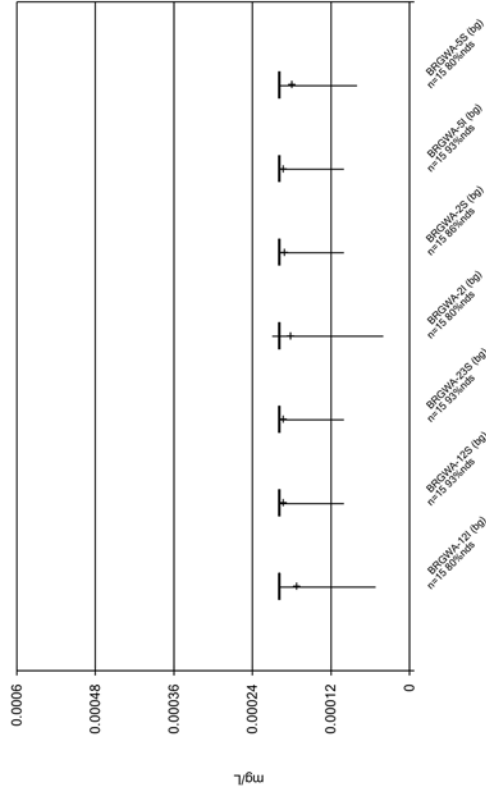
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



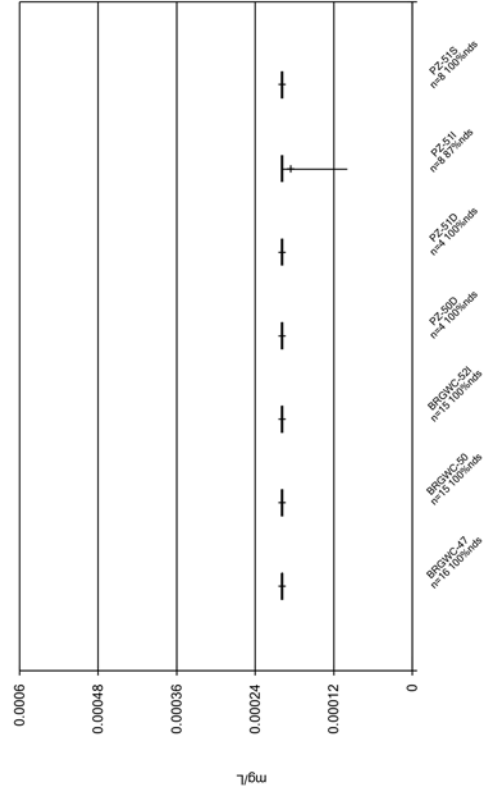
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



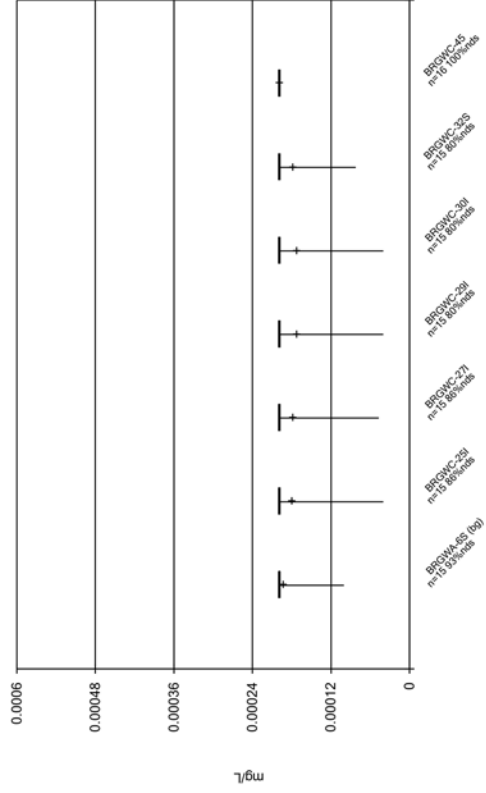
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



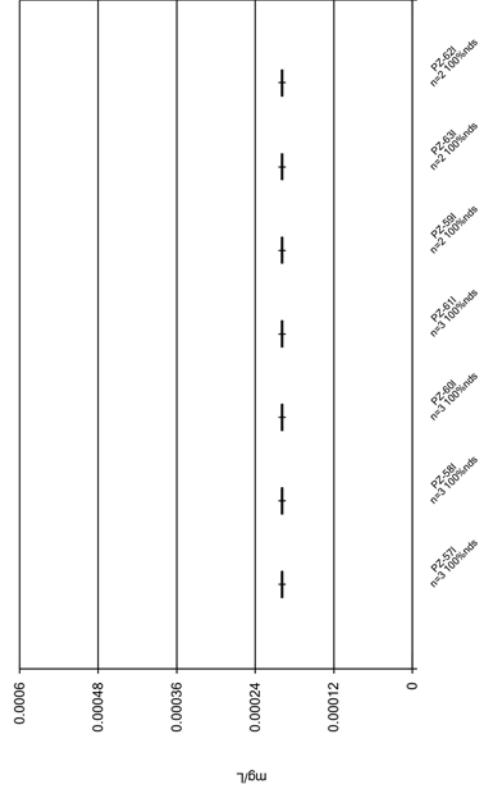
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



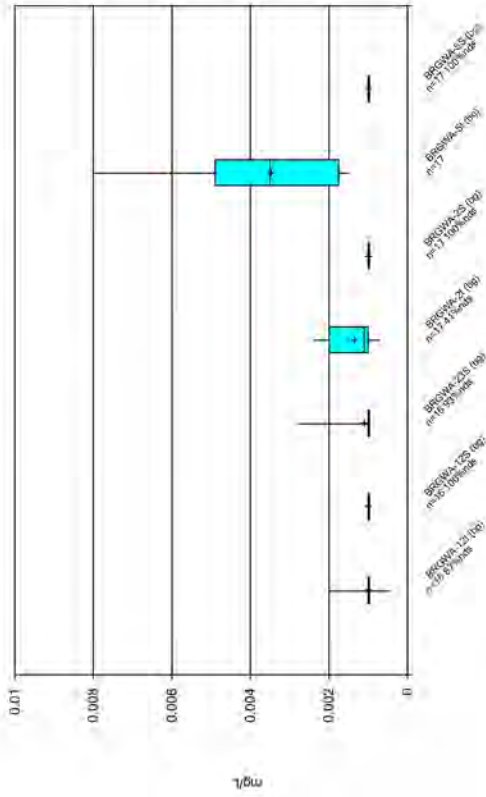
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



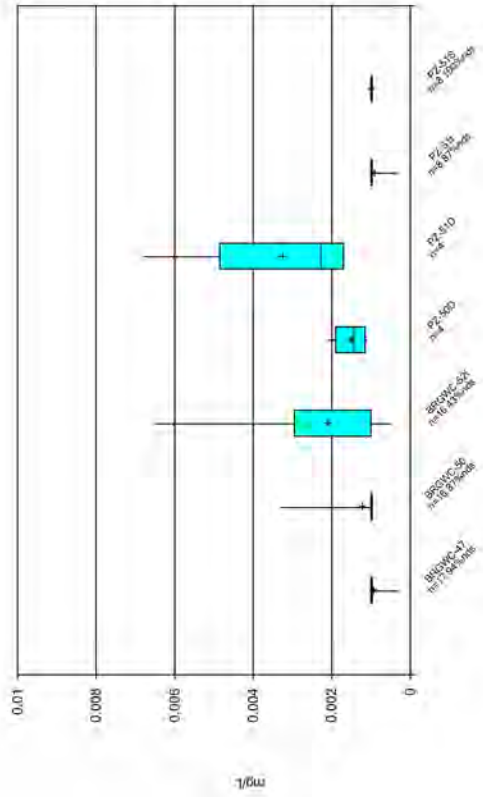
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



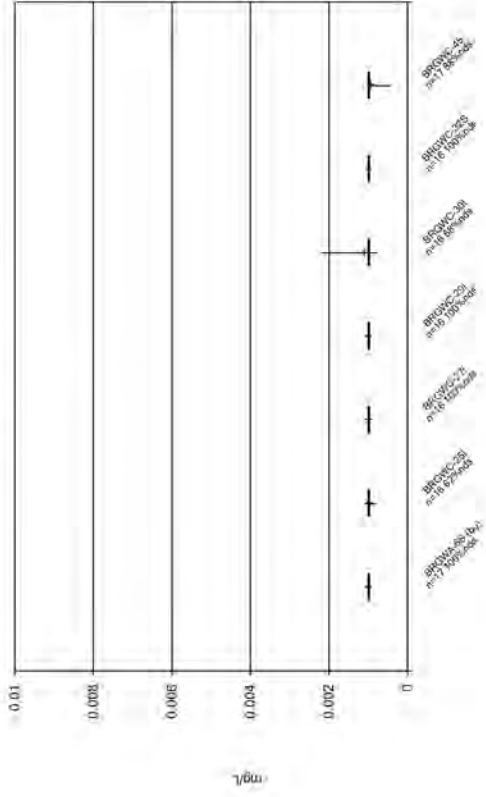
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



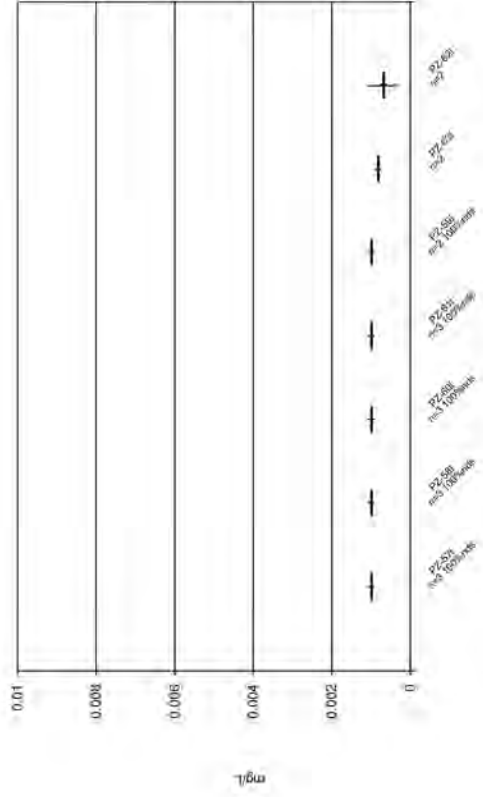
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Box & Whiskers Plot



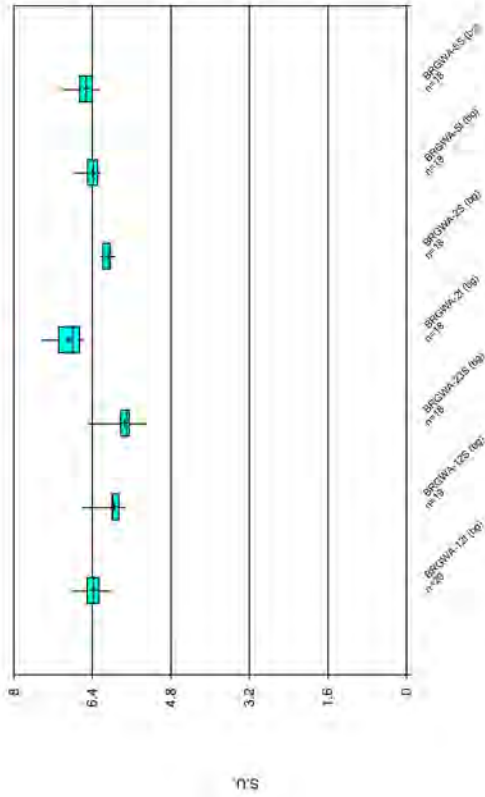
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



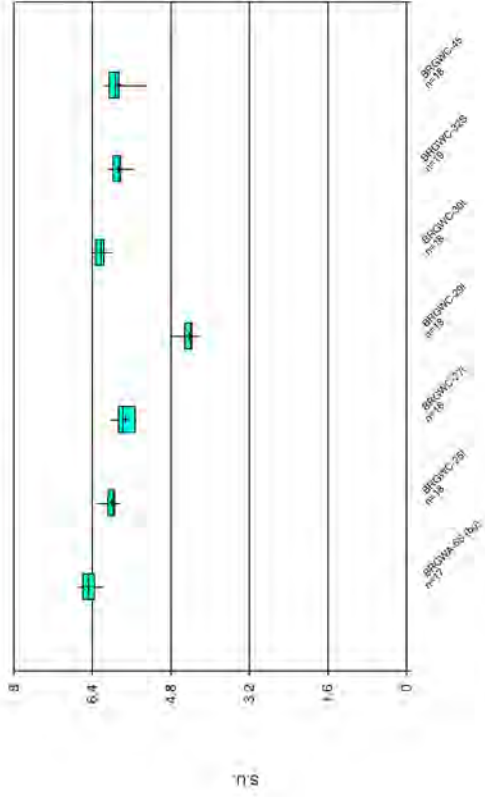
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



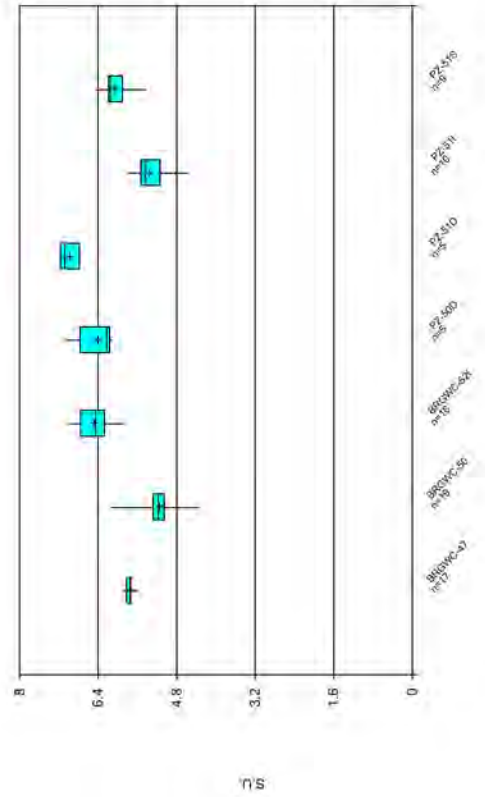
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



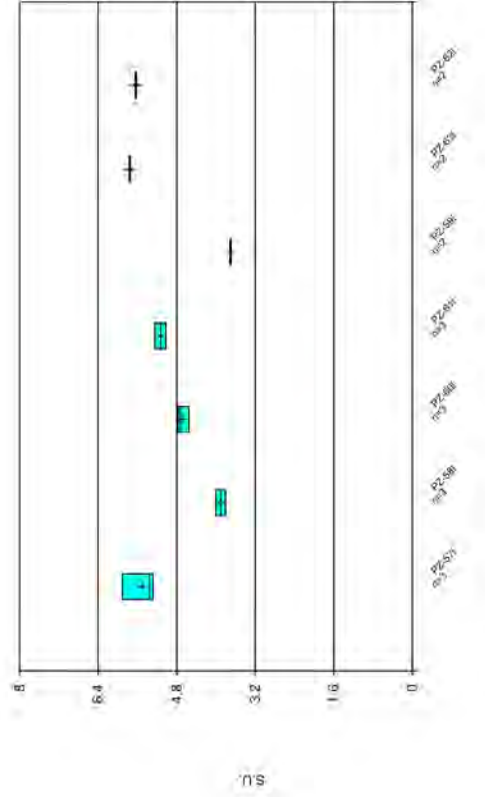
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



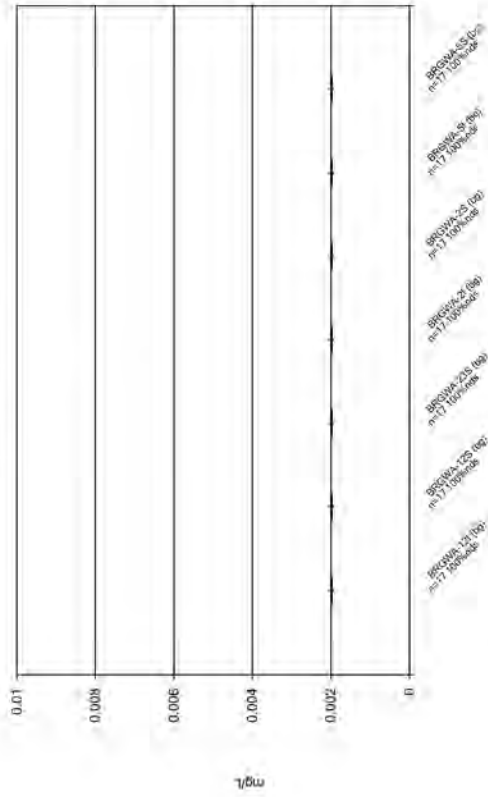
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



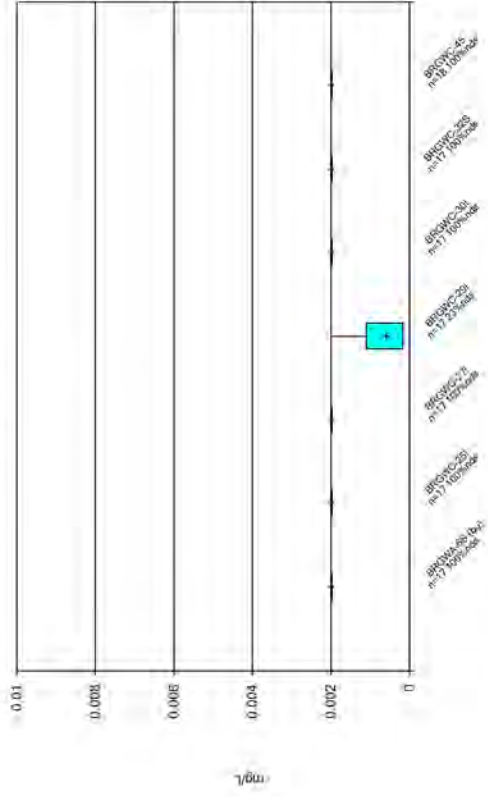
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Box & Whiskers Plot



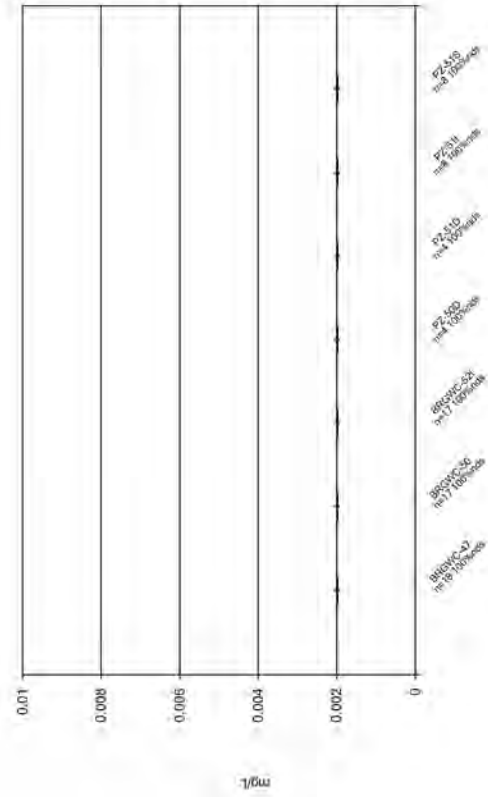
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Box & Whiskers Plot



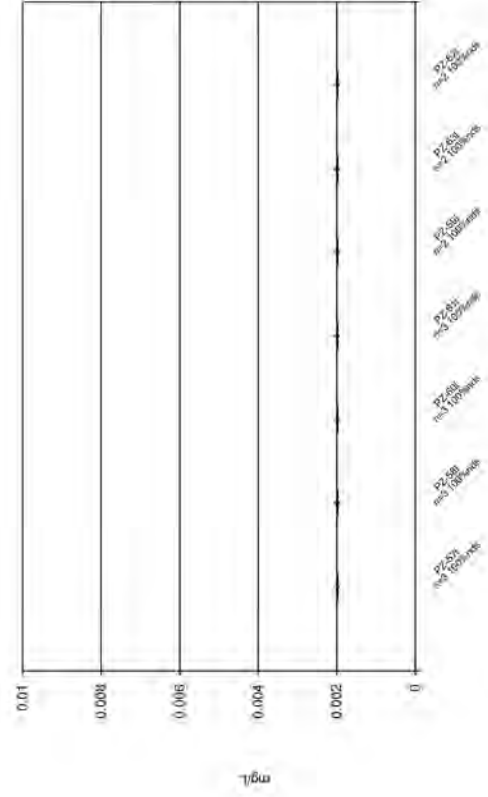
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Box & Whiskers Plot



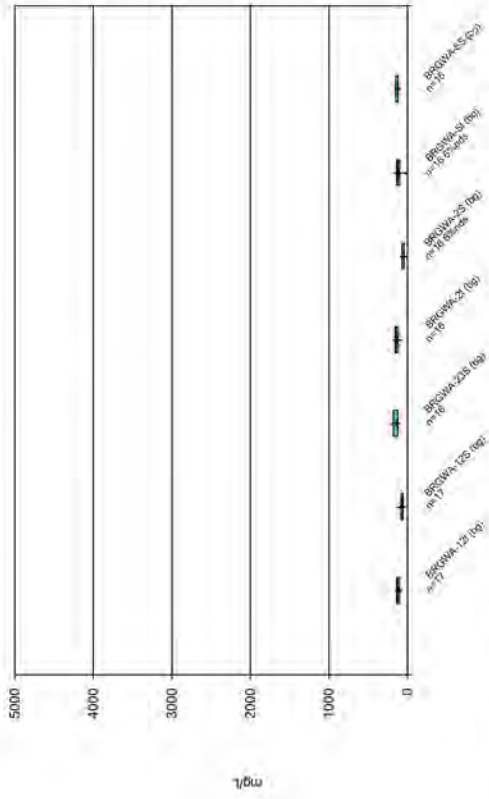
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



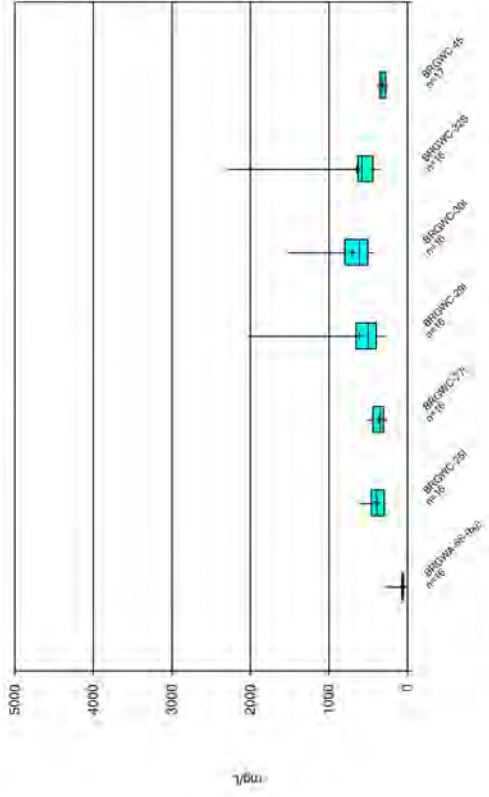
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



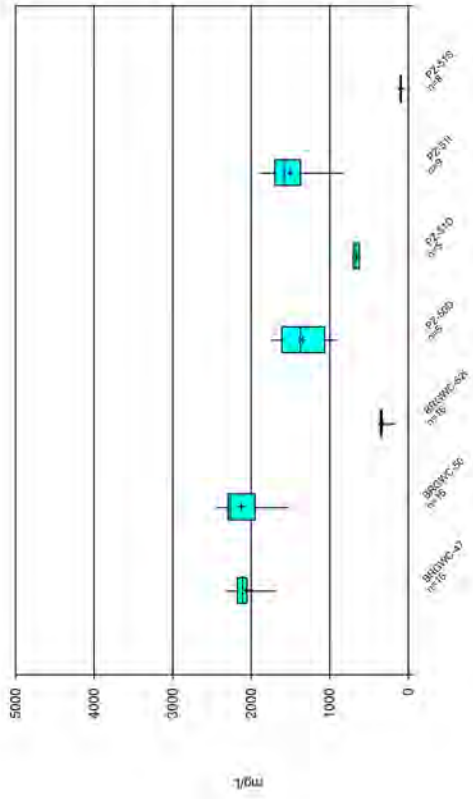
Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:47 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



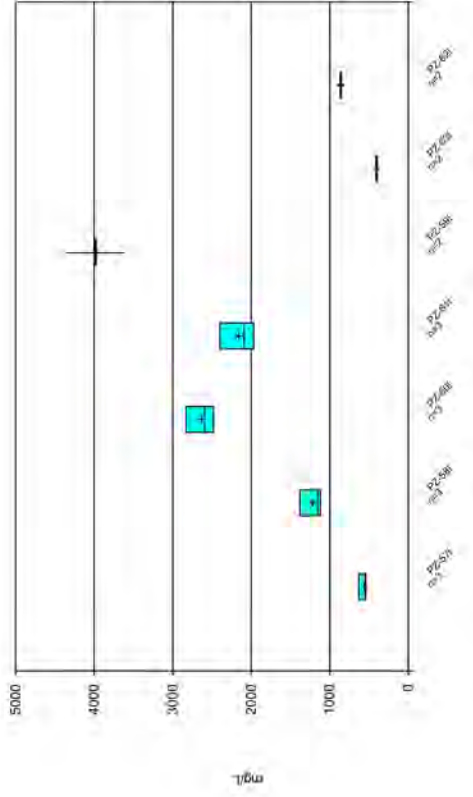
Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:47 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:47 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 3:47 PM View: Pond BCD
Plant Branch Client: Southern Company Data: Plant Branch AP

FIGURE C.

Outlier Summary

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:50 PM

	BRGWC-521 Calcium (mg/L)	BRGWA-51 Cobalt (mg/L)	BRGWC-521 Fluoride (mg/L)	BRGWC-291 Lead (mg/L)	BRGWC-45 Lithium (mg/L)	BRGWC-50 Sulfate (mg/L)	BRGWC-47 Total Dissolved Solids (mg/L)
11/16/2016	<0.01 (o)						
2/13/2018	<0.01 (o)						
2/14/2018			<0.005 (o)				
6/27/2018					31 (OX)		
7/31/2018				<0.25 (o)			
8/10/2018	410 (O)	1.6 (O)					
1/16/2019					589 (O)		

FIGURE D.

Appendix III Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:39 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)	BRGWC-25I	0.068	n/a	8/23/2022	1.38	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	8/25/2022	1.03	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	8/24/2022	1.13	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	8/24/2022	2.15	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	8/25/2022	1.07	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	8/23/2022	0.547	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	8/24/2022	0.406	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	8/25/2022	1.56	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	8/23/2022	51.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	8/25/2022	64	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	8/24/2022	61	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	8/24/2022	316	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	8/25/2022	48.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	8/25/2022	33.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	8/23/2022	323	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	8/24/2022	215	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	8/25/2022	38.3	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-29I	5.8	n/a	8/24/2022	5.84	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-45	5.8	n/a	8/25/2022	14.9	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-50	5.8	n/a	8/24/2022	15.8	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-52I	5.8	n/a	8/25/2022	6.27	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	8/24/2022	0.497	Yes	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-29I	7.04	5.588	8/24/2022	4.39	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-50	7.04	5.588	8/24/2022	5.01	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-25I	89	n/a	8/23/2022	158	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-27I	89	n/a	8/25/2022	176	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-29I	89	n/a	8/24/2022	298	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-30I	89	n/a	8/24/2022	935	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-32S	89	n/a	8/25/2022	254	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-45	89	n/a	8/25/2022	114	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-47	89	n/a	8/23/2022	1410	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-50	89	n/a	8/24/2022	1400	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-52I	89	n/a	8/25/2022	142	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-25I	299	n/a	8/23/2022	315	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-27I	299	n/a	8/25/2022	311	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-29I	299	n/a	8/24/2022	383	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-30I	299	n/a	8/24/2022	1540	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-32S	299	n/a	8/25/2022	437	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-47	299	n/a	8/23/2022	2060	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-50	299	n/a	8/24/2022	1990	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:39 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)	BRGWC-25I	0.068	n/a	8/23/2022	1.38	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	8/25/2022	1.03	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	8/24/2022	1.13	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	8/24/2022	2.15	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	8/25/2022	1.07	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	8/25/2022	0.0458	No	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	8/23/2022	0.547	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	8/24/2022	0.406	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	8/25/2022	1.56	Yes	128	n/a	n/a	53.91	n/a	n/a	0.0001206	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	8/23/2022	51.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	8/25/2022	64	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	8/24/2022	61	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	8/24/2022	316	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	8/25/2022	48.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	8/25/2022	33.5	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	8/23/2022	323	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	8/24/2022	215	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	8/25/2022	38.3	Yes	130	n/a	n/a	4.615	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-25I	5.8	n/a	8/23/2022	5.38	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-27I	5.8	n/a	8/25/2022	4.65	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-29I	5.8	n/a	8/24/2022	5.84	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-30I	5.8	n/a	8/24/2022	4.91	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-32S	5.8	n/a	8/25/2022	3.96	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-45	5.8	n/a	8/25/2022	14.9	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-47	5.8	n/a	8/23/2022	4.49	No	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-50	5.8	n/a	8/24/2022	15.8	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-52I	5.8	n/a	8/25/2022	6.27	Yes	130	n/a	n/a	0	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	8/23/2022	0.186	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	8/25/2022	0.234	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	8/24/2022	0.103	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	8/24/2022	0.318	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	8/25/2022	0.138	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	8/25/2022	0.166	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	8/23/2022	0.1ND	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	8/24/2022	0.497	Yes	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	8/25/2022	0.157	No	144	n/a	n/a	53.47	n/a	n/a	0.00009487	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-25I	7.04	5.588	8/23/2022	6.11	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-27I	7.04	5.588	8/25/2022	6.03	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-29I	7.04	5.588	8/24/2022	4.39	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-30I	7.04	5.588	8/24/2022	6.38	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-32S	7.04	5.588	8/25/2022	6.06	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-45	7.04	5.588	8/25/2022	5.74	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-47	7.04	5.588	8/23/2022	5.61	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-50	7.04	5.588	8/24/2022	5.01	Yes	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-52I	7.04	5.588	8/25/2022	6.21	No	146	6.314	0.3783	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-25I	89	n/a	8/23/2022	158	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-27I	89	n/a	8/25/2022	176	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-29I	89	n/a	8/24/2022	298	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-30I	89	n/a	8/24/2022	935	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-32S	89	n/a	8/25/2022	254	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-45	89	n/a	8/25/2022	114	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-47	89	n/a	8/23/2022	1410	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-50	89	n/a	8/24/2022	1400	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-52I	89	n/a	8/25/2022	142	Yes	130	n/a	n/a	14.62	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2

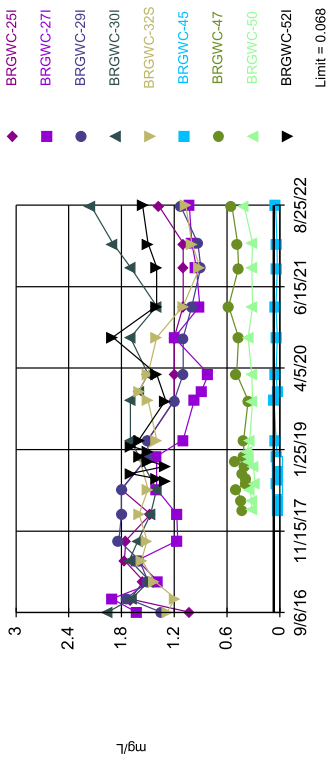
Appendix III Interwell Prediction Limits - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:39 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Total Dissolved Solids (mg/L)	BRGWC-25I	299	n/a	8/23/2022	315	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-27I	299	n/a	8/25/2022	311	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-29I	299	n/a	8/24/2022	383	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-30I	299	n/a	8/24/2022	1540	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-32S	299	n/a	8/25/2022	437	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-45	299	n/a	8/25/2022	248	No	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-47	299	n/a	8/23/2022	2060	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-50	299	n/a	8/24/2022	1990	Yes	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-52I	299	n/a	8/25/2022	296	No	130	n/a	n/a	1.538	n/a	n/a	0.0001171	NP Inter (normality) 1 of 2

Exceeds Limit: BRGWC-251, BRGWC-271,
BRGWC-291, BRGWC-301, BRGWC-32S,
BRGWC-47, BRGWC-50, BRGWC-521

Prediction Limit
Interwell Non-parametric

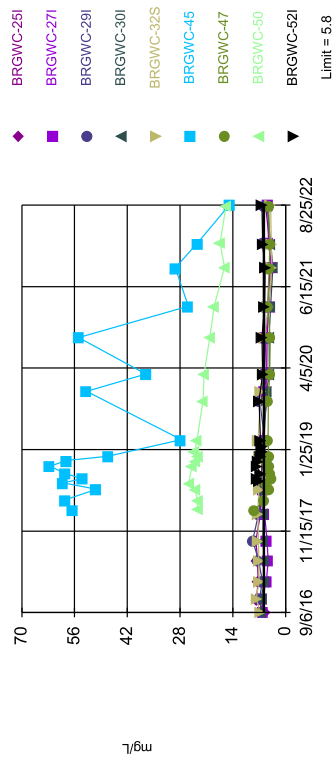


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 128 background values. 53.91% NDS. Annual per-constituent alpha = 0.002169. Individual comparison alpha = 0.0001206 (1 of 2). Comparing 9 points to limit.

Constituent: Boron Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-291, BRGWC-45,
BRGWC-50, BRGWC-521

Prediction Limit
Interwell Non-parametric

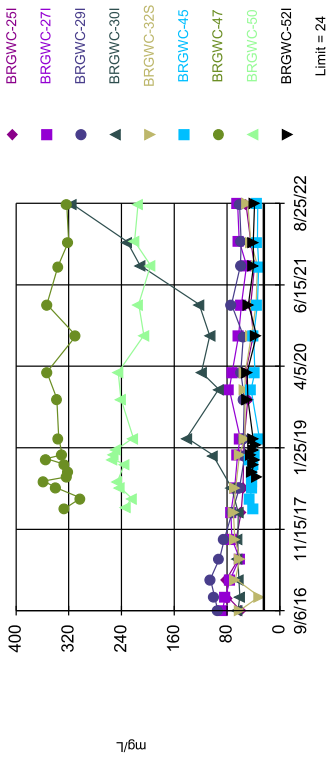


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 130 background values. Annual per-constituent alpha = 0.002106. Individual comparison alpha = 0.0001171 (1 of 2). Comparing 9 points to limit.

Constituent: Chloride Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-251, BRGWC-271,
BRGWC-291, BRGWC-301, BRGWC-32S,
BRGWC-45, BRGWC-47, BRGWC-50,...

Prediction Limit
Interwell Non-parametric

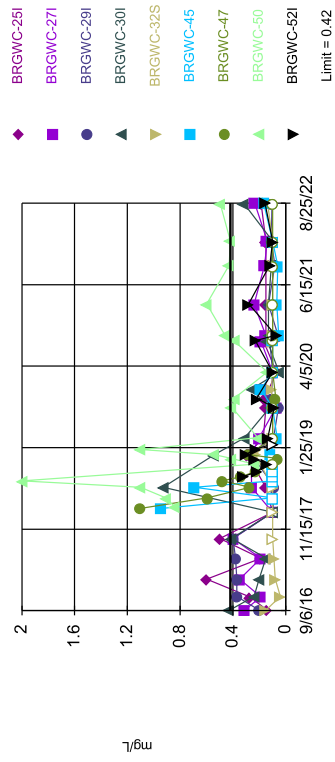


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 130 background values. 4.615% NDS. Annual per-constituent alpha = 0.002106. Individual comparison alpha = 0.0001171 (1 of 2). Comparing 9 points to limit.

Constituent: Calcium Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-50

Prediction Limit
Interwell Non-parametric

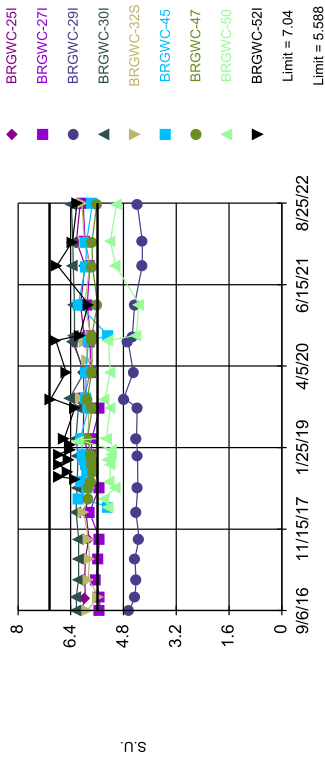


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 144 background values. 53.47% NDS. Annual per-constituent alpha = 0.001706. Individual comparison alpha = 0.00009487 (1 of 2). Comparing 9 points to limit.

Constituent: Fluoride Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limits: BRGWC-291, BRGWC-50

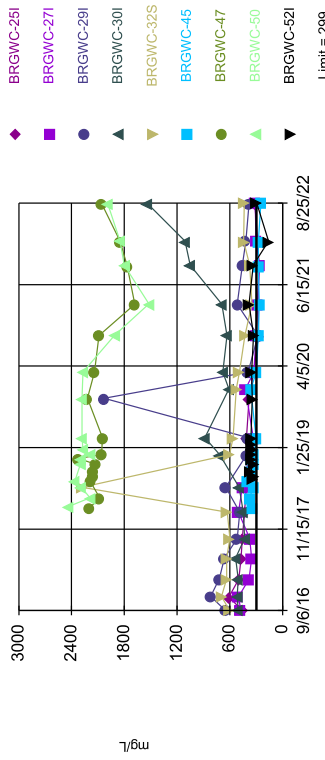
Prediction Limit
Interwell Parametric



Constituent: pH, Field Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-251, BRGWC-271, BRGWC-291, BRGWC-301, BRGWC-325, BRGWC-47, BRGWC-50

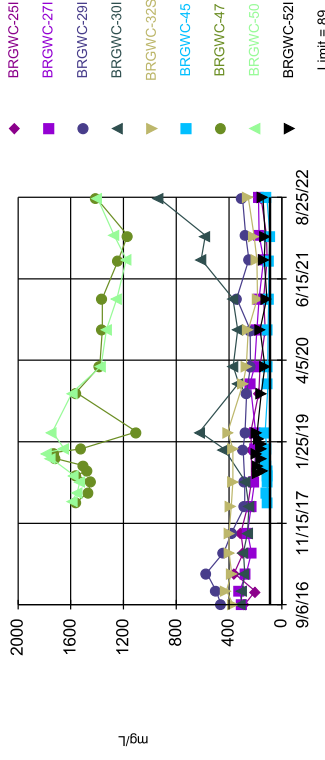
Prediction Limit
Interwell Non-parametric



Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-251, BRGWC-271, BRGWC-291, BRGWC-301, BRGWC-325, BRGWC-45, BRGWC-47, BRGWC-50,...

Prediction Limit
Interwell Non-parametric



Constituent: Sulfate Analysis Run 9/30/2022 4:33 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-6S (bg)	BRGWA-23S (bg)	BRGWC-30I
8/31/2016	<0.015	<0.015	<0.015	0.0072 (J)					
9/1/2016					0.0093 (J)	<0.015	<0.015		
9/6/2016								0.0362 (J)	1.96
9/8/2016									
11/15/2016	0.0085 (J)						0.0123 (J)		
11/16/2016		0.0187 (J)	0.0109 (J)	0.0117 (J)	0.0127 (J)	0.0081 (J)			
11/17/2016								0.0617	
11/18/2016									
11/21/2016									1.68
2/20/2017	0.0093 (J)	0.0066 (J)					0.0157 (J)		
2/21/2017			<0.015	0.0088 (J)	0.0071 (J)	<0.015		0.0245 (J)	
2/22/2017									1.48
6/12/2017	<0.015	<0.015		0.0133 (J)			<0.015		
6/13/2017			<0.015			<0.015		<0.015	
6/14/2017					0.0078 (J)				1.71
9/26/2017	<0.015	<0.015	<0.015	0.0093 (J)	<0.015	<0.015	<0.015	<0.015	
9/27/2017									1.61
2/13/2018	<0.015	<0.015	<0.015	0.0141 (J)			<0.015		
2/14/2018					0.0068 (J)	<0.015		0.0314 (J)	1.47
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	0.0056 (J)	0.0042 (J)	<0.015	0.012 (J)	0.008 (J)	<0.015	0.0041 (J)	0.062	
6/27/2018									
6/28/2018									1.4
7/31/2018									
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	0.0062 (J)	<0.015	<0.015	0.0086 (J)	0.0083 (J)	0.0053 (J)	<0.015	0.055	1.6
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	<0.015	<0.015	<0.015	0.00565 (JD)	0.008 (J)	<0.015	<0.015	0.068	
3/20/2019									1.7
10/15/2019	0.006 (J)	<0.015	<0.015	0.0067 (J)	0.006 (J)	<0.015	0.01 (J)	0.022 (J)	
10/16/2019									
10/17/2019									1.7
12/3/2019									
12/4/2019									1.6
3/3/2020	<0.015	<0.015	<0.015	0.0082 (J)	0.01 (J)	0.0065 (J)	<0.015		
3/4/2020								0.044 (J)	
3/5/2020									1.5
9/15/2020	<0.015	<0.015	<0.015	<0.015	0.0071 (J)	<0.015	<0.015	0.033 (J)	
9/16/2020									1.7
9/17/2020									
3/1/2021				<0.015			<0.015		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
3/2/2021				1.1	0.044	0.58		
3/3/2021	0.91	1						
3/4/2021			1.1				0.31	1.4
9/21/2021								
9/22/2021								
9/23/2021					0.029 (J)	0.47		
9/27/2021							0.32	
9/28/2021	0.95	0.9	0.91	1.1				1.4
2/1/2022								
2/2/2022			1	1.1	0.034 (J)	0.48		1.5
2/3/2022		0.93					0.31	
2/4/2022	1							
8/23/2022				1.38		0.547		
8/24/2022		1.13					0.406	
8/25/2022	1.03		1.07		0.0458			1.56

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-12S (bg)	BRGWA-12I (bg)	BRGWA-6S (bg)	BRGWA-23S (bg)	BRGWC-30I
8/31/2016	12.6	4.09	13.5	19.6					
9/1/2016					4.61	8.98	3.3		
9/6/2016								12.8	63.3
9/8/2016									
11/15/2016				21.7			3.44		
11/16/2016	12.1	4.25	14.9		4.17	15.4			
11/17/2016								19.2	
11/18/2016									
11/21/2016									60.7
2/20/2017			13.9	21.1			3.52		
2/21/2017	11.4	4.02			5	17.4		15.1	
2/22/2017									62.1
6/12/2017	9.34		13.7	21.5			3.11		
6/13/2017		3.84			4.98			10.2	
6/14/2017						18.1			63.5
9/26/2017	14.3	3.31	14.4	24	4.49	19.3	3.15	15	
9/27/2017									63.5
2/13/2018	<25	3.94	<25	<25			3.65		
2/14/2018					<25	<25		<25	62.8
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	16 (J)	3.6	13.5 (J)	23.5 (J)	6.4	15.5 (J)	3.3	18.5 (J)	
6/27/2018									
6/28/2018									73.3
7/31/2018					6.1	18.2 (J)			
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	14.5 (J)	3.8	16.4 (J)	19.8 (J)	5.5	18.7 (J)	3.5	16.8 (J)	102
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	14.3 (JD)	3.9	12.3 (J)	21.4 (J)	5.9	15.9 (J)	3.6	13.5 (J)	
3/20/2019									141
10/15/2019	15.1	3.7	14.4	20	6.2	15.9	3.5	8.6	
10/16/2019									
12/3/2019									
12/4/2019									92.6
3/3/2020	20	4	14.9	23.2	6.8	19.4	5		
3/4/2020								11.5	
3/5/2020									119
9/15/2020	14.1	3.9	12.7	16.8	5.7	14.5	3.7	10.7	
9/16/2020									106
9/17/2020									
3/1/2021	15.4						4.2		
3/2/2021		4	13.2	16.8	5.4	11.7		11.6	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-32S	BRGWC-29I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	59.4	87.2	60.5	93.9				
11/15/2016								
11/16/2016								
11/17/2016	78.4							
11/18/2016		82.4						
11/21/2016			31.1	99.1				
2/20/2017								
2/21/2017	80.9	75.1						
2/22/2017			67.3	105				
6/12/2017								
6/13/2017	62	61						
6/14/2017			60.2	91.3				
9/26/2017								
9/27/2017	65.8	72.6	68.4	84				
2/13/2018								
2/14/2018	58.8	74.1	70.2	72.1				
3/6/2018					326	39.5		
3/15/2018							233	
5/1/2018					302 (D)	45.5	225	
6/26/2018	55.5							
6/27/2018		68.2	67.1	61.1	340			
6/28/2018						41.9	242	
7/31/2018						41.5		
8/1/2018					358		246	
8/10/2018								410 (O)
8/23/2018					323	42.3		33.9
9/19/2018					321	41.9		42.3
10/29/2018					326	40.8	236	39.8
11/28/2018					354	45.1	254	38.2
12/18/2018	54.7			52.9				
12/19/2018			61.2		330		252	
12/20/2018		63.9				39		43.2
1/16/2019							248	
1/17/2019								39.4
2/13/2019								36.9
3/19/2019		60.2			335			
3/20/2019	53.95 (D)		52.8	55.4		31.2	222	40.85 (D)
10/15/2019	48.3							
10/16/2019				54	338		241	48.4
12/3/2019						43.7		
12/4/2019		76.8	52.7					
3/3/2020								
3/4/2020	52	72.3		59.3	353		245	49.5
3/5/2020			52.1			37.9		
9/15/2020	40.1			55.1				
9/16/2020		62.5	43.1		309	39.7		
9/17/2020							206	35.4
3/1/2021								
3/2/2021	44.1				353	33.9		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-32S	BRGWC-29I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
3/3/2021		58.2		73.3				
3/4/2021			35.7				214	47.5
9/21/2021								
9/22/2021								
9/23/2021					336	32		
9/27/2021							196	
9/28/2021	38.4	50.4	33.9	59.5				39.5
2/1/2022								
2/2/2022	44.3		44.2		320	33.8		40.1
2/3/2022				58.7			220	
2/4/2022		61.7						
8/23/2022	51.5				323			
8/24/2022				61			215	
8/25/2022		64	48.5			33.5		38.3

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-12I (bg)	BRGWA-6S (bg)	BRGWA-12S (bg)	BRGWC-30I	BRGWA-23S (bg)
8/31/2016	3.6	4.4	2	2.3					
9/1/2016					3.3	2.5	3.5		
9/6/2016								6.7	5.8
9/8/2016									
11/15/2016	4					2.3			
11/16/2016		4.4	1.8	2	3.6		3.6		
11/17/2016									4.3
11/18/2016									
11/21/2016								6.5	
2/20/2017	3.9	4.8				2.4			
2/21/2017			1.8	2	3.2		3.2		3.5
2/22/2017								5.6	
6/12/2017	3.8	4.2		2.1		2.2			
6/13/2017			1.7				3.3		3.2
6/14/2017					3.1			5.7	
9/26/2017	4.1	4.4	1.8	2	3.3	2.3	3.3		3.5
9/27/2017								6	
2/13/2018	4.1	4.7	1.7	2.1		2.3			
2/14/2018					3.1		3.5	5.9	3.8
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	4.1	4.5	2.2	2.4	3.4	2.6	3.4		3.8
6/27/2018									
6/28/2018								7 (J-X)	
7/31/2018					2.6		2.9		
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	3.8	4.5	1.9	1.8	2.8	2.3	2.9	5.8	3.9
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	4.2	4.5	2	2.45 (D)	3.2	2.6	3.5		3.8
3/20/2019								5.8	
10/15/2019	3.7	4.2	1.9	2.2	3.1	2.4	3.4		3.5
10/16/2019									
12/3/2019									
12/4/2019								5	
3/3/2020	3.6	3.9	1.9	1.9	2.6	2.9	3.2		
3/4/2020									3.3
3/5/2020								4.3	
9/15/2020	3.7	3.7	1.7	1.9	2.4	2.3	3.5		3.1
9/16/2020								4.4	
9/17/2020									
3/1/2021				1.8		2.1			
3/2/2021	3.7	3.8	1.7		2.6		3.7		3.5

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	6	6.4	6.8	5.5				
11/15/2016								
11/16/2016								
11/17/2016				7.7				
11/18/2016	6.3							
11/21/2016		6.9	7.8					
2/20/2017								
2/21/2017	5.1			7.3				
2/22/2017		6.2	7					
6/12/2017								
6/13/2017	4.7			7.5				
6/14/2017		7.2	7.1					
9/26/2017								
9/27/2017	4.9	8.7	7.2	7.9				
2/13/2018								
2/14/2018	5.6	7.2	7.4	6.7				
3/6/2018					56.6	8.4		
3/15/2018							23.3	
5/1/2018					58.5	5.7 (JXD)	23.4	
6/26/2018				6.7				
6/27/2018	5.9	6.3	7.1			4.4		
6/28/2018					50.2 (J-X)		24 (J-X)	
7/31/2018					59			
8/1/2018						5.2	25.7	
8/10/2018								6.9
8/23/2018					54	3.6		7.5
9/19/2018					58.4	4.1		6.6
10/29/2018					62.6	4.3	24.9	7.8
11/28/2018					58.1	5.1	24	7.2
12/18/2018		5.4		6.2				
12/19/2018			7 (J-X)			4.5 (J-X)	23.3 (J-X)	
12/20/2018	5.6 (J-X)				47.2 (J-X)			6.6 (J-X)
1/16/2019							24.1	
1/17/2019								6.4
2/13/2019								6.5
3/19/2019	5.8					4.7		
3/20/2019		5.6	7.3	6.3 (D)	27.7		23.5	6.7 (D)
10/15/2019				5				
10/16/2019		6.9				4.6	21.9	7
12/3/2019					52.8			
12/4/2019	5.6		6.6					
3/3/2020								
3/4/2020	5.1	5.8		5		4.2	21.6	6.1
3/5/2020			6		37.1			
9/15/2020		5.5		4.9				
9/16/2020	5.4		5.6		54.9	4.1		
9/17/2020							20.1	6.3
3/1/2021								
3/2/2021				4.5	25.8	4.8		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
3/3/2021	4.5	5.6						
3/4/2021			4.6				18.9	5.6
9/21/2021								
9/22/2021								
9/23/2021					29.3	4.3		
9/27/2021							16.2	
9/28/2021	3.7	5.4	3.6	4.2				5.5
2/1/2022								
2/2/2022			3.8	4.2	23.4	4.2		6.1
2/3/2022		6.1					17.4	
2/4/2022	4.6							
8/23/2022				5.38		4.49		
8/24/2022		5.84					15.8	
8/25/2022	4.65		3.96		14.9			6.27

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	0.14 (J)	0.2 (J)	0.15 (J)	0.31				
11/15/2016								
11/16/2016								
11/17/2016	0.27 (J)							
11/18/2016				0.19 (J)				
11/21/2016		0.37	0.04 (J)					
2/20/2017								
2/21/2017	0.6			0.35				
2/22/2017		0.37	0.08 (J)					
6/12/2017								
6/13/2017	0.19 (J)			0.19 (J)				
6/14/2017		0.38	0.09 (J)					
9/26/2017								
9/27/2017	0.5	0.4	<0.1	0.4				
2/13/2018								
2/14/2018	<0.1	<0.1	<0.1	<0.1				
3/6/2018					0.94	1.1		
3/15/2018							0.84 (JX)	
5/1/2018					<0.1	0.595 (D)	0.91	
6/26/2018	0.15 (J)							
6/27/2018		0.085 (J)	<0.1	0.26 (J)		0.27 (J)		
6/28/2018					0.69 (J+X)		1.1 (J+X)	
7/31/2018					<0.1			
8/1/2018						0.48	2	
8/10/2018								1.6 (O)
8/23/2018					<0.1	0.34		0.32
9/19/2018					<0.1	0.23 (J)		0.22 (J)
10/29/2018					<0.1	<0.1	0.24 (J)	0.14 (J)
11/28/2018					<0.1	0.063 (J)	0.41	0.24 (J)
12/18/2018	0.29 (J)	0.26 (J)						
12/19/2018			0.23 (J)			0.28 (J)	0.54	
12/20/2018				0.26 (J)	0.12 (J)			0.3
1/16/2019							1.1	
1/17/2019								0.23 (J)
2/13/2019								<0.1
3/19/2019				0.2 (J)		<0.1		
3/20/2019	0.17 (JD)	0.091 (J)	<0.1		0.066 (J)		0.21 (J)	0.135 (JD)
8/27/2019	0.15 (J)		<0.1					
8/28/2019		0.055 (J)		0.074 (J)	<0.1	<0.1		
8/29/2019							0.41	0.087 (J)
10/15/2019	0.16 (J)							
10/16/2019		0.11 (J)				0.076 (J)	0.39	0.22 (J)
12/3/2019					0.19 (J)			
12/4/2019			0.11 (J)	0.18 (J)				
3/3/2020								
3/4/2020	0.07 (J)	<0.1		<0.1		<0.1	0.14 (J)	0.1 (J)
3/5/2020			<0.1		<0.1			
8/18/2020								
8/19/2020	0.17	0.12	<0.1	0.19				

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/20/2020					<0.1	<0.1	0.39	0.23
9/15/2020	0.15	0.057 (J)						
9/16/2020			<0.1	0.15	0.052 (J)	<0.1		
9/17/2020							0.46	0.074 (J)
3/1/2021								
3/2/2021	0.15				0.067 (J)	<0.1		
3/3/2021		0.13		0.24				
3/4/2021			<0.1				0.6	0.28
9/21/2021								
9/22/2021								
9/23/2021					0.06 (J)	<0.1		
9/27/2021							0.43	
9/28/2021	0.15	0.081 (J)	<0.1	0.16				0.12
2/1/2022								
2/2/2022	0.15		<0.1		<0.1	<0.1		0.098 (J)
2/3/2022		0.11					0.42	
2/4/2022				0.14				
8/23/2022	0.186					<0.1		
8/24/2022		0.103					0.497	
8/25/2022			0.138	0.234	0.166			0.157

Prediction Limit

Constituent: pH, Field (S.U.) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-27I	BRGWC-32S	BRGWC-25I	BRGWC-50	BRGWC-45	BRGWC-47	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	4.62	5.51	5.89	6.07				
11/15/2016								
11/16/2016				5.96				
11/17/2016								
11/18/2016		5.53						
11/21/2016	4.44		5.56					
2/20/2017								
2/21/2017		5.63		5.98				
2/22/2017	4.42		5.87					
6/12/2017								
6/13/2017		5.57		5.96				
6/14/2017	4.45		5.83					
9/26/2017								
9/27/2017	4.33	5.53	5.87	5.85				
2/13/2018								
2/14/2018	4.42	5.83	6.01	5.94				
3/15/2018					5.26	5.26		
5/1/2018					5.38	6.14	5.85	
6/26/2018				5.87				
6/27/2018	4.37	5.53	5.83				5.87	
6/28/2018					5.03	5.88		
7/31/2018						6.07		
8/1/2018					5.22		5.79	
8/10/2018								6.28
8/23/2018								6.75
9/19/2018						5.9	5.71	6.48
10/29/2018					5.19	5.93	5.76	6.77
11/28/2018					5.28	5.99	5.74	6.44
12/18/2018	4.38			5.84				
12/19/2018			5.79		5.15		5.8	
12/20/2018		5.78				6.04		6.75
1/16/2019					5.14			
1/17/2019								6.41
2/13/2019								6.42
3/6/2019					6.15			
3/19/2019		5.75					5.89	
3/20/2019	4.4		5.88	6.03	5.32	6.1		6.59
8/27/2019			5.85	6.01				
8/28/2019	4.39	5.51				5.86	5.74	
8/29/2019					5.2			6.27
10/15/2019				6				
10/16/2019	4.79				5.36		5.9	7
10/17/2019		6.01 (D)	6.09			5.93		
3/3/2020								
3/4/2020	4.5	5.8		6.02	5.2		5.76	6.54
3/5/2020			5.74			5.95		
5/12/2020			5.88					
8/18/2020								
8/19/2020	4.67	5.81	5.97	6.32				

Prediction Limit

Constituent: pH, Field (S.U.) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-27I	BRGWC-32S	BRGWC-25I	BRGWC-50	BRGWC-45	BRGWC-47	BRGWC-52I
8/20/2020					5.26	5.86	5.75	6.85
9/15/2020	4.53			6				
9/16/2020		5.81	5.79			5.27	5.76	
9/17/2020					4.41			6.12
3/1/2021								
3/2/2021				6.1		6.17	5.59	
3/3/2021	4.46	5.9						
3/4/2021			5.98		4.34			5.87
9/21/2021								
9/22/2021								
9/23/2021						5.95	5.74	
9/27/2021					5.05			
9/28/2021	4.23	5.82	5.82	5.97				6.81
2/1/2022								
2/2/2022			5.99	6.23		5.92	5.75	6.35
2/3/2022	4.23				5.2			
2/4/2022		5.97						
8/23/2022				6.11			5.61	
8/24/2022	4.39				5.01			
8/25/2022		6.03	6.06			5.74		6.21

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-12I (bg)	BRGWA-6S (bg)	BRGWA-12S (bg)	BRGWC-30I	BRGWA-23S (bg)
8/31/2016	0.81 (J)	2.7	0.38 (J)	7.5					
9/1/2016					2.7	0.6 (J)	1.7		
9/6/2016								310	38
9/8/2016									
11/15/2016	<1 (J)					0.68 (J)			
11/16/2016		3.4	<1 (J)	6.6	3.6		1.2		
11/17/2016									84
11/18/2016									
11/21/2016								300	
2/20/2017	1 (B-01)	3.9 (B-01)				0.98 (J)			
2/21/2017			1.5	6.1	3		1.1		39
2/22/2017								280	
6/12/2017	0.94 (J)	3.7		5		0.54 (J)			
6/13/2017			0.67 (J)				1.1		35
6/14/2017					2.6			290	
9/26/2017	0.92 (J)	4.1	0.62 (J)	5.4	2.5	0.53 (J)	1.3		89
9/27/2017								260	
2/13/2018	<1	6.6	<1	4.7 (J)		<1			
2/14/2018					2.1 (J)		<1	250	82.2
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	0.91 (J)	3.5	0.69 (J)	6.2	2	0.54 (J)	0.84 (J)		84.2
6/27/2018									
6/28/2018								276	
7/31/2018					1.9		0.63 (J)		
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	0.68 (J)	4.3	0.72 (J)	5.9	2.1	0.39 (J)	0.66 (J)	440	83.4
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	0.74 (J)	3	0.78 (J)	6 (D)	2.2	0.68 (J)	0.75 (J)		65
3/20/2019								623	
10/15/2019	0.68 (J)	3.8	0.47 (J)	5.2	1.9	0.48 (J)	0.61 (J)		30
10/16/2019									
12/3/2019									
12/4/2019								327	
3/3/2020	0.71 (J)	2.8	0.93 (J)	7.1	1.8	2.5	0.51 (J)		
3/4/2020									38.6
3/5/2020								369	
9/15/2020	<1	1.7	<1	5.9	1.7	<1	<1		41.5
9/16/2020								334	
9/17/2020									
3/1/2021				4.7		0.74 (J)			
3/2/2021	<1	2.2	<1		1.7		0.51 (J)		54

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	300	460	370	280				
11/15/2016								
11/16/2016								
11/17/2016				200				
11/18/2016	320							
11/21/2016		500	420					
2/20/2017								
2/21/2017	270			360				
2/22/2017		570	380					
6/12/2017								
6/13/2017	230			290				
6/14/2017		440	400					
9/26/2017								
9/27/2017	260	380	400	310				
2/13/2018								
2/14/2018	232	280	383	260				
3/6/2018					111	1560		
3/15/2018							1590	
5/1/2018					112	1465 (D)	1550	
6/26/2018				231				
6/27/2018	205	281	372			1450		
6/28/2018					109		1530	
7/31/2018					107			
8/1/2018						1560	1580	
8/10/2018								183
8/23/2018					108	1470		145
9/19/2018					117	1500		178
10/29/2018					127	1720	1750	157
11/28/2018					133	1730	1780	189
12/18/2018		293		231				
12/19/2018			370			1520	1650	
12/20/2018	200				113			150
1/16/2019							589 (O)	
1/17/2019								157
2/13/2019								169
3/19/2019	199					1100		
3/20/2019		278	409	235 (D)	127		1740	186.5 (D)
10/15/2019				174				
10/16/2019		266				1560	1590	155
12/3/2019					105			
12/4/2019	241		293					
3/3/2020								
3/4/2020	205	238		165		1380	1370	129
3/5/2020			269		106			
9/15/2020		241		126				
9/16/2020	190		255		103	1360		
9/17/2020							1330	165
3/1/2021								
3/2/2021				139	98.3	1360		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
3/3/2021	172	341						
3/4/2021			185				1250	114
9/21/2021								
9/22/2021								
9/23/2021					97.5	1240		
9/27/2021							1180	
9/28/2021	137	250	189	112				132
2/1/2022								
2/2/2022			210	117	90.1	1170		126
2/3/2022		274					1270	
2/4/2022	172							
8/23/2022				158		1410		
8/24/2022		298					1400	
8/25/2022	176		254		114			142

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-12S (bg)	BRGWA-12I (bg)	BRGWA-6S (bg)	BRGWA-23S (bg)	BRGWC-30I
8/31/2016	151	88	138	154					
9/1/2016					69	142	299		
9/6/2016								146	505
9/8/2016									
11/15/2016				123			41		
11/16/2016	69	41	77		100	100			
11/17/2016								211	
11/18/2016									
11/21/2016									515
2/20/2017			170	158			133		
2/21/2017	68	<10			37	71		151	
2/22/2017									504
6/12/2017	161		132	142			61		
6/13/2017		53			84			130	
6/14/2017						140			536
9/26/2017	167	45	108	138	68	149	29	160	
9/27/2017									432
2/13/2018	165	63	141	150			61		
2/14/2018					138	137		194	448
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	188	71	133	154	90	142	71	221	
6/27/2018									
6/28/2018									494
7/31/2018					83	133			
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	145 (X)	78 (X)	138 (X)	147	85	135	70 (X)	208	715
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	146.5 (D)	68	130	146	82 (JX)	132 (JX)	72	161 (JX)	
3/20/2019									885
10/15/2019	140	66	175	144	89	134	63	124	
10/16/2019									
12/3/2019									
12/4/2019									612
3/3/2020	155	41	<10	130	72	115	54		
3/4/2020								118	
3/5/2020									681
9/15/2020	116	69	100	116	60	95	79	109	
9/16/2020									634
9/17/2020									
3/1/2021	98						39		
3/2/2021		43	80	96	43	93		105	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-32S	BRGWC-29I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	460	478	607	654				
11/15/2016								
11/16/2016								
11/17/2016	611							
11/18/2016		503						
11/21/2016			695	819				
2/20/2017								
2/21/2017	497	380						
2/22/2017			635	721				
6/12/2017								
6/13/2017	474	354						
6/14/2017			635	661				
9/26/2017								
9/27/2017	457	376	601	518				
2/13/2018								
2/14/2018	431	503 (JX)	628	487				
3/6/2018					2200	346		
3/15/2018							2440	
5/1/2018					2080 (D)	374	2190	
6/26/2018	414							
6/27/2018		458 (X)	2280	648 (X)	31 (OX)			
6/28/2018						333	2290	
7/31/2018						393		
8/1/2018					2190		2360	
8/10/2018								344
8/23/2018					2160	350		333
9/19/2018					2160	353		364
10/29/2018					2130	329	2300	334
11/28/2018					2320	358	2300	357
12/18/2018	401			407				
12/19/2018			605		2060		2190	
12/20/2018		344				322		355
1/16/2019							2270	
1/17/2019								347
2/13/2019								350
3/19/2019		334 (JX)			2050 (JX)			
3/20/2019	410.5 (D)		564	391		302	2280	360 (D)
10/15/2019	380							
10/16/2019				2030	2220		2280	346
12/3/2019						362		
12/4/2019		422	526					
3/3/2020								
3/4/2020	330	326		391	2140		2270	351
3/5/2020			489			297		
9/15/2020	272			281				
9/16/2020		301	428		2090	275		
9/17/2020							1910	329
3/1/2021								
3/2/2021	280				1680	264		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 9/30/2022 4:39 PM View: Pond BCD - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-32S	BRGWC-29I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
3/3/2021		288		515				
3/4/2021			350				1520	383
9/21/2021								
9/22/2021								
9/23/2021					1770	277		
9/27/2021							1800	
9/28/2021	270	262	375	457				336
2/1/2022								
2/2/2022	283		443		1850	276		160
2/3/2022				419			1850	
2/4/2022		301						
8/23/2022	315				2060			
8/24/2022				383			1990	
8/25/2022		311	437			248		296

FIGURE E.

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWC-271	-0.1256	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-291	-0.1312	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-1.083	-59	-58	Yes	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1657	69	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-25I	-4.85	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-271	-3.929	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-30I	23.17	97	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-2.344	-67	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-12I (bg)	-0.2039	-88	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-23S (bg)	-0.1807	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.2006	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-45	-8.907	-78	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-50	-2.087	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-52I	-0.3801	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0.006411	71	68	Yes	18	66.67	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-23S (bg)	-0.04537	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.1019	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.0368	-71	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05383	-81	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12I (bg)	-0.2311	-105	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12S (bg)	-0.1348	-81	-63	Yes	17	17.65	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-25I	-35.25	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-271	-22.5	-90	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-291	-32.54	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-30I	43.71	60	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-32S	-35.7	-74	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.658	-65	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-25I	-46.21	-96	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-271	-26.31	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-291	-63.47	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-30I	99.28	74	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-32S	-48.29	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-50	-115.9	-68	-58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-12I (bg)	-0.0002161	-11	-58	No	16	18.75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-12S (bg)	0	8	58	No	16	81.25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-23S (bg)	0.001638	21	58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2I (bg)	0.001506	18	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	-3	-58	No	16	87.5	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	-6	-58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-8	-58	No	16	56.25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	2	58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-25I	-0.09624	-49	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-27I	-0.1256	-73	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-29I	-0.1312	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-30I	0.006741	14	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-32S	-0.05023	-39	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-47	0.0244	42	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-50	0.004693	15	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-52I	0.01634	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12I (bg)	-0.01457	-1	-63	No	17	5.882	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12S (bg)	0.1808	27	63	No	17	5.882	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-1.083	-59	-58	Yes	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.5425	43	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	0.073	30	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	0.03321	5	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.5076	-36	-58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1657	69	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-25I	-4.85	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-27I	-3.929	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-29I	-6.709	-54	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-30I	23.17	97	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-32S	-4.259	-54	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-2.344	-67	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-47	0.1986	3	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-50	-7.514	-42	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-52I	0.4585	11	53	No	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-12I (bg)	-0.2039	-88	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-12S (bg)	0.05355	39	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-23S (bg)	-0.1807	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2I (bg)	-0.04825	-38	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2S (bg)	-0.02501	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.2006	-67	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5S (bg)	-0.07499	-48	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-6S (bg)	-0.01997	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-29I	-0.1991	-46	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-45	-8.907	-78	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-50	-2.087	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-52I	-0.3801	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12I (bg)	-0.01195	-45	-68	No	18	22.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0.006411	71	68	Yes	18	66.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-23S (bg)	0	-10	-68	No	18	55.56	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	0	-17	-68	No	18	50	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	49	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	54	68	No	18	72.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	0	-20	-68	No	18	38.89	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0	55	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-50	-0.07419	-28	-68	No	18	0	n/a	n/a	0.01	NP

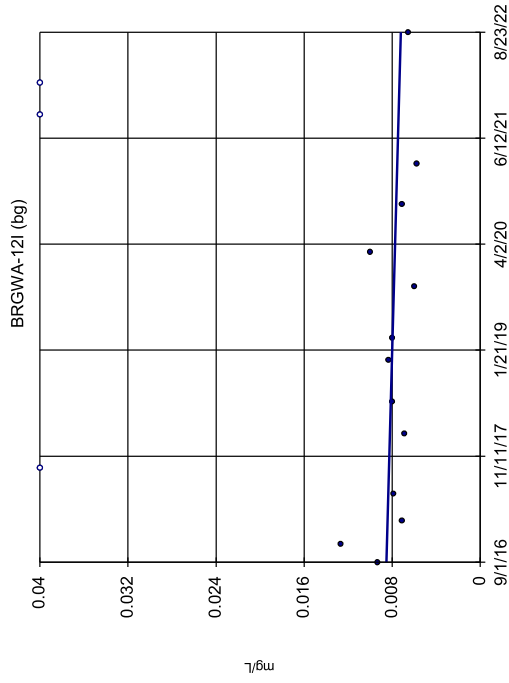
Appendix III Trend Tests - Prediction Limit Exceedances - All Results Page 2

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:44 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
pH, Field (S.U.)	BRGWA-12I (bg)	-0.03267	-43	-81	No	20	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-12S (bg)	-0.02298	-48	-74	No	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-23S (bg)	-0.04537	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.1019	-79	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.0368	-71	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5I (bg)	-0.02765	-47	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05383	-81	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-6S (bg)	0	0	63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-29I	-0.01622	-18	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-50	-0.05165	-47	-74	No	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12I (bg)	-0.2311	-105	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-12S (bg)	-0.1348	-81	-63	Yes	17	17.65	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-23S (bg)	-5.093	-42	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2I (bg)	-0.1382	-32	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2S (bg)	-0.00315	-15	-58	No	16	37.5	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5I (bg)	-0.3159	-48	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5S (bg)	-0.07263	-52	-58	No	16	37.5	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-6S (bg)	-0.01229	-34	-58	No	16	25	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-25I	-35.25	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-27I	-22.5	-90	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-29I	-32.54	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-30I	43.71	60	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-32S	-35.7	-74	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-45	-3.782	-45	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-47	-66.51	-50	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-50	-99.04	-44	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-52I	-11.11	-49	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-12I (bg)	-5.702	-55	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-12S (bg)	-6.383	-48	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-23S (bg)	-10.83	-53	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-2I (bg)	-6.071	-28	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-2S (bg)	0.7623	11	58	No	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5I (bg)	-4.462	-30	-58	No	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.658	-65	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-6S (bg)	-2.774	-23	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-25I	-46.21	-96	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-27I	-26.31	-78	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-29I	-63.47	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-30I	99.28	74	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-32S	-48.29	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-47	-71.84	-54	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-50	-115.9	-68	-58	Yes	16	0	n/a	n/a	0.01	NP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

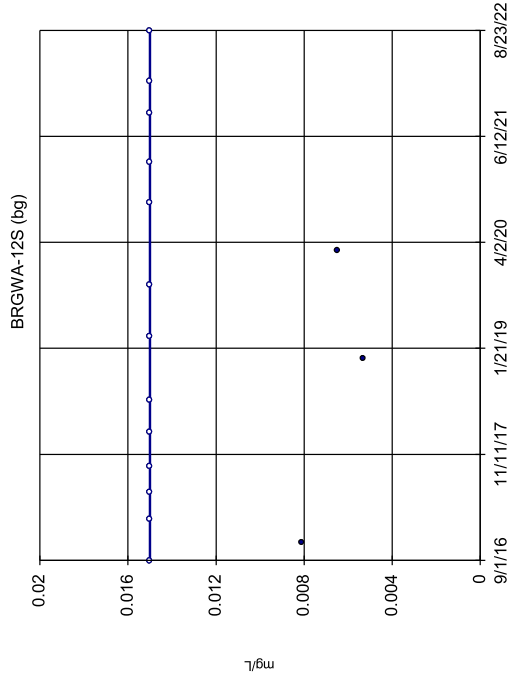
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

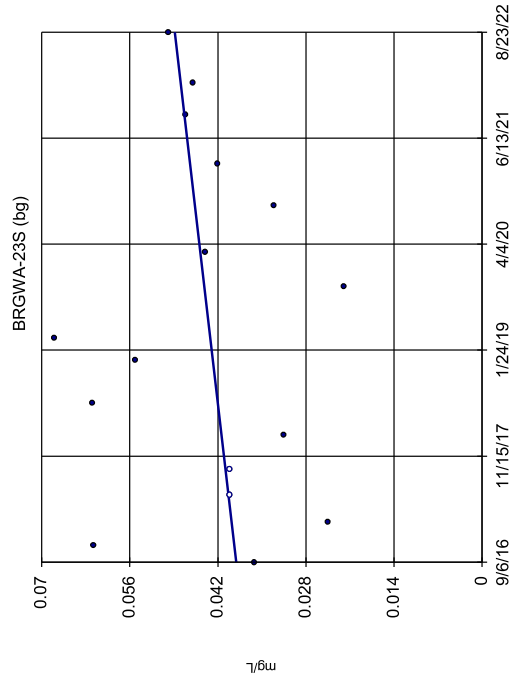
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

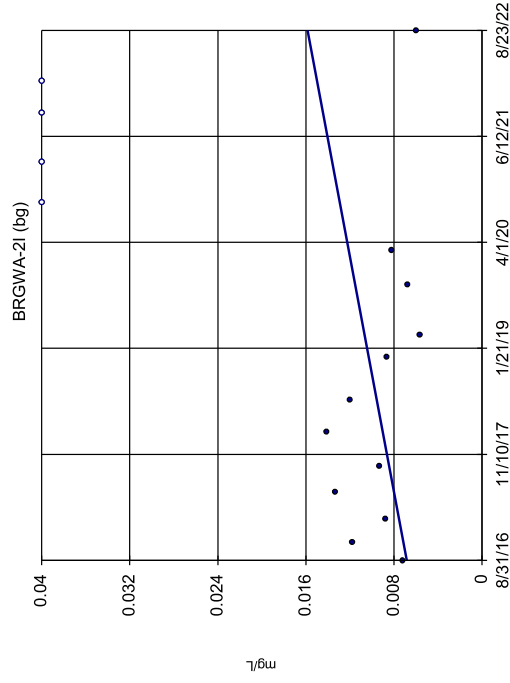
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

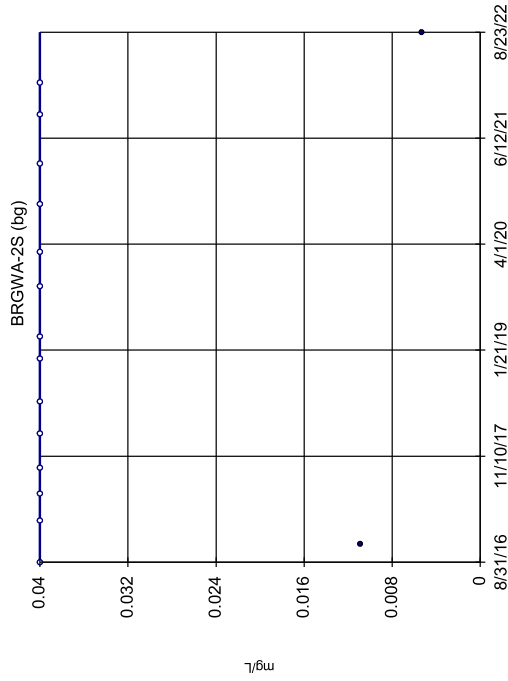
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

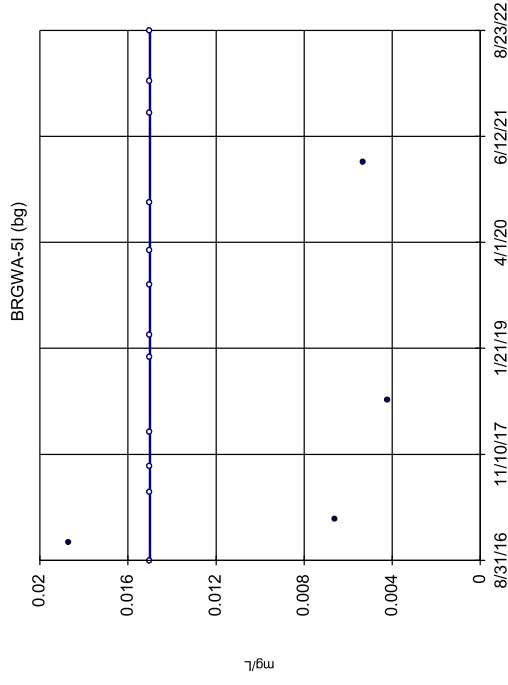
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

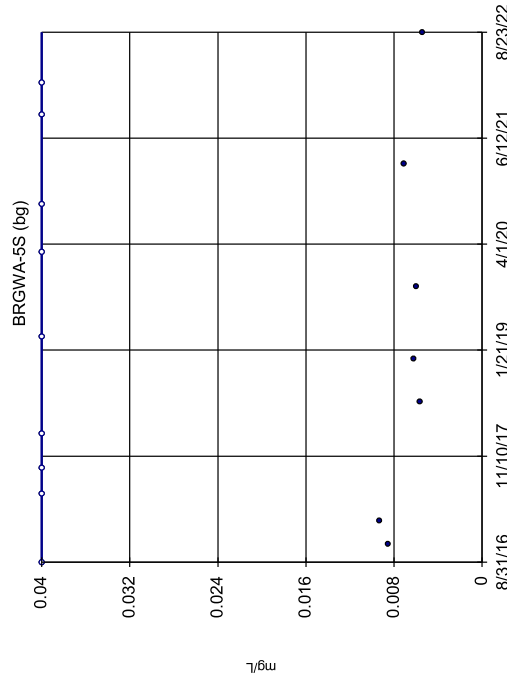
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

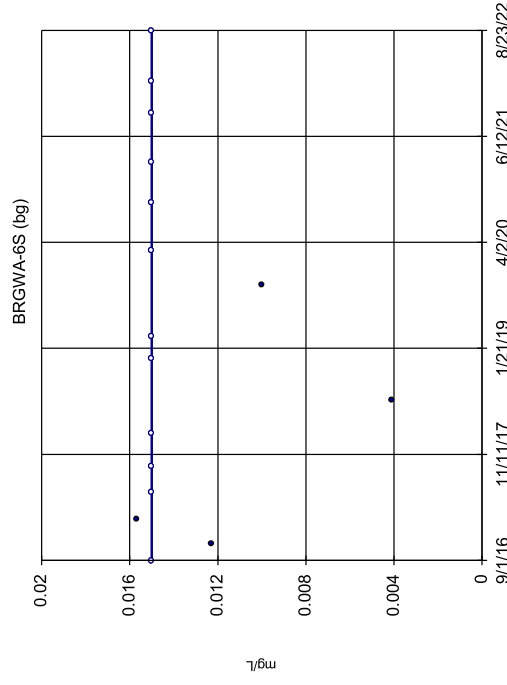
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

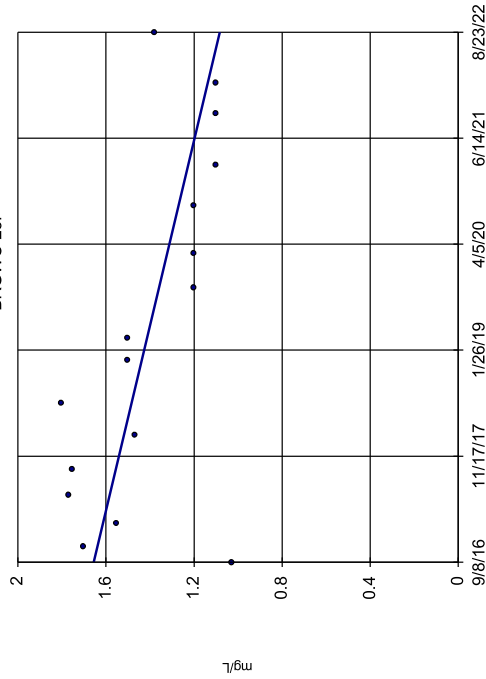
Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-251

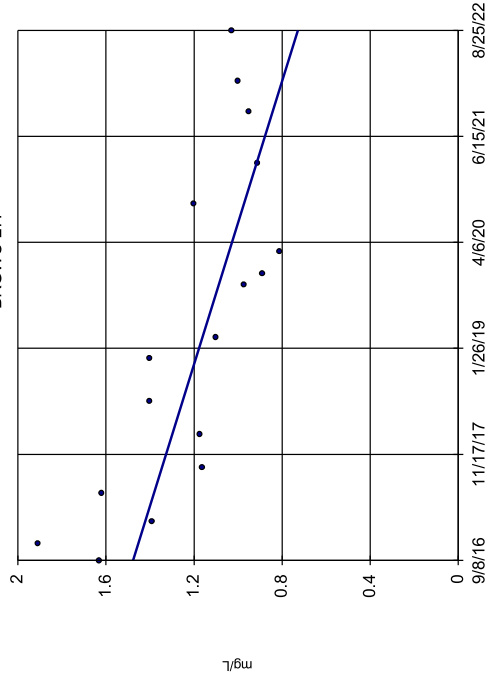


n = 16
 Slope = -0.08624
 units per year.
 Mann-Kendall
 statistic = -49
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-271

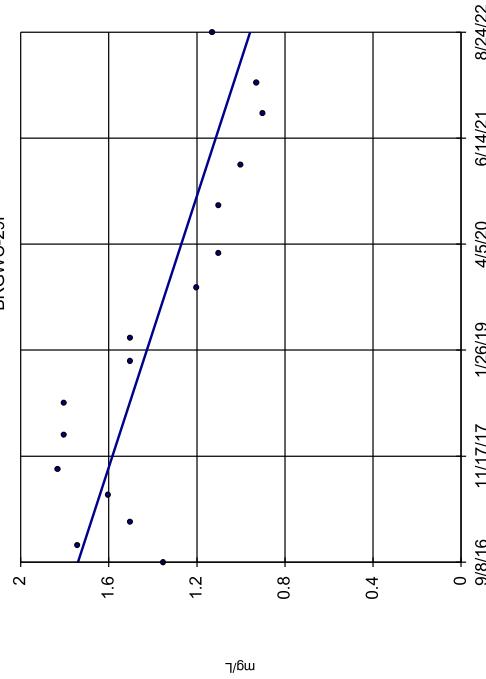


n = 17
 Slope = -0.1256
 units per year.
 Mann-Kendall
 statistic = -73
 critical = -63
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-291

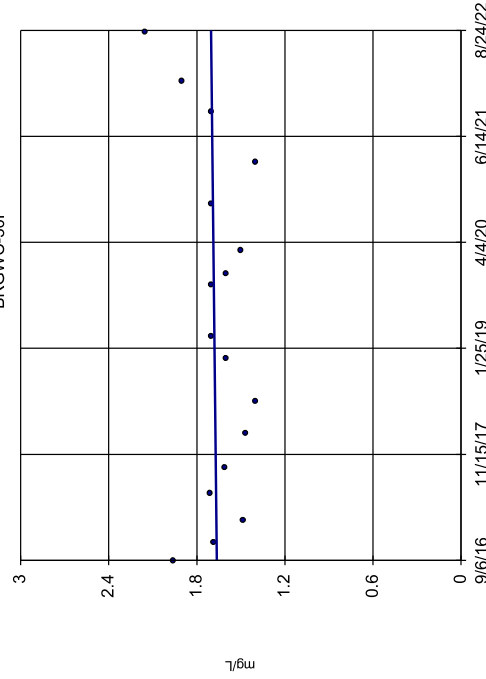


n = 16
 Slope = -0.1312
 units per year.
 Mann-Kendall
 statistic = -67
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

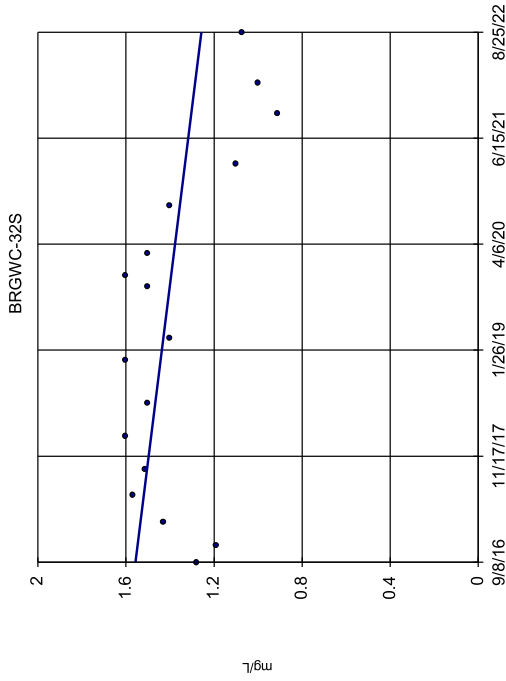
BRGWC-301



n = 17
 Slope = 0.006741
 units per year.
 Mann-Kendall
 statistic = 14
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

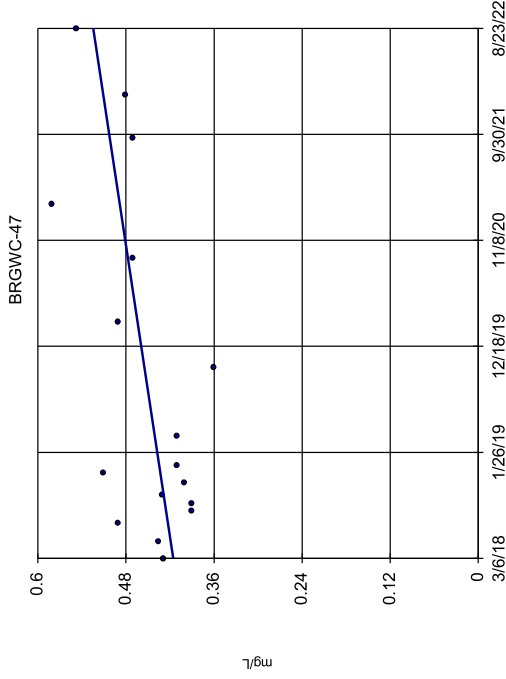
Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



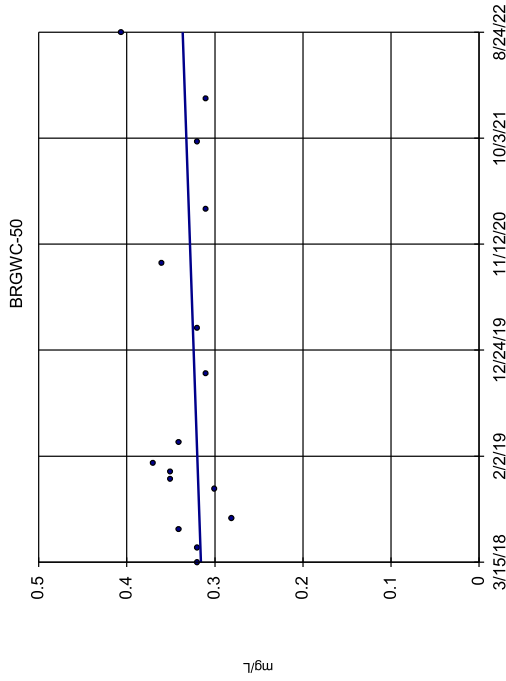
Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



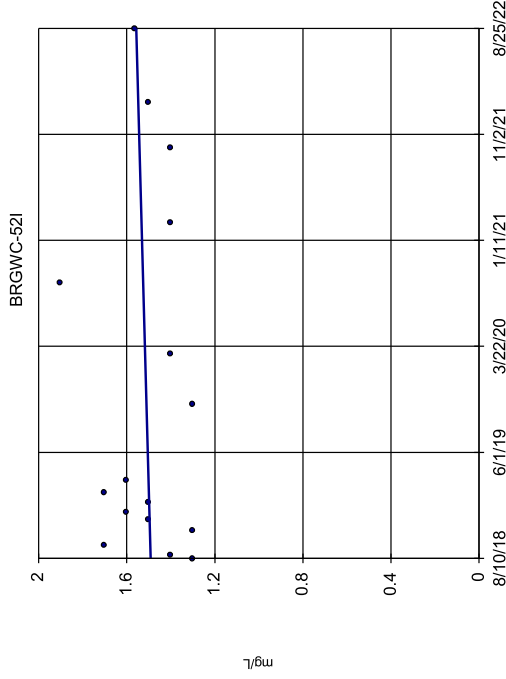
Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

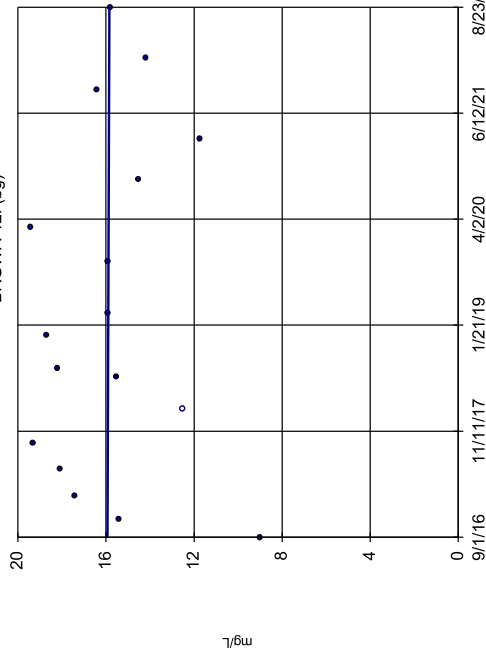


Constituent: Boron Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-12L (bg)



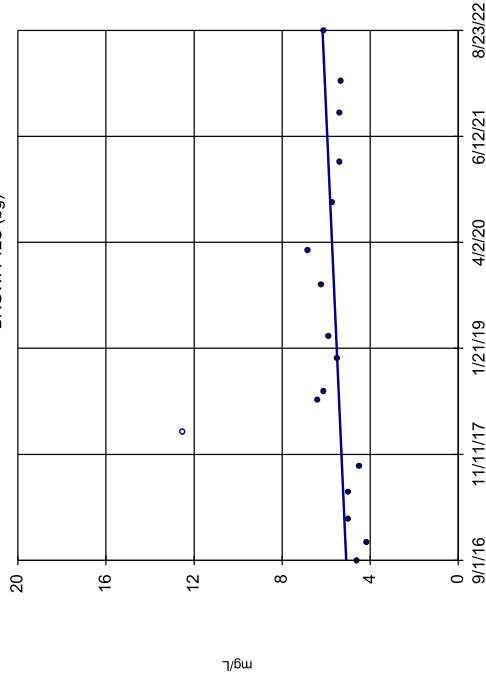
n = 17
Slope = -0.01457
units per year.
Mann-Kendall
statistic = -1
critical = -63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 9/30/2022 4:41 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-12S (bg)



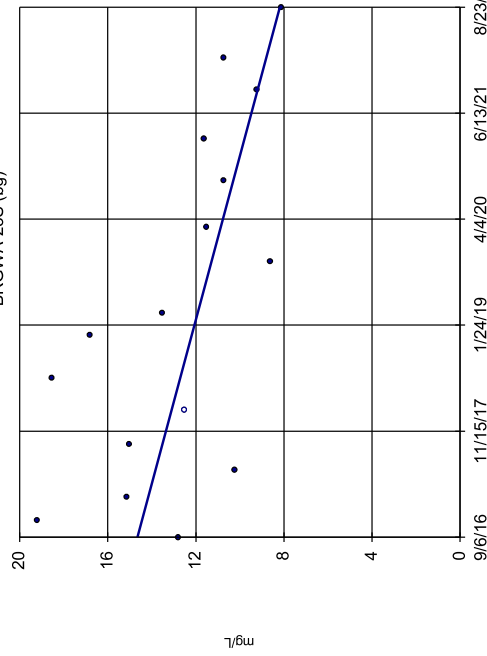
n = 17
Slope = 0.1808
units per year.
Mann-Kendall
statistic = 27
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-23S (bg)



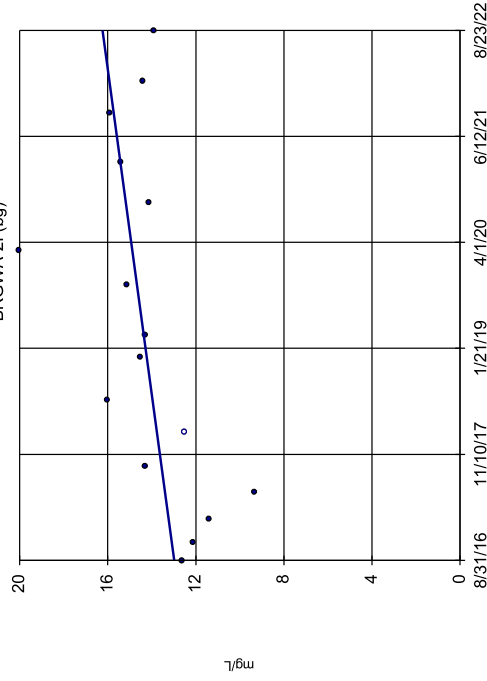
n = 16
Slope = -1.083
units per year.
Mann-Kendall
statistic = -59
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

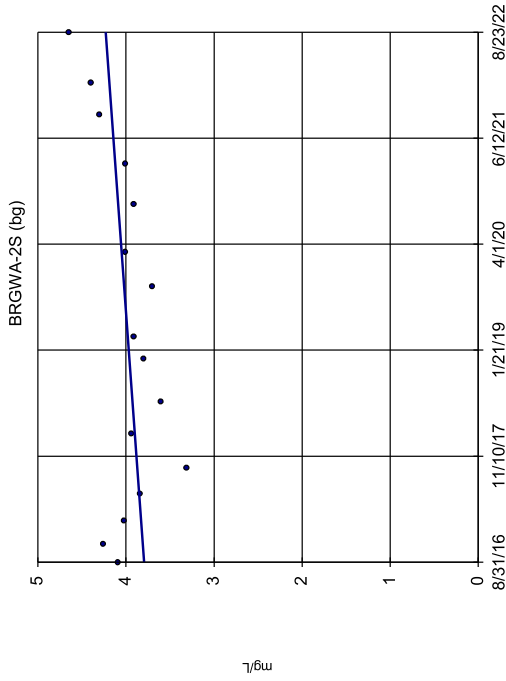
BRGWA-2I (bg)



n = 16
Slope = 0.5425
units per year.
Mann-Kendall
statistic = 43
critical = 58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

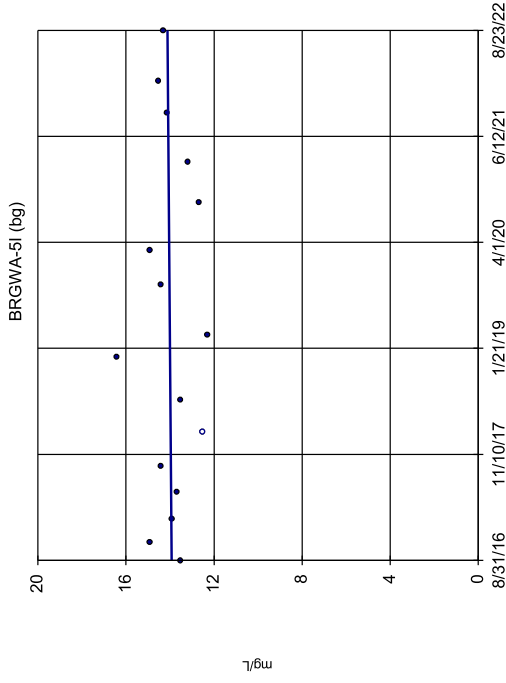
Sen's Slope Estimator



n = 16
 Slope = 0.073
 units per year.
 Mann-Kendall
 statistic = 30
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

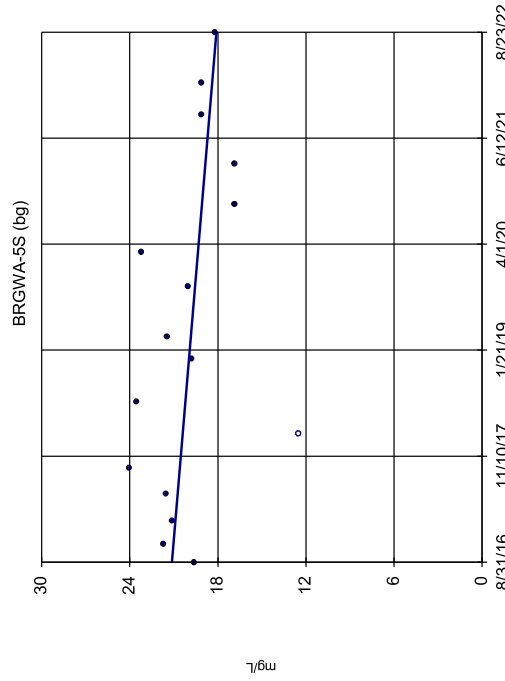
Sen's Slope Estimator



n = 16
 Slope = 0.03221
 units per year.
 Mann-Kendall
 statistic = 5
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

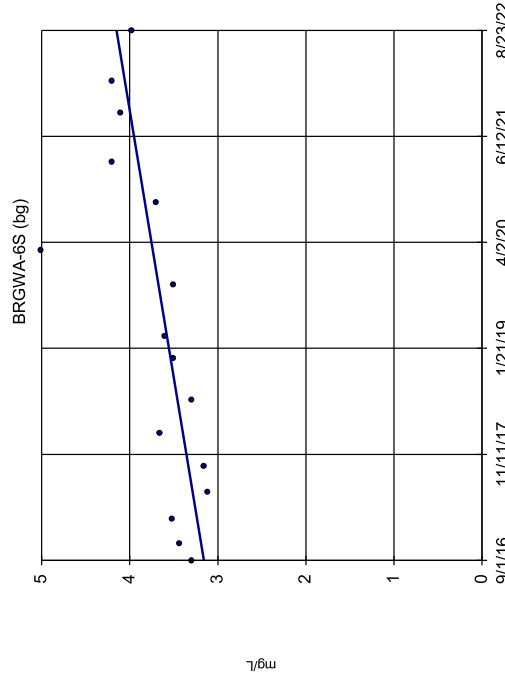
Sen's Slope Estimator



n = 16
 Slope = -0.5076
 units per year.
 Mann-Kendall
 statistic = -39
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

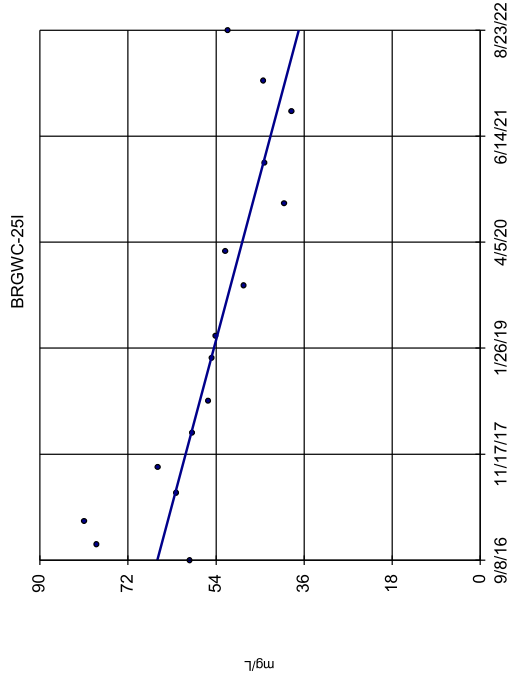
Sen's Slope Estimator



n = 16
 Slope = 0.1657
 units per year.
 Mann-Kendall
 statistic = 69
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

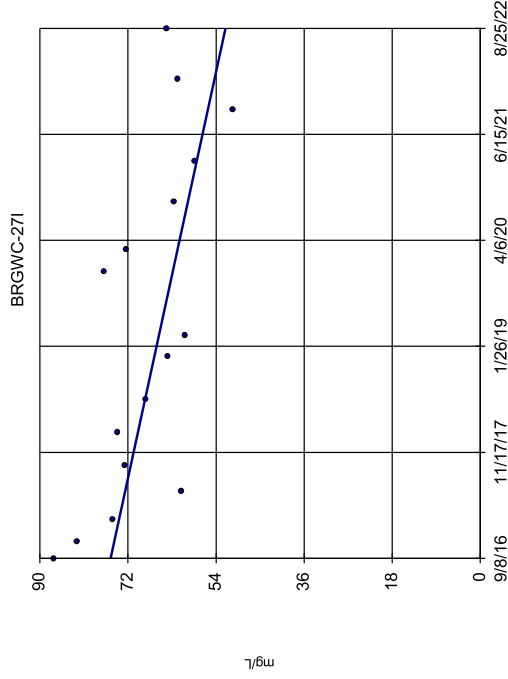
Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



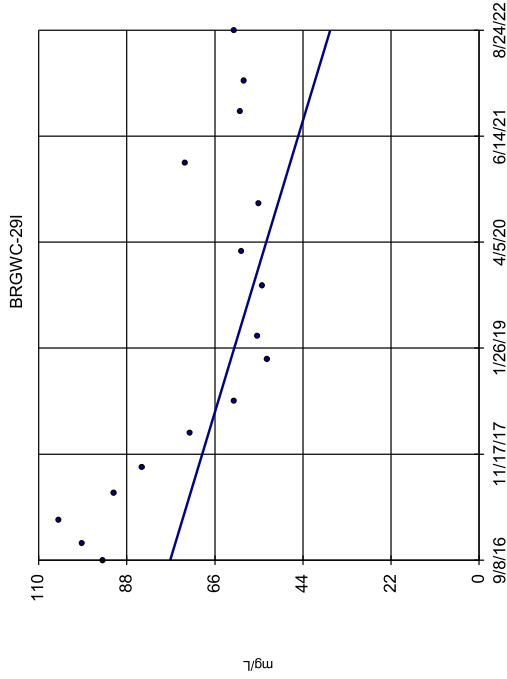
Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



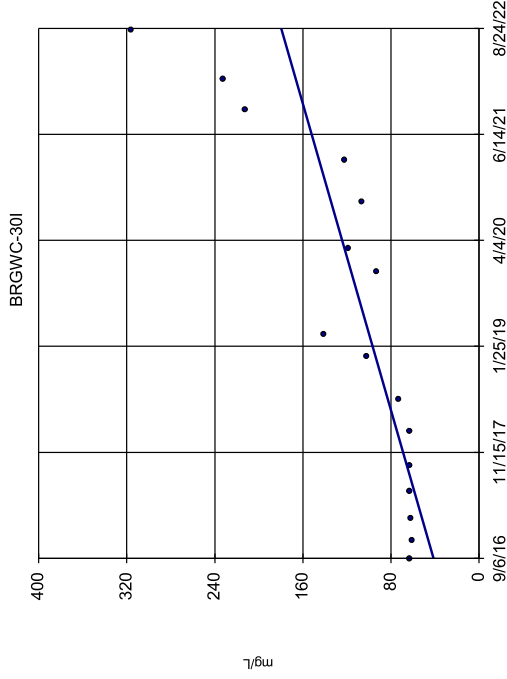
Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



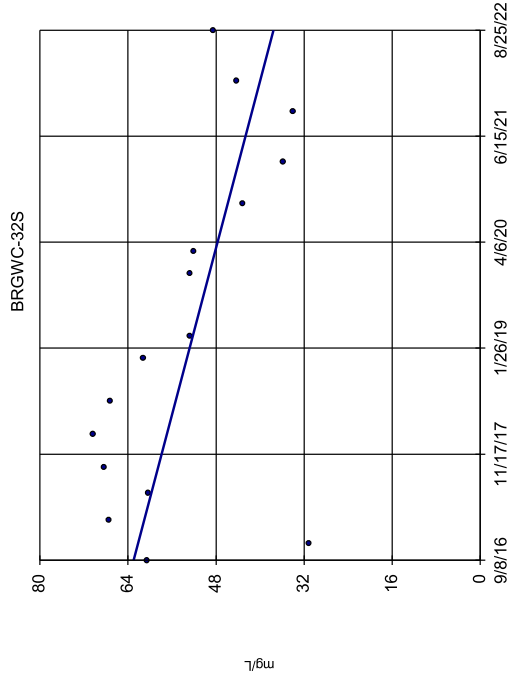
Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

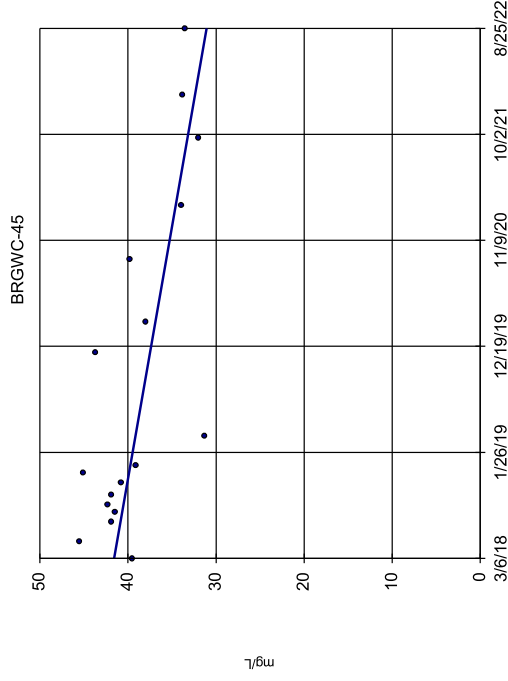
Sen's Slope Estimator



n = 16
 Slope = -4.259
 units per year.
 Mann-Kendall
 statistic = -54
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

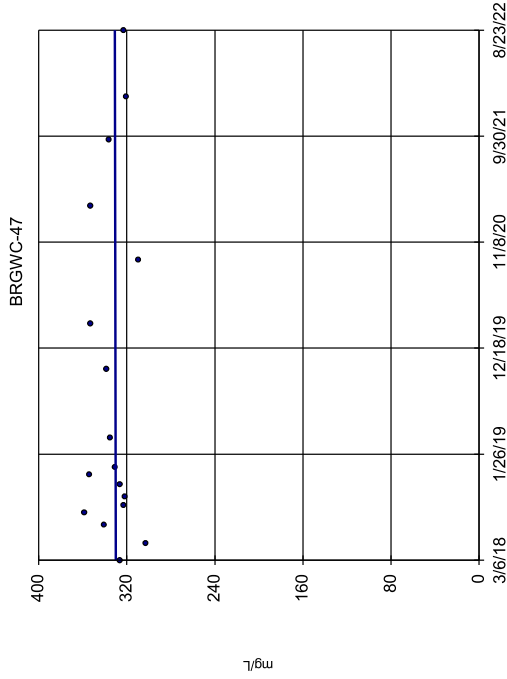
Sen's Slope Estimator



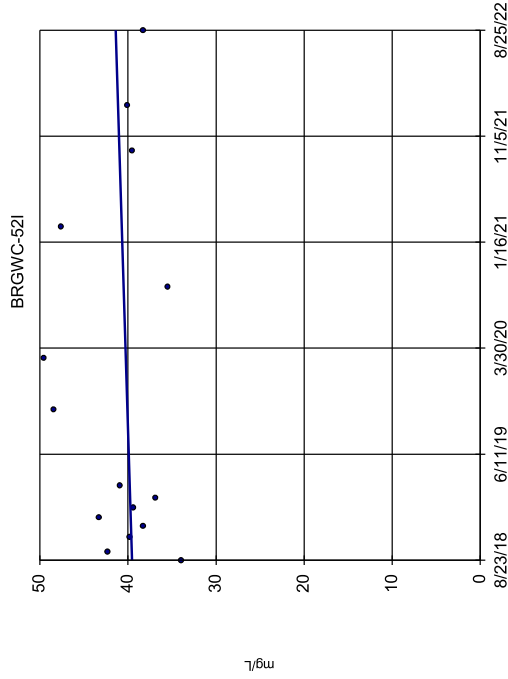
n = 17
 Slope = -2.344
 units per year.
 Mann-Kendall
 statistic = -67
 critical = -63
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Calcium Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

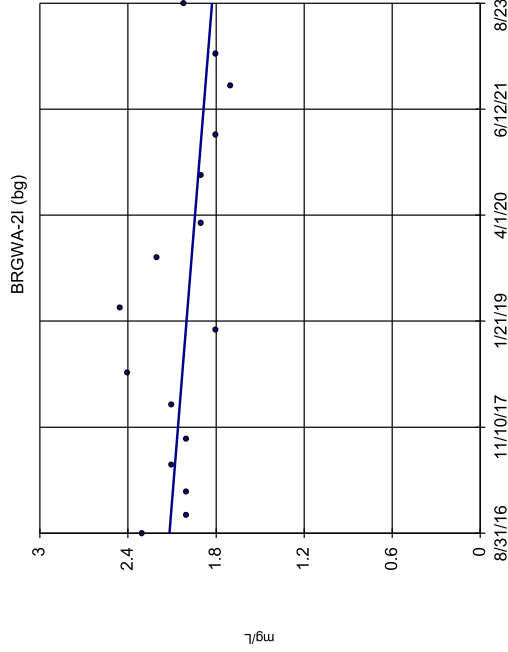
Sen's Slope Estimator



Sen's Slope Estimator

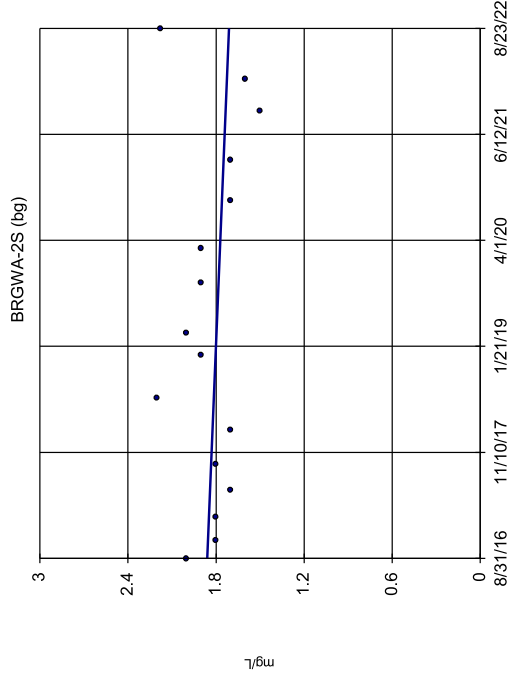


Sen's Slope Estimator



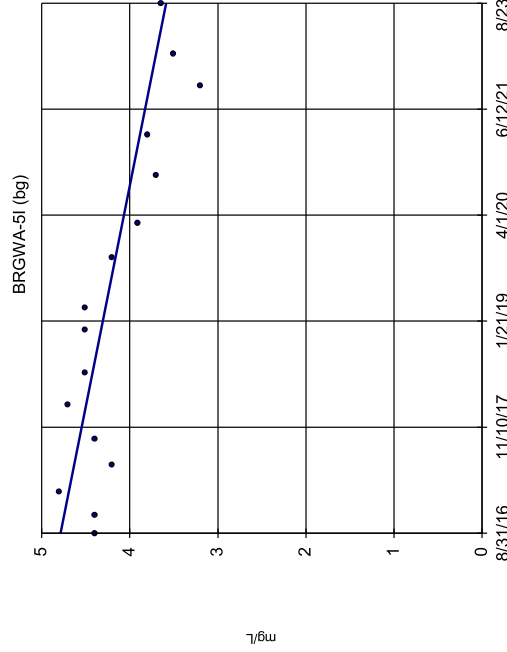
Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



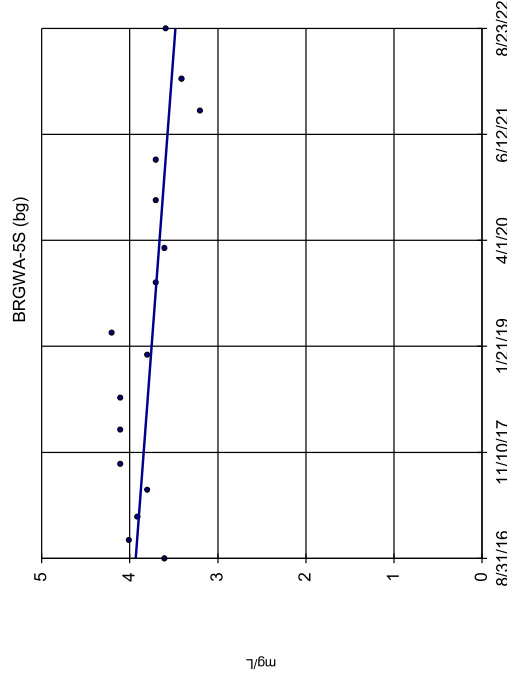
Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



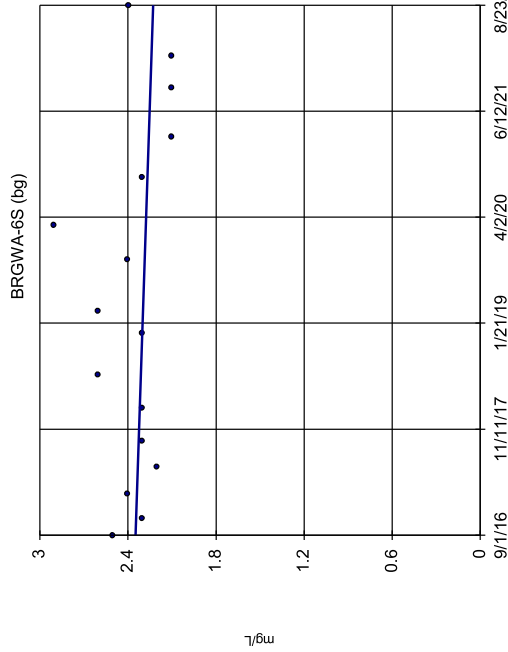
Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

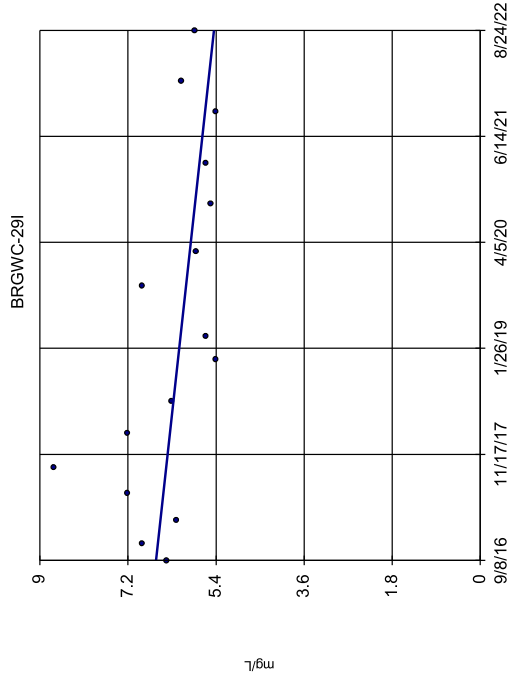
Sen's Slope Estimator



n = 16
 Slope = -0.01997
 units per year.
 Mann-Kendall
 statistic = -21
 critical = -38
 Trend not sig-
 nificant at 99%
 confidence level
 (alpha = 0.005 per
 tail).

Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

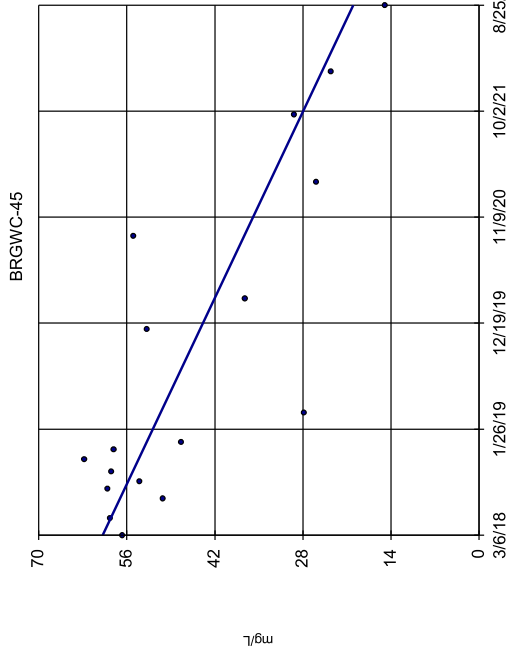
Sen's Slope Estimator



n = 16
 Slope = -0.1991
 units per year.
 Mann-Kendall
 statistic = -46
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (alpha = 0.005 per
 tail).

Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

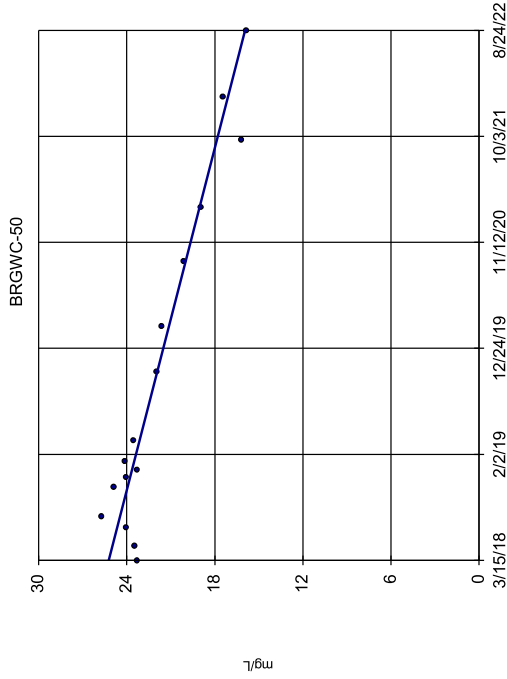
Sen's Slope Estimator



n = 17
 Slope = -8.907
 units per year.
 Mann-Kendall
 statistic = -78
 critical = -63
 Decreasing trend
 significant at 99%
 confidence level
 (alpha = 0.005 per
 tail).

Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

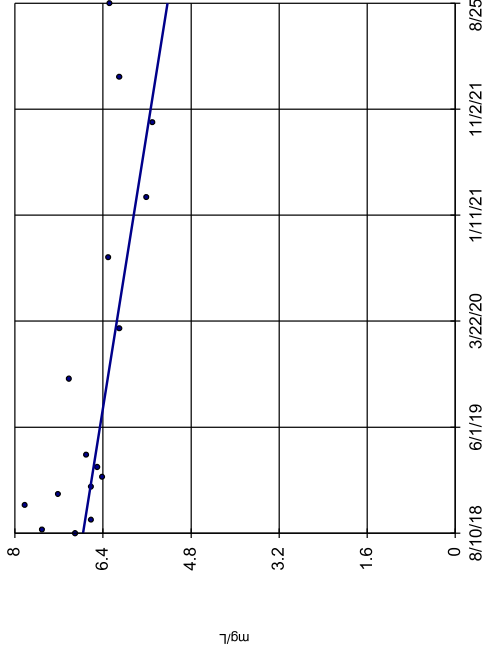


n = 16
 Slope = -2.087
 units per year.
 Mann-Kendall
 statistic = -78
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (alpha = 0.005 per
 tail).

Constituent: Chloride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

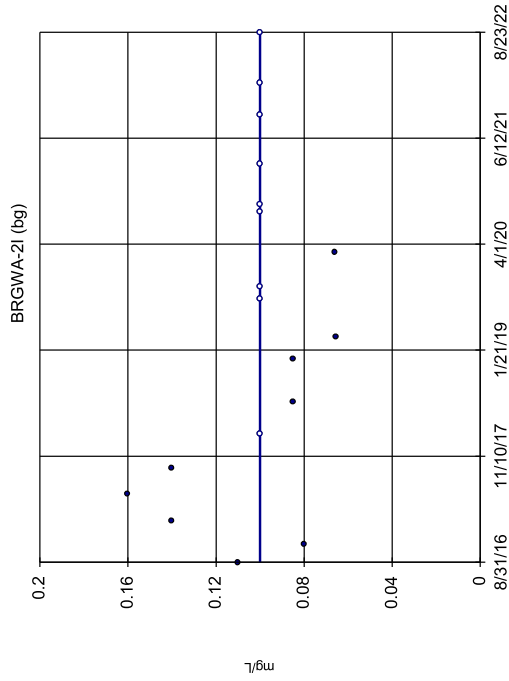
Sen's Slope Estimator

BRGWC-52I



Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

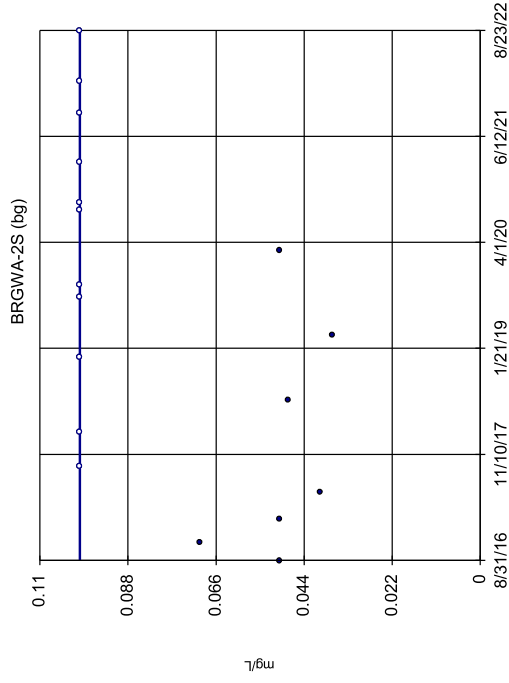


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -17
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

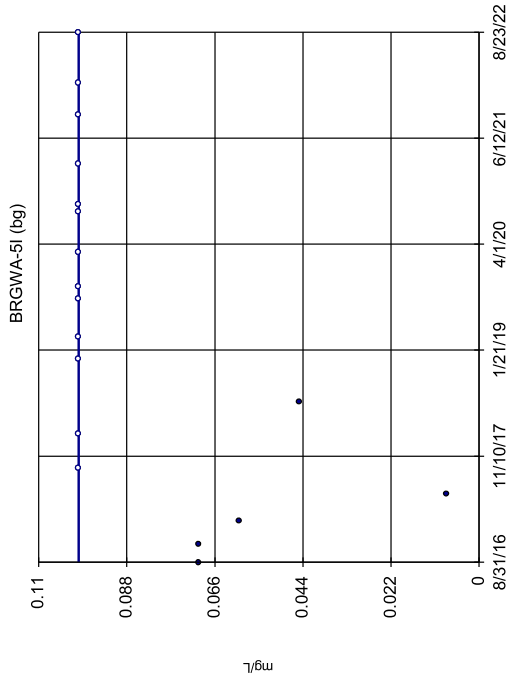


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = 49
critical = 68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

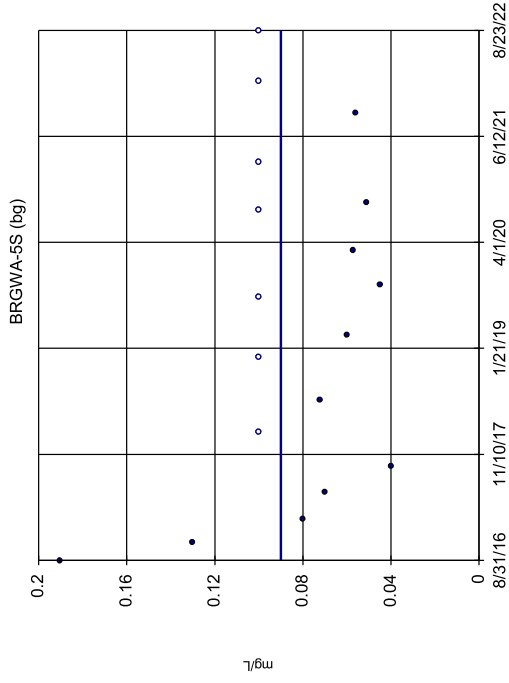


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = 54
critical = 68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

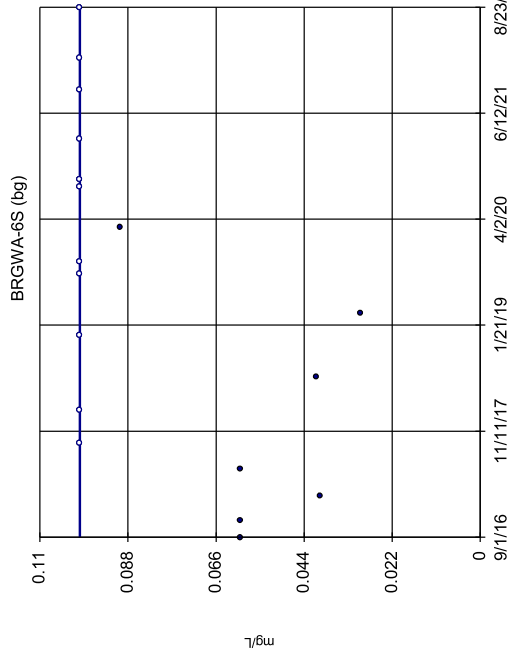
Sen's Slope Estimator



n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = -20
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

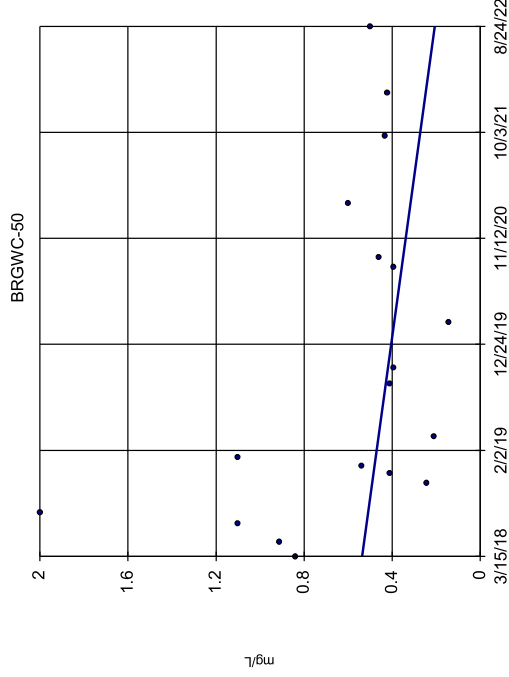
Sen's Slope Estimator



n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = 55
critical = 68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

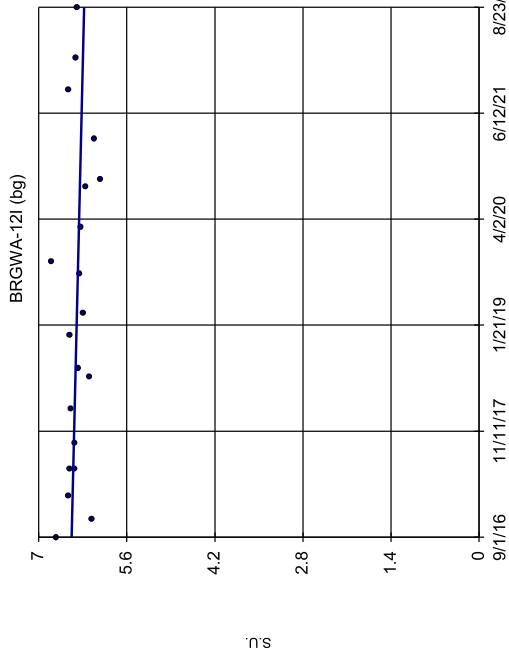
Sen's Slope Estimator



n = 18
Slope = -0.07419
units per year.
Mann-Kendall
statistic = -28
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

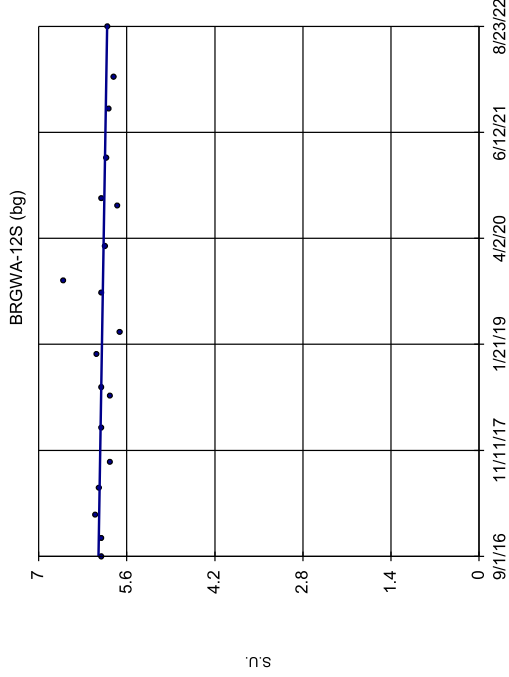
Sen's Slope Estimator



n = 20
Slope = -0.03267
units per year.
Mann-Kendall
statistic = 43
critical = -81
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH_i Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

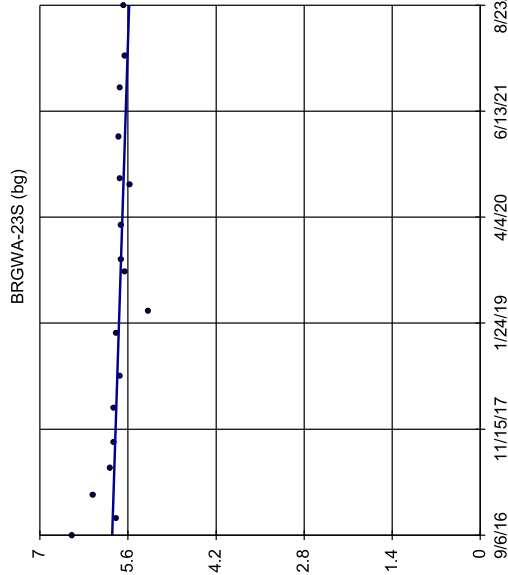
Sen's Slope Estimator



n = 19
Slope = -0.02298
units per year.
Mann-Kendall
statistic = -48
critical = -74
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: pH_i Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

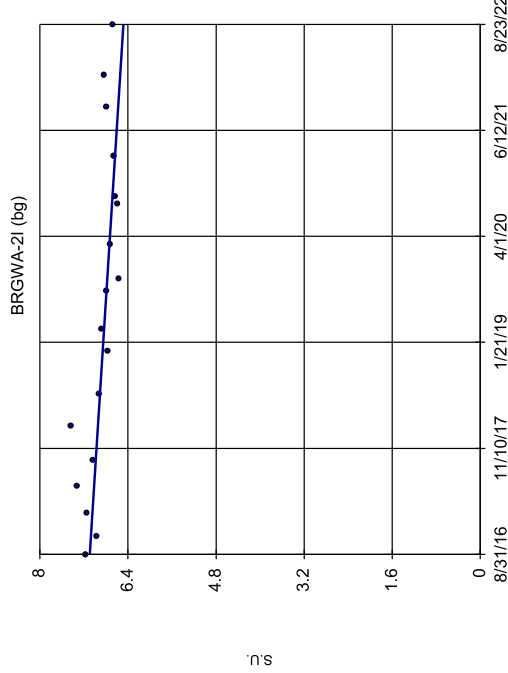
Sen's Slope Estimator



n = 18
 Slope = -0.04537
 units per year.
 Mann-Kendall
 statistic = -79
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

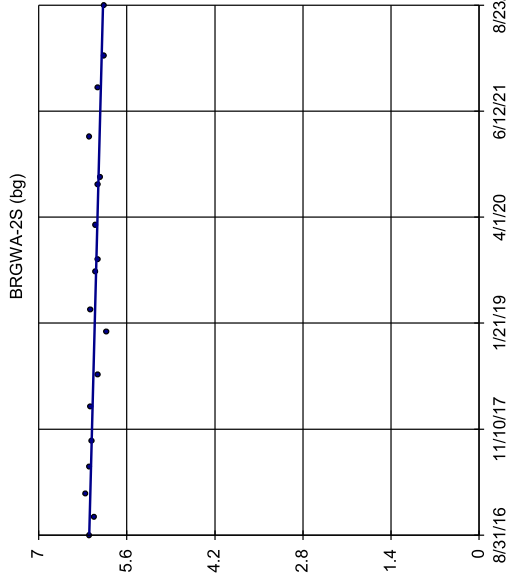
Sen's Slope Estimator



n = 18
 Slope = -0.1019
 units per year.
 Mann-Kendall
 statistic = -79
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

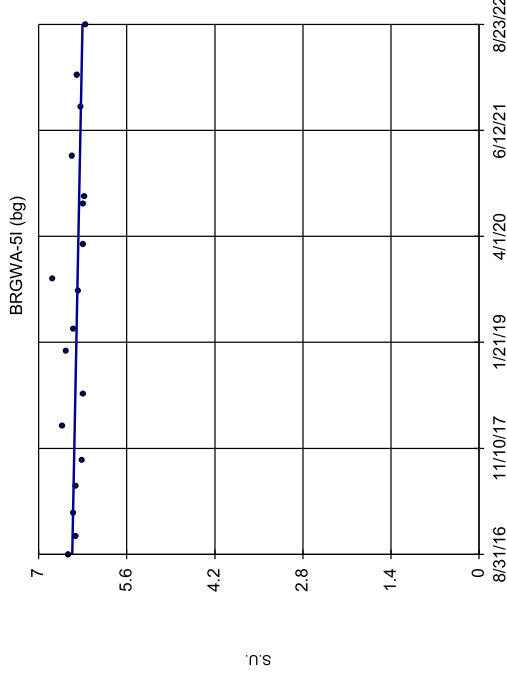
Sen's Slope Estimator



n = 18
 Slope = -0.0368
 units per year.
 Mann-Kendall
 statistic = -71
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

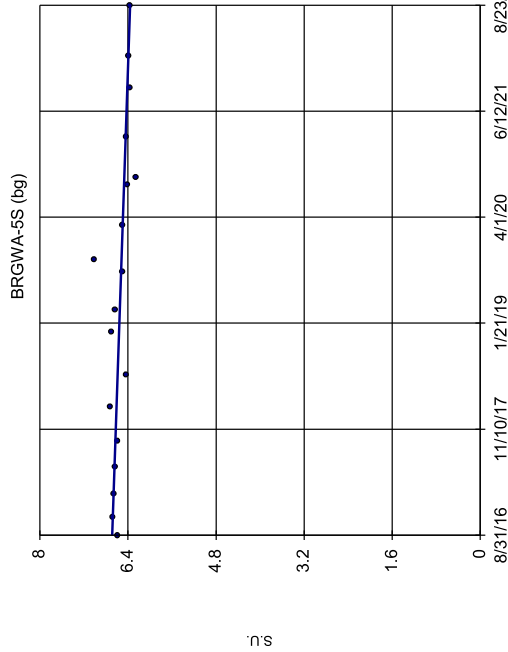
Sen's Slope Estimator



n = 18
 Slope = -0.02765
 units per year.
 Mann-Kendall
 statistic = -47
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

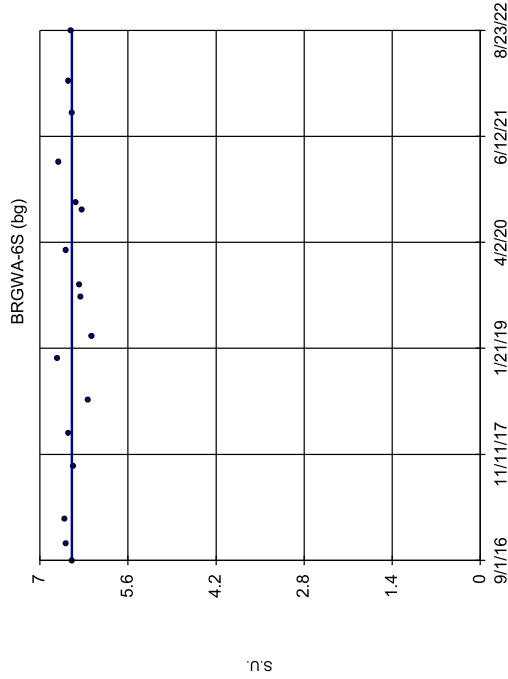
Sen's Slope Estimator



n = 18
 Slope = -0.05383
 units per year.
 Mann-Kendall
 statistic = -81
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

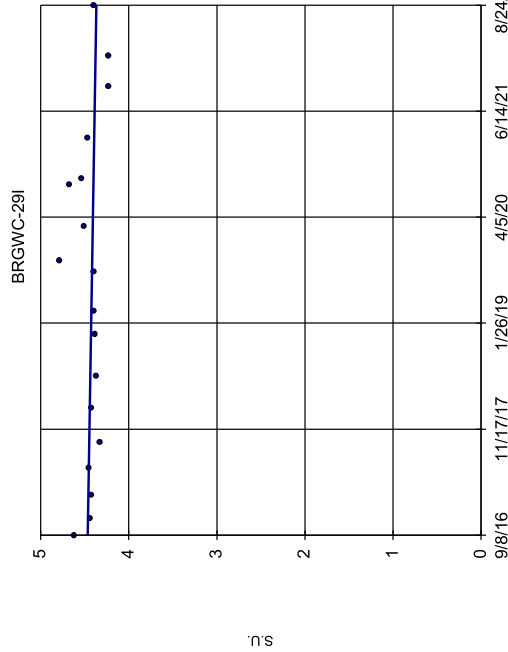
Sen's Slope Estimator



n = 17
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

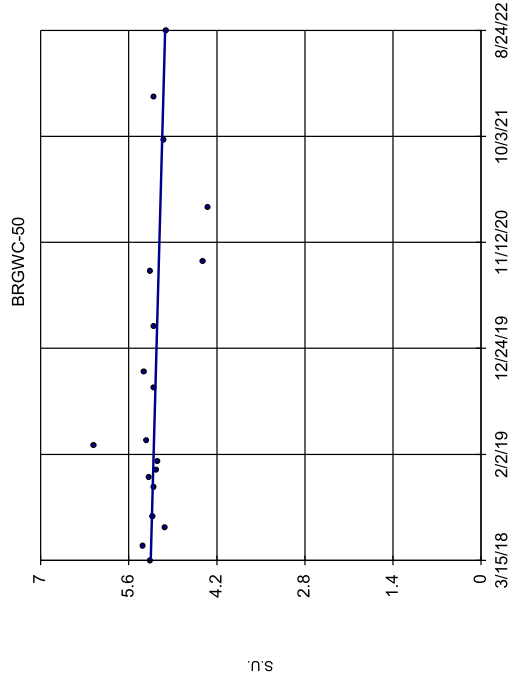
Sen's Slope Estimator



n = 18
 Slope = -0.01622
 units per year.
 Mann-Kendall
 statistic = -18
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

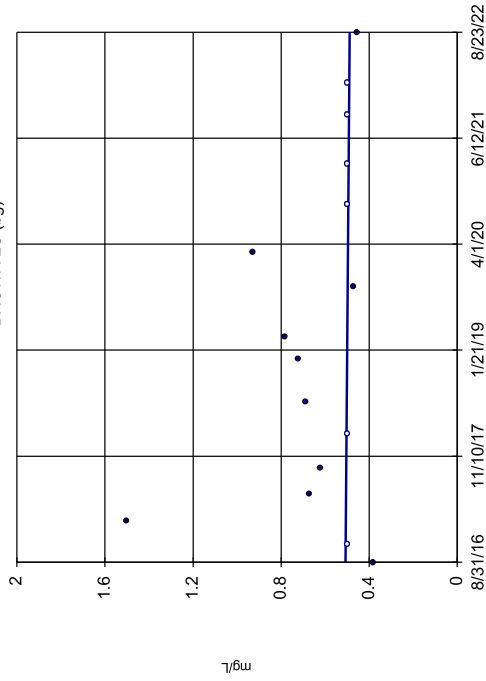


n = 19
 Slope = -0.05165
 units per year.
 Mann-Kendall
 statistic = -47
 critical = -74
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWA-2S (bg)

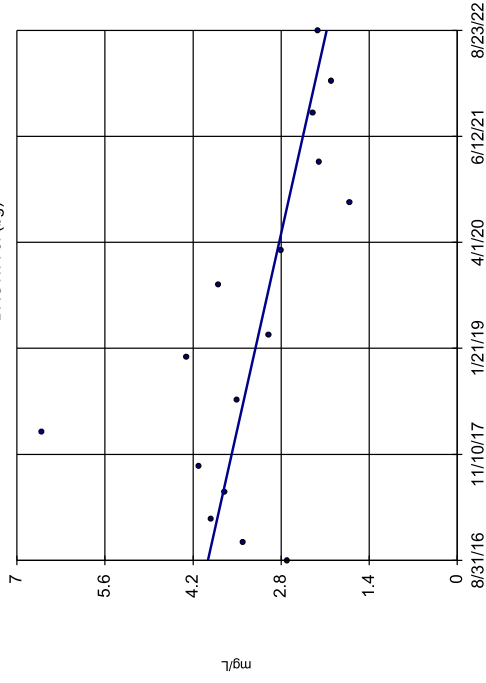


n = 16
Slope = -0.00315
units per year.
Mann-Kendall
statistic = -15
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWA-5I (bg)

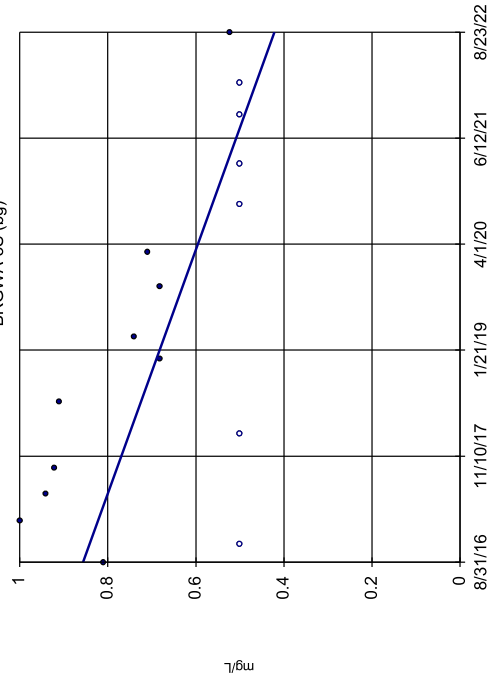


n = 16
Slope = -0.3159
units per year.
Mann-Kendall
statistic = -48
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWA-5S (bg)

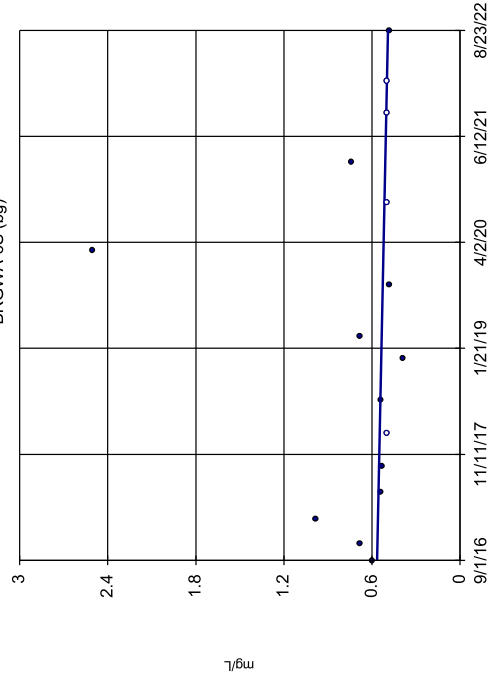


n = 16
Slope = -0.07263
units per year.
Mann-Kendall
statistic = -52
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

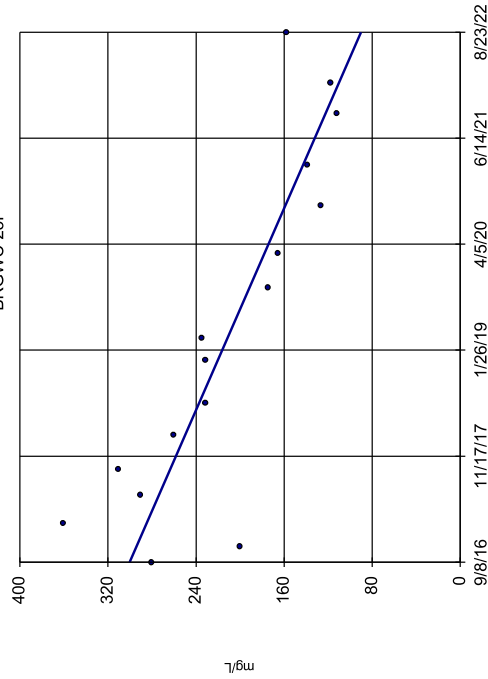
Sen's Slope Estimator

BRGWA-6S (bg)



Sen's Slope Estimator

BRGWC-251

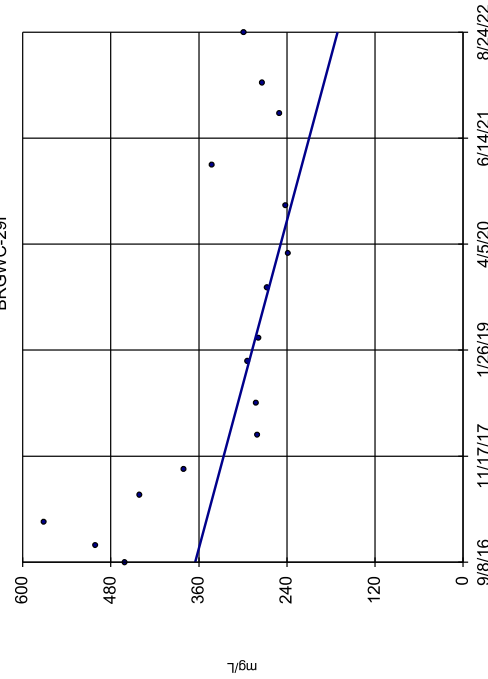


n = 16
 Slope = -35.25
 units per year.
 Mann-Kendall
 statistic = -81
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-291

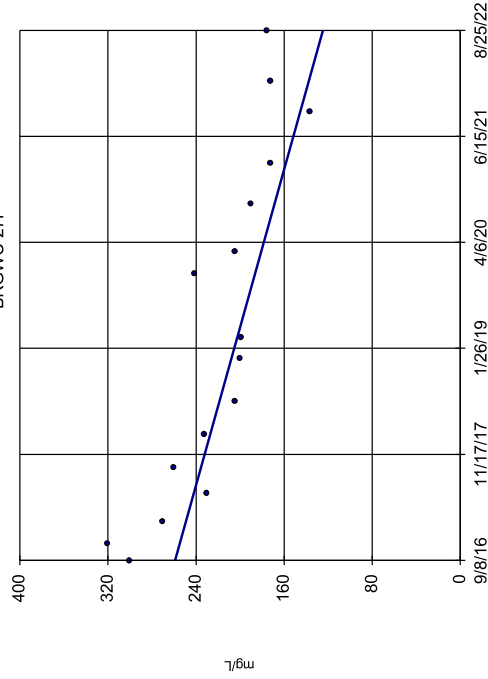


n = 16
 Slope = -32.54
 units per year.
 Mann-Kendall
 statistic = -62
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-271

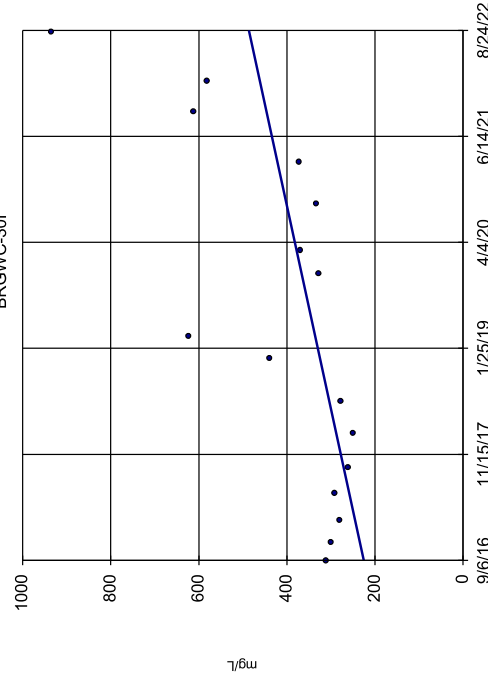


n = 16
 Slope = 22.5
 units per year.
 Mann-Kendall
 statistic = -90
 critical = -58
 Increasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

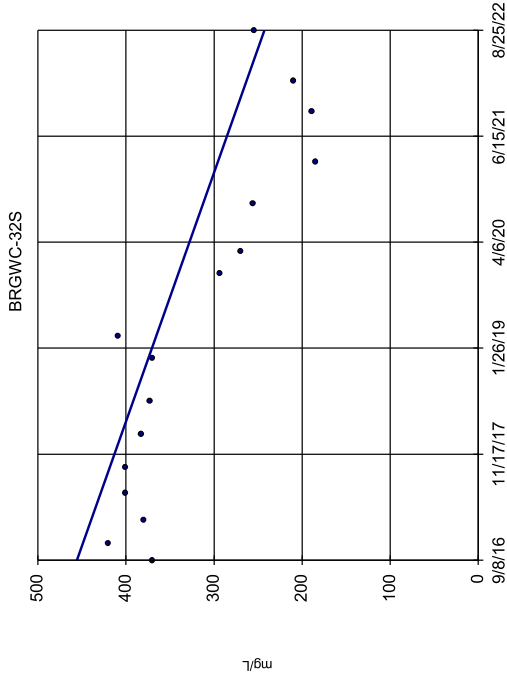
BRGWC-301



n = 16
 Slope = 43.71
 units per year.
 Mann-Kendall
 statistic = 60
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

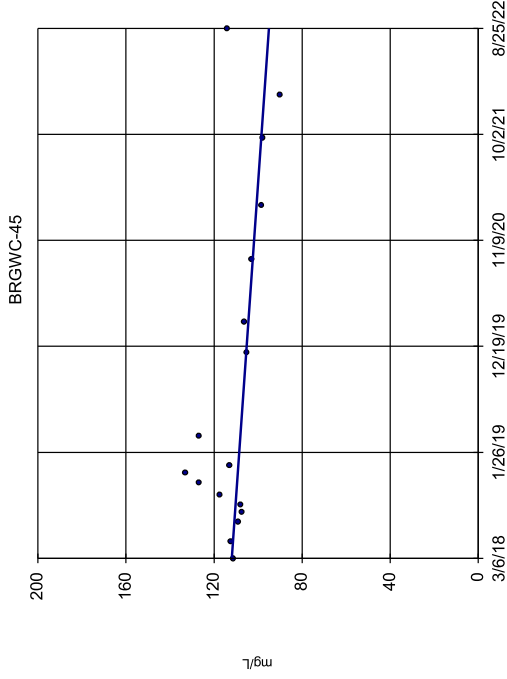
Sen's Slope Estimator



n = 16
 Slope = -35.7
 units per year.
 Mann-Kendall
 statistic = -74
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

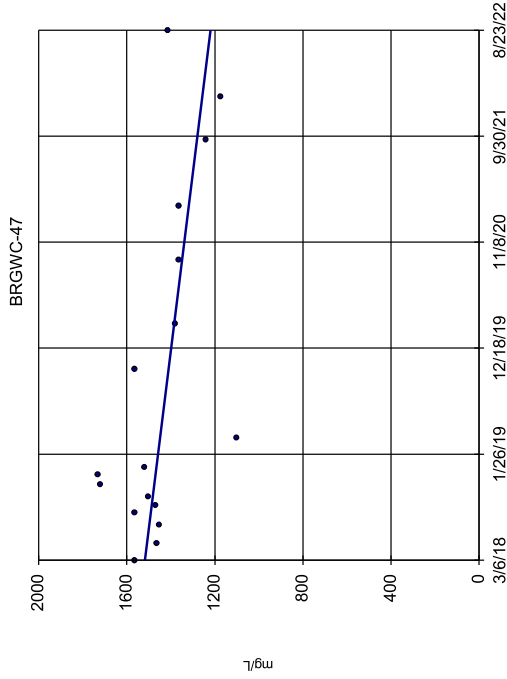
Sen's Slope Estimator



n = 17
 Slope = -3.782
 units per year.
 Mann-Kendall
 statistic = -45
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

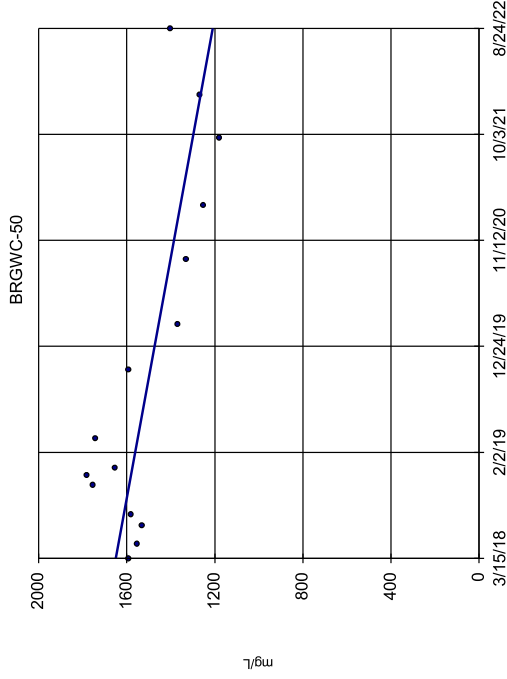
Sen's Slope Estimator



n = 17
 Slope = -66.51
 units per year.
 Mann-Kendall
 statistic = -50
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

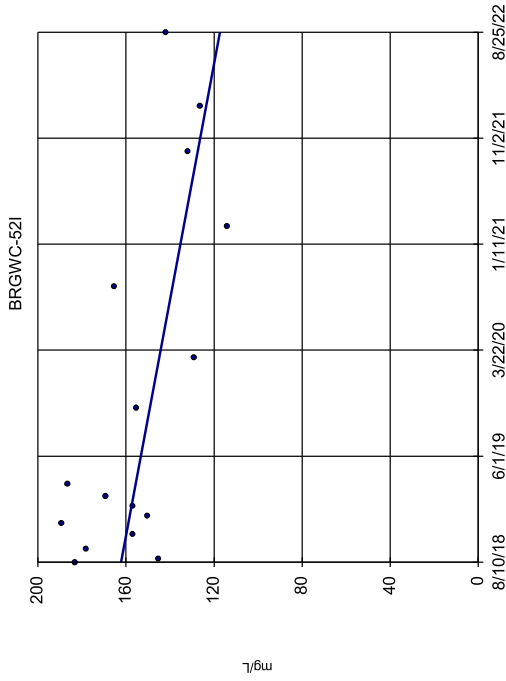
Sen's Slope Estimator



n = 15
 Slope = -99.04
 units per year.
 Mann-Kendall
 statistic = -44
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

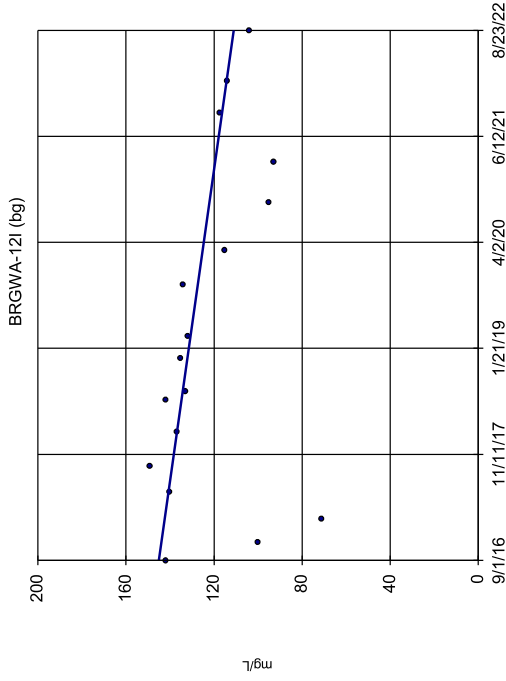
Sen's Slope Estimator



n = 16
 Slope = -11.11
 units per year.
 Mann-Kendall
 statistic = -49
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

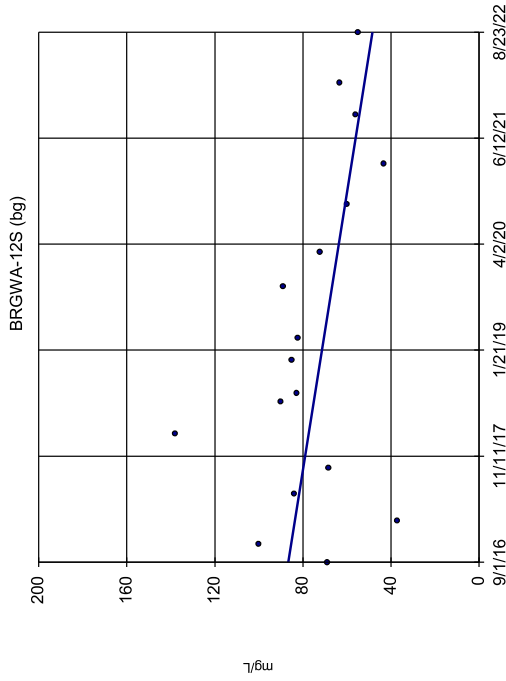
Sen's Slope Estimator



n = 17
 Slope = -5.702
 units per year.
 Mann-Kendall
 statistic = -55
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

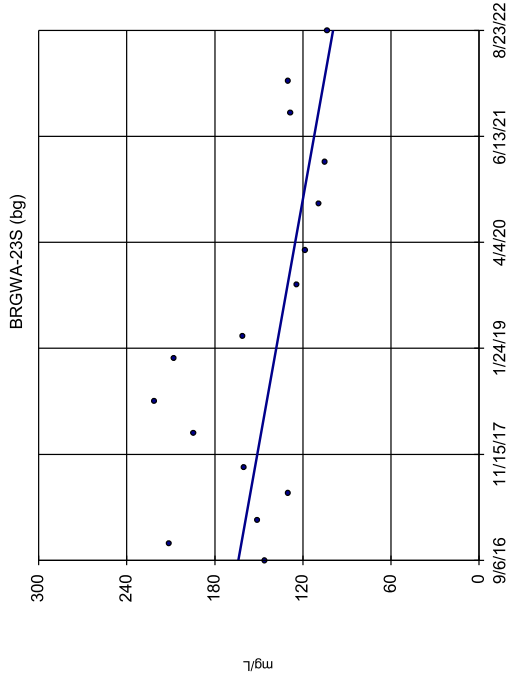
Sen's Slope Estimator



n = 17
 Slope = -6.383
 units per year.
 Mann-Kendall
 statistic = -48
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

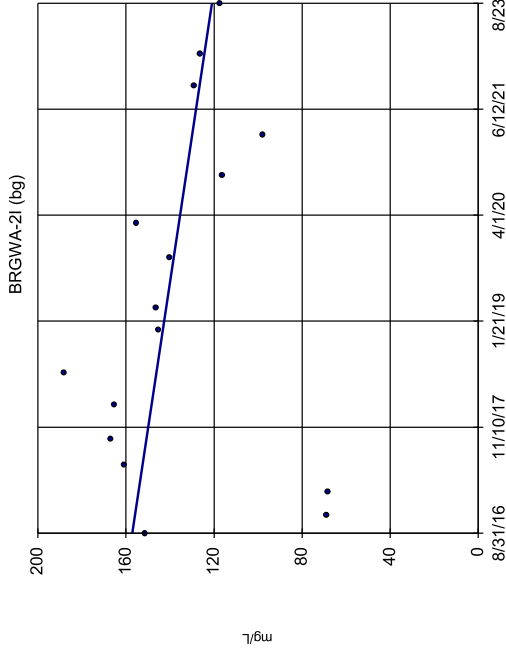
Sen's Slope Estimator



n = 16
 Slope = -10.83
 units per year.
 Mann-Kendall
 statistic = -53
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

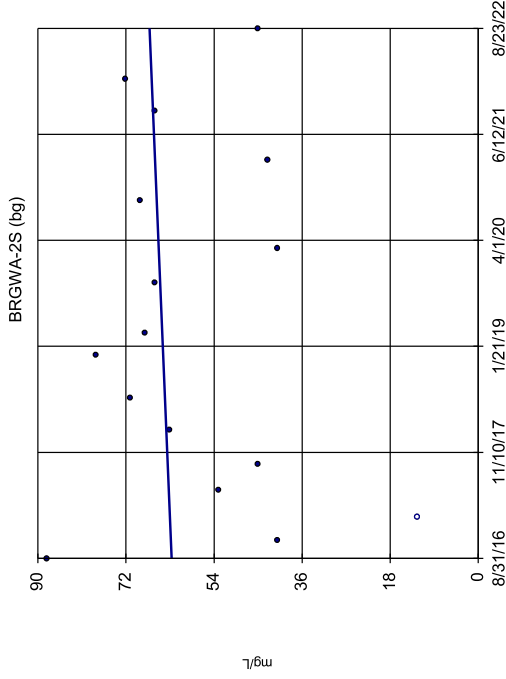
Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



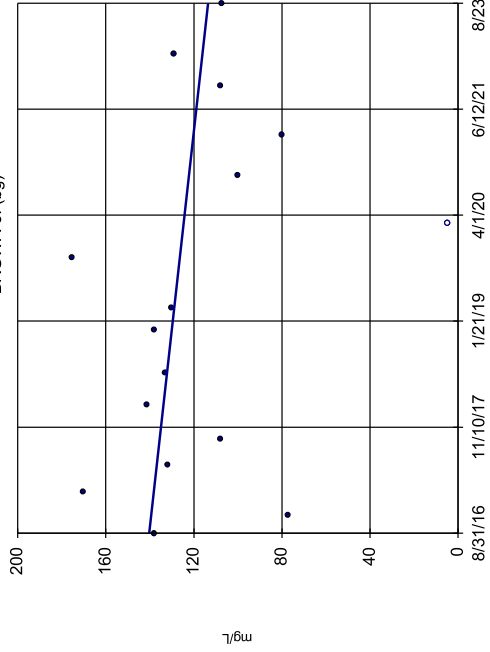
Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



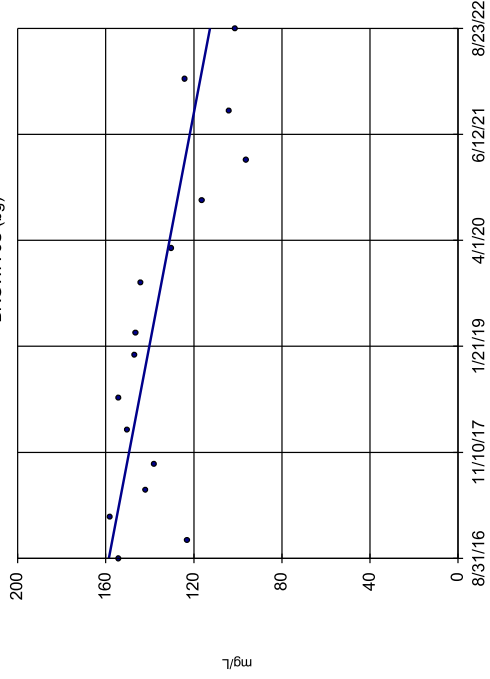
Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
Plant Branch Client: Southern Company Data: Plant Branch AP

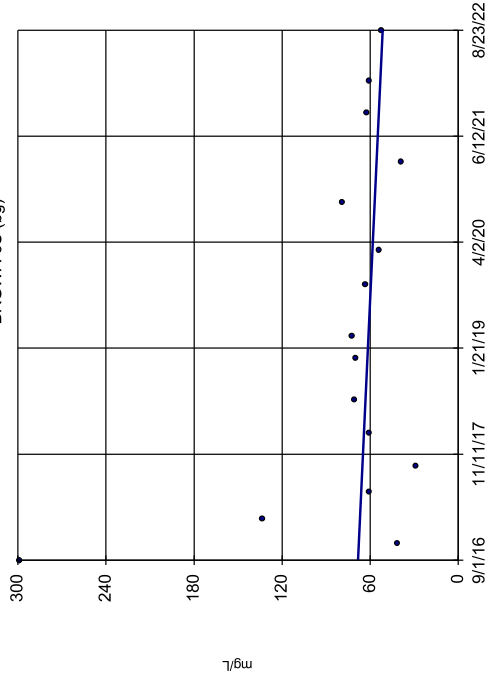
Sen's Slope Estimator



Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWA-6S (bg)

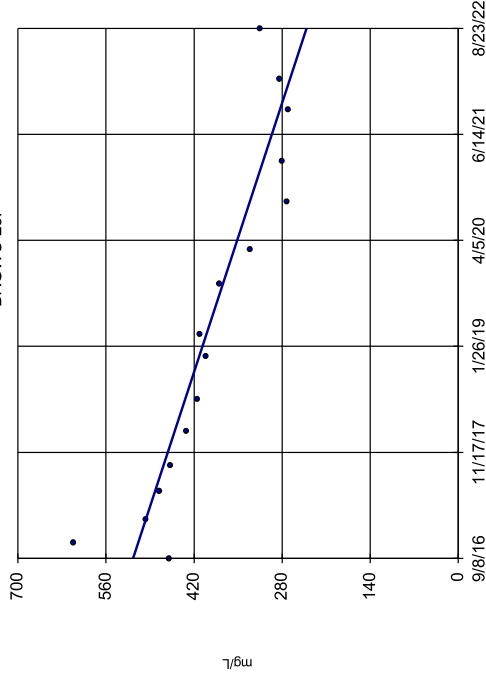


n = 16
 Slope = -2.774
 units per year.
 Mann-Kendall
 statistic = -23
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-251

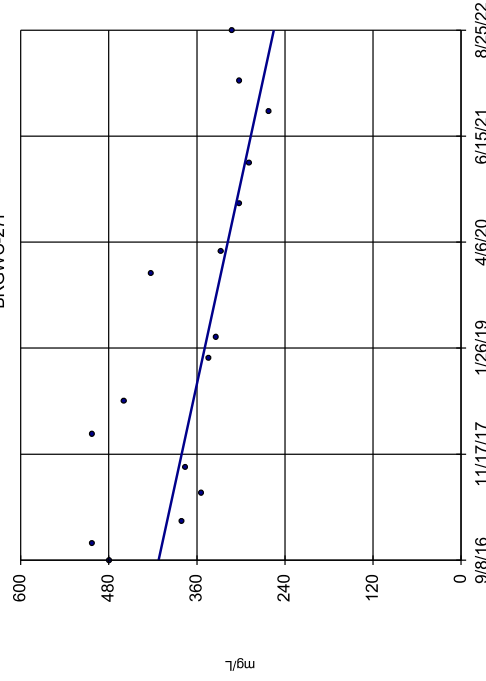


n = 16
 Slope = -46.21
 units per year.
 Mann-Kendall
 statistic = -96
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

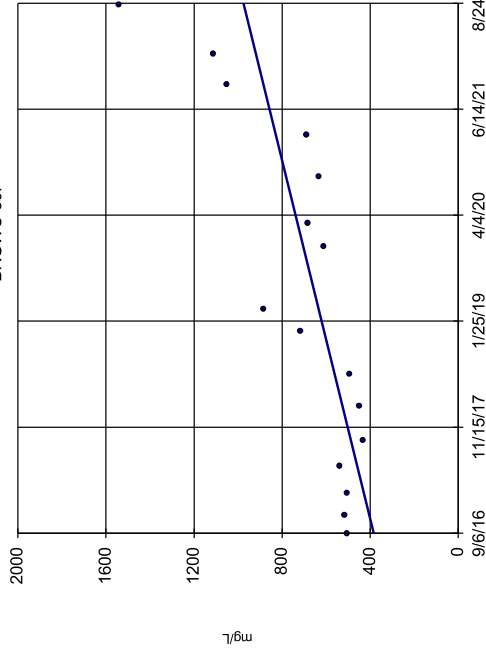
Sen's Slope Estimator

BRGWC-271



Sen's Slope Estimator

BRGWC-301

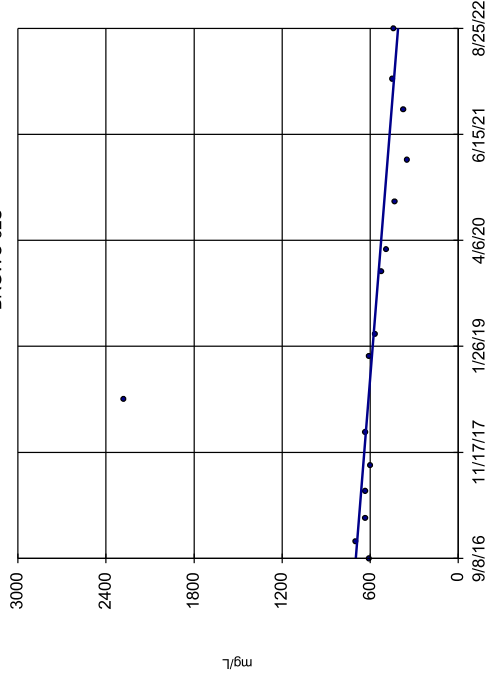


n = 16
 Slope = 99.28
 units per year.
 Mann-Kendall
 statistic = 74
 critical = 58
 Increasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-32S

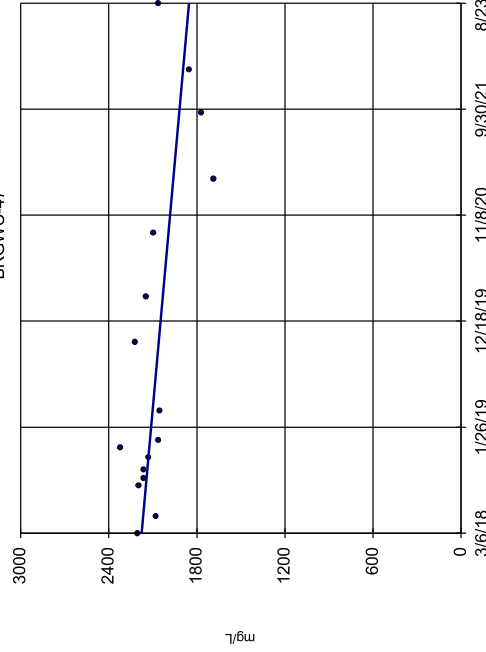


n = 16
 Slope = -48.29
 units per year.
 Mann-Kendall
 statistic = -81
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-47

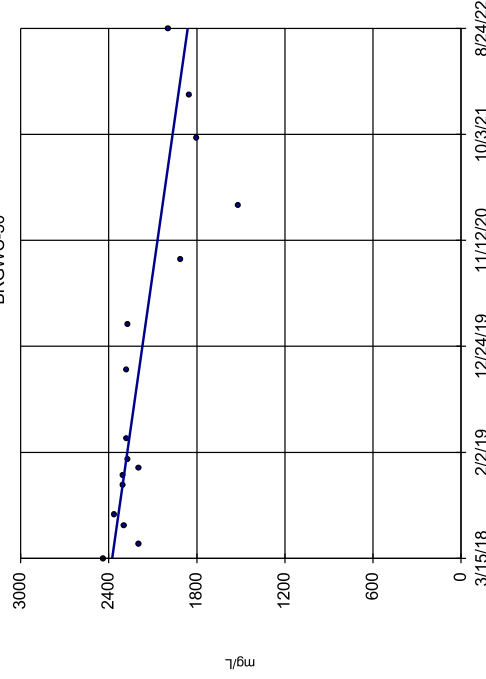


n = 16
 Slope = -71.84
 units per year.
 Mann-Kendall
 statistic = -54
 critical = -58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-50



n = 16
 Slope = -115.9
 units per year.
 Mann-Kendall
 statistic = -68
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:42 PM View: Pond BCD - Appendix III Tren
 Plant Branch Client: Southern Company Data: Plant Branch AP

FIGURE F.

Upper Tolerance Limit Summary Table

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:54 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.0241	n/a	n/a	n/a	n/a	136	n/a	n/a	82.35	n/a	n/a	0.0009341	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a	136	n/a	n/a	75	n/a	n/a	0.0009341	NP Inter(NDs)
Barium (mg/L)	n/a	0.13	n/a	n/a	n/a	n/a	136	n/a	n/a	0	n/a	n/a	0.0009341	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a	136	n/a	n/a	100	n/a	n/a	0.0009341	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a	138	n/a	n/a	98.55	n/a	n/a	0.0008431	NP Inter(NDs)
Chromium (mg/L)	n/a	0.016	n/a	n/a	n/a	n/a	136	n/a	n/a	19.85	n/a	n/a	0.0009341	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0135	n/a	n/a	n/a	n/a	136	n/a	n/a	55.88	n/a	n/a	0.0009341	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	1.699	n/a	n/a	n/a	n/a	136	0.8071	0.474	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.42	n/a	n/a	n/a	n/a	144	n/a	n/a	53.47	n/a	n/a	0.0006197	NP Inter(NDs)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a	136	n/a	n/a	86.76	n/a	n/a	0.0009341	NP Inter(NDs)
Lithium (mg/L)	n/a	0.089	n/a	n/a	n/a	n/a	136	n/a	n/a	39.71	n/a	n/a	0.0009341	NP Inter(normality)
Mercury (mg/L)	n/a	0.00021	n/a	n/a	n/a	n/a	120	n/a	n/a	87.5	n/a	n/a	0.002122	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.008	n/a	n/a	n/a	n/a	133	n/a	n/a	77.44	n/a	n/a	0.00109	NP Inter(NDs)
Selenium (mg/L)	n/a	0.006	n/a	n/a	n/a	n/a	136	n/a	n/a	91.18	n/a	n/a	0.0009341	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a	136	n/a	n/a	100	n/a	n/a	0.0009341	NP Inter(NDs)

FIGURE G.

PLANT BRANCH POND BCD GWPS				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.024	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.13	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.001	0.005
Chromium, Total (mg/L)	0.1		0.016	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.014	0.014
Combined Radium, Total (pCi/L)	5		1.7	5
Fluoride, Total (mg/L)	4		0.42	4
Lead, Total (mg/L)	n/a	0.015	0.002	0.015
Lithium, Total (mg/L)	n/a	0.04	0.089	0.089
Mercury, Total (mg/L)	0.002		0.00021	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.008	0.1
Selenium, Total (mg/L)	0.05		0.006	0.05
Thallium, Total (mg/L)	0.002		0.002	0.002

**Highlighted cells indicate Background is higher than MCLs*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

Confidence Intervals - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BRGWC-50	0.03637	0.0123	0.005	Yes	17	0.02766	0.02475	0	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.42	1.3	0.014	Yes	17	1.395	0.06615	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	PZ-511	0.0239	0.018	0.014	Yes	10	0.02239	0.006881	0	None	No	0.011	NP (normality)

Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BRGWC-29I	0.003	0.0007	0.006	No	17	0.002865	0.0005578	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-30I	0.003	0.0013	0.006	No	17	0.0029	0.0004123	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-32S	0.003	0.0014	0.006	No	17	0.002906	0.0003881	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-45	0.003	0.0014	0.006	No	18	0.002447	0.0008933	61.11	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-47	0.003	0.00035	0.006	No	18	0.002853	0.0006246	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-50	0.003	0.00092	0.006	No	17	0.002579	0.0009413	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-52I	0.003	0.00091	0.006	No	17	0.002599	0.0008968	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	PZ-50D	0.003	0.00056	0.006	No	4	0.00239	0.00122	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	PZ-51D	0.003	0.0013	0.006	No	4	0.002575	0.00085	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	PZ-51I	0.003	0.00079	0.006	No	8	0.002336	0.0009479	62.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	PZ-51S	0.003	0.00043	0.006	No	8	0.002529	0.0009463	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BRGWC-25I	0.005	0.00091	0.01	No	17	0.003985	0.001887	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-27I	0.005	0.0014	0.01	No	17	0.004065	0.001743	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-29I	0.005	0.0015	0.01	No	17	0.003447	0.001957	58.82	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-30I	0.005	0.00283	0.01	No	17	0.004611	0.001169	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-32S	0.005	0.00053	0.01	No	17	0.004737	0.001084	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-45	0.005	0.00096	0.01	No	18	0.003894	0.00186	72.22	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-47	0.005	0.0012	0.01	No	18	0.002951	0.001837	33.33	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-50	0.005	0.0025	0.01	No	17	0.004124	0.001675	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-52I	0.005	0.0026	0.01	No	17	0.003657	0.001473	41.18	None	No	0.01	NP (normality)
Arsenic (mg/L)	PZ-50D	0.002914	0.0000331	0.01	No	4	0.002355	0.001874	25	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	PZ-51D	0.00374	0.0002464	0.01	No	4	0.002745	0.001689	25	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	PZ-51I	0.005	0.00222	0.01	No	8	0.004652	0.0009829	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Arsenic (mg/L)	PZ-51S	0.005	0.002	0.01	No	8	0.004625	0.001061	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	BRGWC-25I	0.03483	0.02632	2	No	17	0.03078	0.007065	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BRGWC-27I	0.01685	0.015	2	No	17	0.01592	0.001471	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-29I	0.0192	0.0169	2	No	17	0.01805	0.001838	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-30I	0.02874	0.02236	2	No	17	0.02569	0.00533	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	BRGWC-32S	0.04195	0.02702	2	No	17	0.03449	0.01191	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-45	0.09373	0.07398	2	No	18	0.08386	0.01632	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-47	0.04274	0.03319	2	No	18	0.03797	0.007891	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-50	0.02107	0.01806	2	No	17	0.01956	0.002402	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-52I	0.02435	0.0161	2	No	17	0.02052	0.007012	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	PZ-50D	0.05003	0.01782	2	No	4	0.03393	0.007091	0	None	No	0.01	Param.
Barium (mg/L)	PZ-51D	0.08	0.057	2	No	4	0.0631	0.01129	0	None	No	0.0625	NP (normality)
Barium (mg/L)	PZ-51I	0.01626	0.01359	2	No	8	0.01493	0.00126	0	None	No	0.01	Param.
Barium (mg/L)	PZ-51S	0.03466	0.02467	2	No	8	0.02966	0.004711	0	None	No	0.01	Param.
Beryllium (mg/L)	BRGWC-27I	0.0005	0.0001	0.004	No	18	0.0002352	0.0001743	27.78	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-29I	0.001026	0.00074	0.004	No	17	0.0008832	0.0002286	5.882	None	No	0.01	Param.
Beryllium (mg/L)	BRGWC-45	0.0005	0.000079	0.004	No	19	0.0004539	0.0001381	89.47	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-47	0.0005	0.000056	0.004	No	18	0.0004254	0.0001716	83.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-50	0.005518	0.002801	0.004	No	17	0.004159	0.002169	11.76	None	No	0.01	Param.
Beryllium (mg/L)	PZ-50D	0.0004024	-0.00007439	0.004	No	4	0.000332	0.0002121	50	Kaplan-Meier	No	0.01	Param.
Beryllium (mg/L)	PZ-51I	0.0005	0.000064	0.004	No	8	0.0001845	0.0001951	25	None	No	0.004	NP (normality)
Cadmium (mg/L)	BRGWC-27I	0.001	0.00009	0.005	No	18	0.0008978	0.0002975	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-30I	0.001	0.00014	0.005	No	18	0.0009011	0.000288	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-32S	0.001	0.00011	0.005	No	18	0.0008494	0.0003465	83.33	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-45	0.001	0.0002	0.005	No	19	0.0008183	0.0003619	78.95	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-47	0.001	0.00015	0.005	No	18	0.0005406	0.0004238	44.44	None	No	0.01	NP (normality)
Cadmium (mg/L)	BRGWC-50	0.03637	0.0123	0.005	Yes	17	0.02766	0.02475	0	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	PZ-51I	0.01225	0.001149	0.005	No	10	0.007311	0.01016	0	None	x^(1/3)	0.01	Param.
Chromium (mg/L)	BRGWC-25I	0.01	0.0016	0.1	No	17	0.008975	0.002895	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-27I	0.01	0.003	0.1	No	17	0.009059	0.00268	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-29I	0.02	0.01	0.1	No	17	0.01059	0.002425	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-30I	0.014	0.0051	0.1	No	17	0.009947	0.00158	88.24	None	No	0.01	NP (NDs)

Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	BRGWC-32S	0.01	0.0012	0.1	No	17	0.004629	0.004109	35.29	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-45	0.01	0.0014	0.1	No	18	0.008496	0.003464	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-47	0.01	0.0018	0.1	No	18	0.008008	0.003841	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-50	0.01	0.00098	0.1	No	17	0.006514	0.004389	58.82	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-52I	0.01	0.0017	0.1	No	17	0.009512	0.002013	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	PZ-51I	0.01	0.0008	0.1	No	8	0.007722	0.004217	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	PZ-51S	0.01	0.00042	0.1	No	8	0.007631	0.004386	75	None	No	0.004	NP (NDs)
Cobalt (mg/L)	BRGWC-25I	0.006497	0.003517	0.014	No	17	0.005007	0.002378	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-27I	0.01062	0.007739	0.014	No	18	0.009178	0.002378	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-29I	0.009914	0.006062	0.014	No	17	0.007988	0.003074	5.882	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-30I	0.00119	0.0007782	0.014	No	18	0.001106	0.0003155	16.67	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BRGWC-32S	0.0025	0.001	0.014	No	18	0.001083	0.0003536	88.89	Kaplan-Meier	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-45	0.015	0.0054	0.014	No	19	0.01238	0.01443	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-47	0.001751	0.0004698	0.014	No	18	0.002175	0.003099	22.22	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.42	1.3	0.014	Yes	17	1.395	0.06615	0	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-52I	0.0015	0.00063	0.014	No	17	0.001382	0.000966	58.82	None	No	0.01	NP (NDs)
Cobalt (mg/L)	PZ-50D	0.5119	-0.1865	0.014	No	5	0.1627	0.2084	0	None	No	0.01	Param.
Cobalt (mg/L)	PZ-51D	0.0004605	0.0002954	0.014	No	5	0.0006232	0.0003464	40	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	PZ-51I	0.0239	0.018	0.014	Yes	10	0.02239	0.006881	0	None	No	0.011	NP (normality)
Cobalt (mg/L)	PZ-51S	0.007228	0.002645	0.014	No	9	0.004937	0.002373	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-25I	1.536	0.5768	5	No	17	1.137	0.9613	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-27I	1.415	0.5721	5	No	17	1.059	0.798	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-29I	1.648	1.18	5	No	17	1.414	0.3731	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-30I	1.353	0.6195	5	No	17	1.036	0.6789	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-32S	1.079	0.468	5	No	17	0.7737	0.4878	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-45	0.8864	0.3806	5	No	18	0.6335	0.4179	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-47	1.593	0.716	5	No	18	1.223	0.8064	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-50	1.957	1.264	5	No	17	1.611	0.5523	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-52I	2.558	1.453	5	No	17	2.06	0.9825	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-50D	3.133	0.07744	5	No	4	1.605	0.6728	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-51D	3.894	1.101	5	No	4	2.498	0.6152	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-51I	11.7	0.625	5	No	8	2.451	3.764	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	PZ-51S	17.1	0.00107	5	No	8	2.786	5.805	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	BRGWC-25I	0.27	0.14	4	No	18	0.2081	0.1353	5.556	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-27I	0.2596	0.1546	4	No	18	0.2071	0.08675	11.11	None	No	0.01	Param.
Fluoride (mg/L)	BRGWC-29I	0.37	0.085	4	No	18	0.1734	0.1234	11.11	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-30I	0.3461	0.1334	4	No	18	0.2594	0.215	5.556	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-32S	0.11	0.09	4	No	18	0.1077	0.03756	61.11	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BRGWC-45	0.166	0.067	4	No	19	0.1764	0.2312	52.63	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BRGWC-47	0.34	0.076	4	No	19	0.2334	0.257	52.63	None	No	0.01	NP (NDs)
Fluoride (mg/L)	BRGWC-50	0.8057	0.3536	4	No	18	0.6159	0.4444	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-52I	0.2297	0.1292	4	No	17	0.1795	0.08022	5.882	None	No	0.01	Param.
Fluoride (mg/L)	PZ-50D	0.2794	0.04298	4	No	5	0.1612	0.07055	0	None	No	0.01	Param.
Fluoride (mg/L)	PZ-51D	0.3329	0.2023	4	No	5	0.2676	0.03897	0	None	No	0.01	Param.
Fluoride (mg/L)	PZ-51I	0.148	0.061	4	No	9	0.101	0.02184	77.78	None	No	0.002	NP (NDs)
Fluoride (mg/L)	PZ-51S	0.1175	0.05175	4	No	8	0.08463	0.03101	0	None	No	0.01	Param.
Lead (mg/L)	BRGWC-25I	0.002	0.00011	0.015	No	17	0.001889	0.0004584	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-27I	0.002	0.000063	0.015	No	17	0.001886	0.0004698	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-29I	0.0006	0.00029	0.015	No	16	0.0006819	0.0006628	18.75	None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-30I	0.002	0.00011	0.015	No	17	0.001889	0.0004584	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-45	0.002	0.00026	0.015	No	18	0.001696	0.0007011	83.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-47	0.002	0.00012	0.015	No	18	0.00168	0.0007372	83.33	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-50	0.002	0.0001	0.015	No	17	0.001144	0.000942	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-52I	0.002	0.000042	0.015	No	17	0.001885	0.0004749	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	PZ-50D	0.002	0.000056	0.015	No	4	0.001514	0.000972	75	None	No	0.0625	NP (NDs)

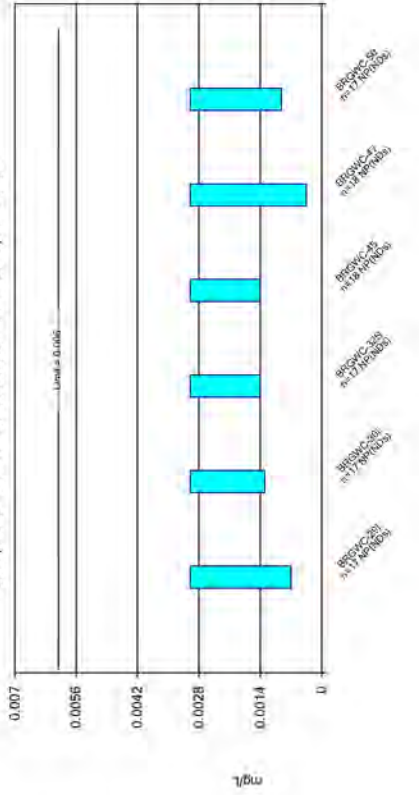
Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 7:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	PZ-51D	0.002	0.00013	0.015	No	4	0.001533	0.000935	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	PZ-51I	0.002	0.00017	0.015	No	8	0.001566	0.0008048	75	None	No	0.004	NP (NDs)
Lithium (mg/L)	BRGWC-27I	0.0021	0.0012	0.089	No	17	0.002106	0.001405	17.65	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-29I	0.003608	0.00302	0.089	No	17	0.003314	0.0004687	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-30I	0.01735	0.01219	0.089	No	17	0.01493	0.004314	0	None	sqrt(x)	0.01	Param.
Lithium (mg/L)	BRGWC-32S	0.0035	0.0021	0.089	No	17	0.002688	0.001061	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-45	0.003728	0.002896	0.089	No	17	0.003312	0.0006642	5.882	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-47	0.04413	0.04074	0.089	No	18	0.04243	0.002802	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-50	0.0439	0.03831	0.089	No	17	0.04111	0.004465	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-52I	0.006682	0.003294	0.089	No	17	0.005294	0.003416	5.882	None	x^(1/3)	0.01	Param.
Lithium (mg/L)	PZ-50D	0.02921	0.01504	0.089	No	4	0.02213	0.003119	0	None	No	0.01	Param.
Lithium (mg/L)	PZ-51D	0.0096	0.0042	0.089	No	4	0.008175	0.002654	0	None	No	0.0625	NP (normality)
Lithium (mg/L)	PZ-51I	0.026	0.019	0.089	No	8	0.0209	0.002371	0	None	No	0.004	NP (normality)
Lithium (mg/L)	PZ-51S	0.005	0.0012	0.089	No	8	0.004525	0.001344	87.5	None	No	0.004	NP (NDs)
Mercury (mg/L)	BRGWC-25I	0.0002	0.000083	0.002	No	15	0.0001815	0.00004941	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-27I	0.0002	0.00005	0.002	No	15	0.0001798	0.00005331	86.67	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-29I	0.0002	0.000098	0.002	No	15	0.0001739	0.0000552	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-30I	0.0002	0.000082	0.002	No	15	0.0001728	0.0000569	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-32S	0.0002	0.0001	0.002	No	15	0.0001781	0.0000454	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	PZ-51I	0.0002	0.000099	0.002	No	8	0.0001874	0.00003571	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	BRGWC-25I	0.00105	0.00089	0.1	No	16	0.0009781	0.00007876	62.5	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-30I	0.0012	0.001	0.1	No	16	0.001099	0.0003203	68.75	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-45	0.001	0.00076	0.1	No	17	0.000952	0.0001479	88.24	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-47	0.001	0.000296	0.1	No	17	0.0009586	0.0001707	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-50	0.0022	0.001	0.1	No	16	0.001219	0.0006306	87.5	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-52I	0.005	0.001	0.1	No	16	0.002117	0.002007	43.75	None	No	0.01	NP (normality)
Molybdenum (mg/L)	PZ-50D	0.002584	0.0004608	0.1	No	4	0.001523	0.0004676	0	None	No	0.01	Param.
Molybdenum (mg/L)	PZ-51D	0.009763	0.0001132	0.1	No	4	0.003278	0.002415	0	None	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	PZ-51I	0.001	0.000313	0.1	No	8	0.0009141	0.0002429	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	BRGWC-25I	0.005	0.0021	0.05	No	17	0.004829	0.0007034	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-27I	0.005	0.0025	0.05	No	17	0.003841	0.001247	35.29	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-29I	0.005	0.0042	0.05	No	17	0.004829	0.001348	52.94	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-30I	0.005	0.0045	0.05	No	17	0.004618	0.0008662	76.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-32S	0.13	0.0019	0.05	No	18	0.07245	0.07317	22.22	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-45	0.005	0.0029	0.05	No	18	0.004883	0.000495	94.44	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-47	0.005	0.002	0.05	No	18	0.003978	0.001509	66.67	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-50	0.005	0.002	0.05	No	17	0.003704	0.00139	47.06	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-29I	0.002	0.00016	0.002	No	17	0.0006071	0.0007966	23.53	None	No	0.01	NP (normality)

Non-Parametric Confidence Interval

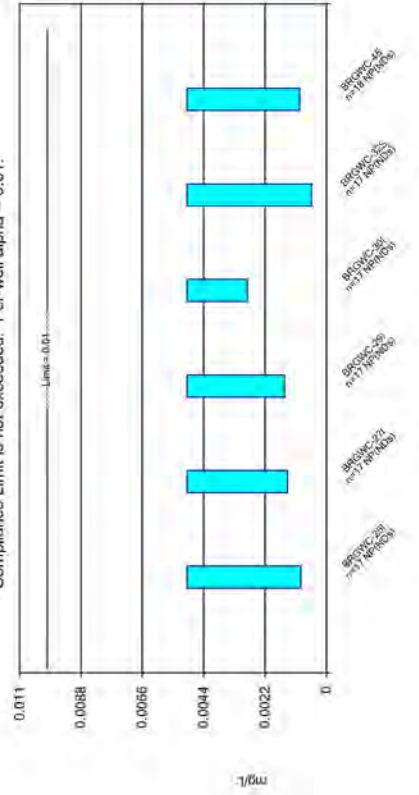
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

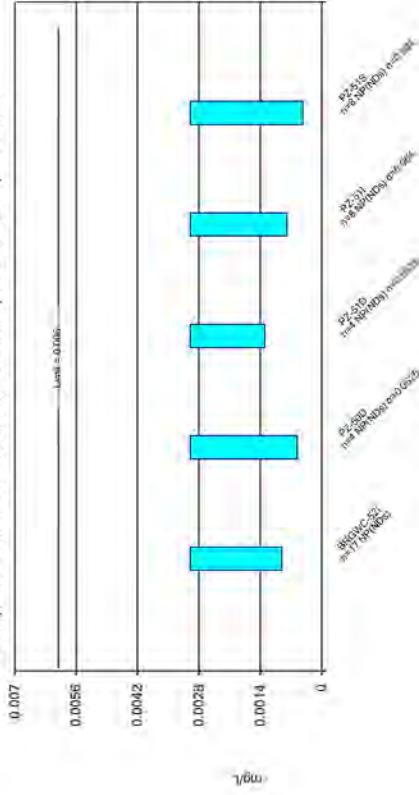
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

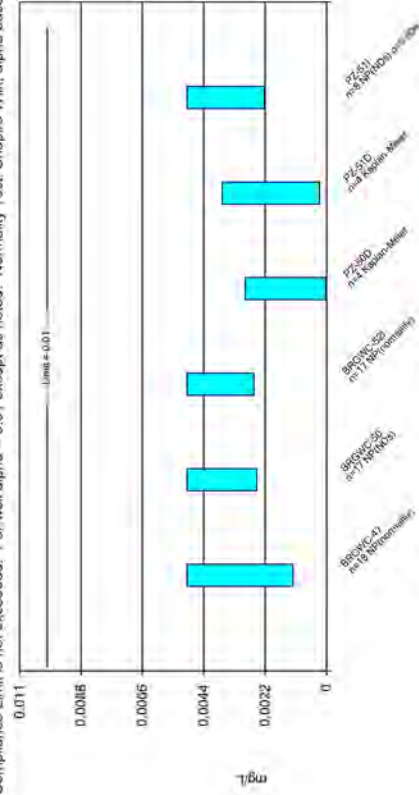
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

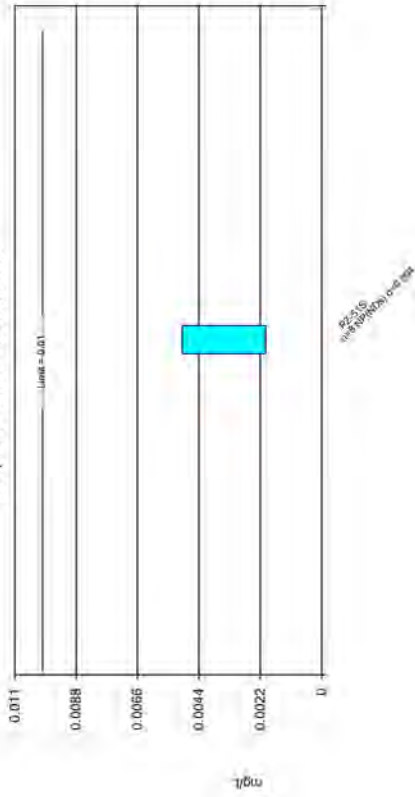
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

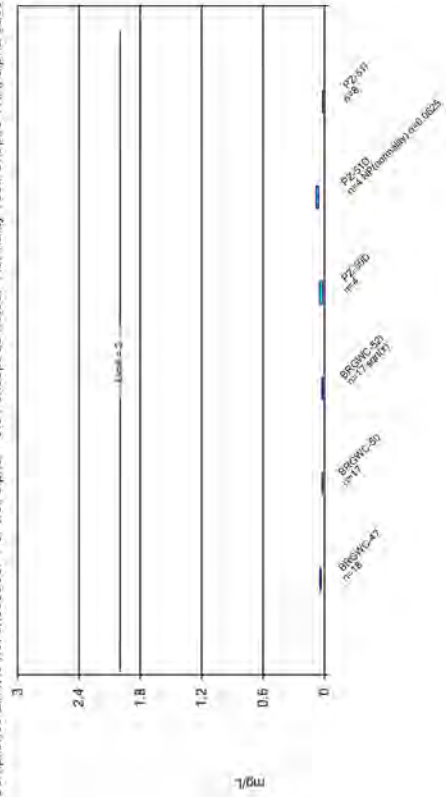
Compliance Limit is not exceeded. Limit = 0.01.



Constituent: Arsenic Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

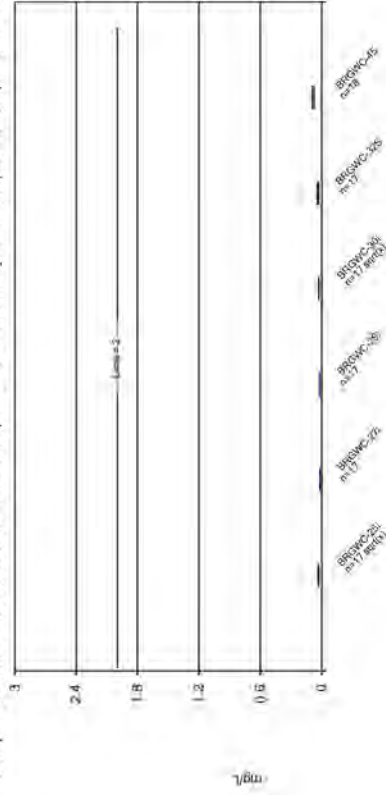
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric Confidence Interval

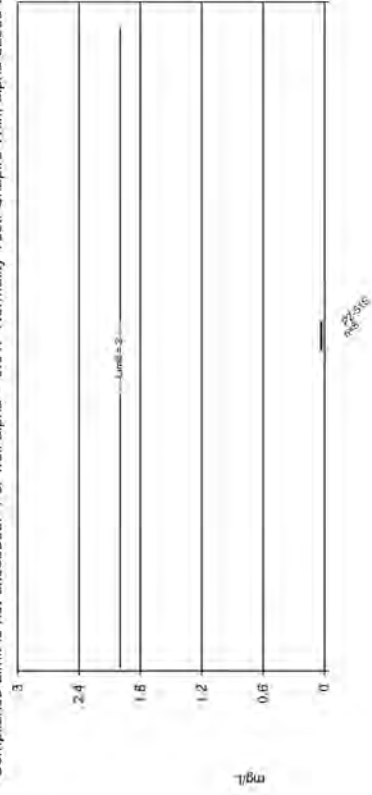
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

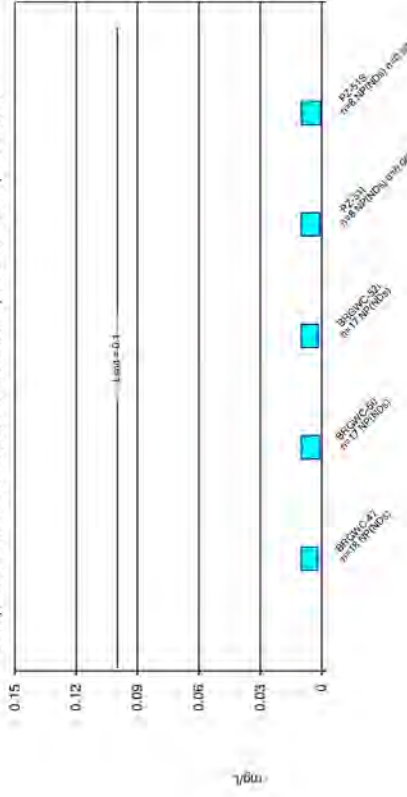
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

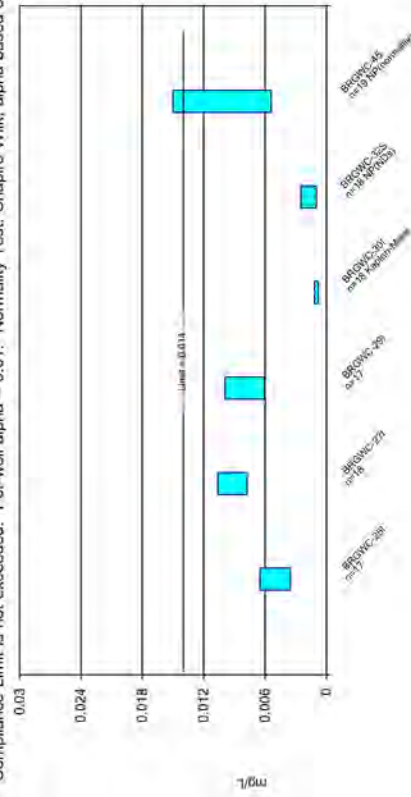
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

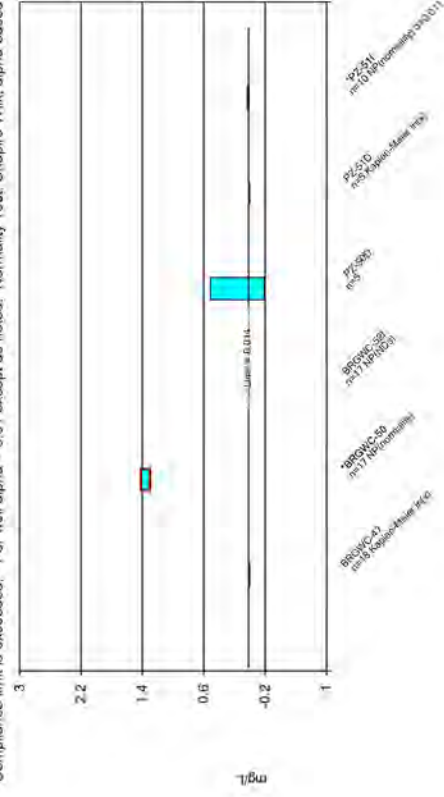
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

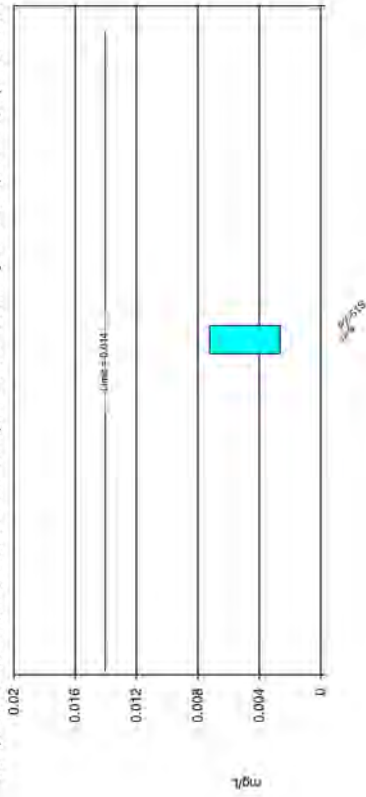
Compliance limit is exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

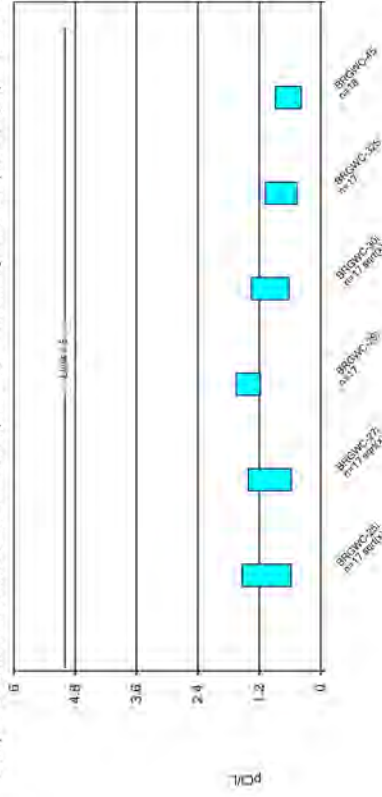
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric Confidence Interval

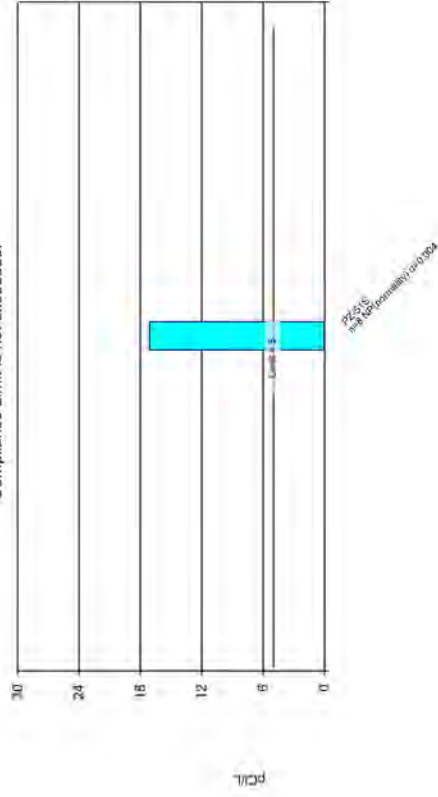
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

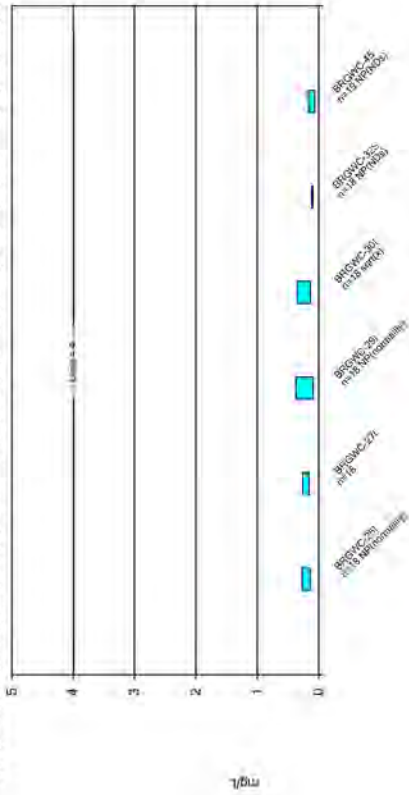
Compliance Limit is not exceeded.



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

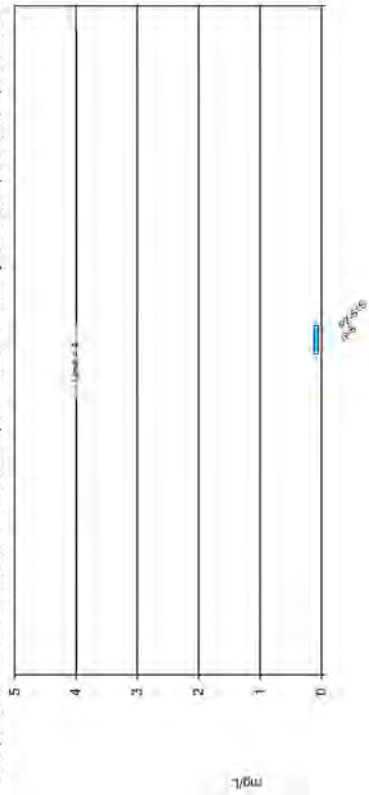
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric Confidence Interval

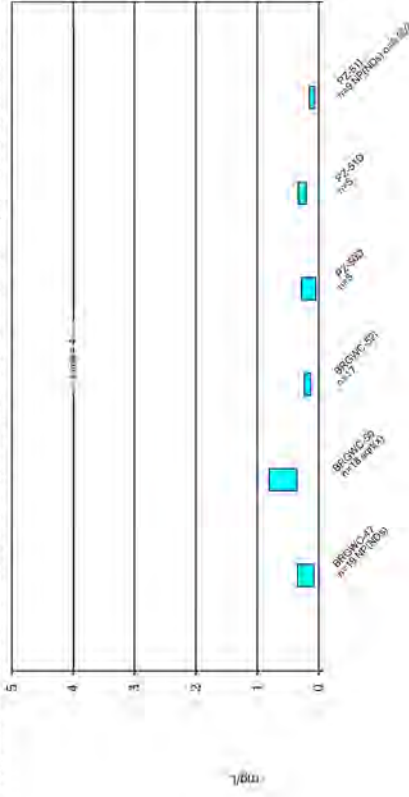
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

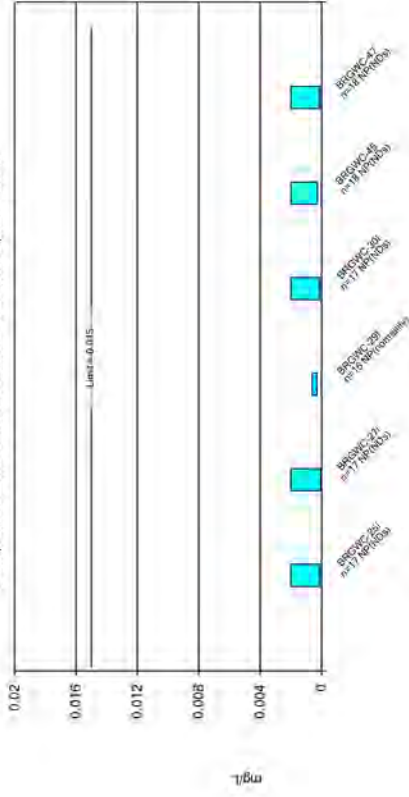
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

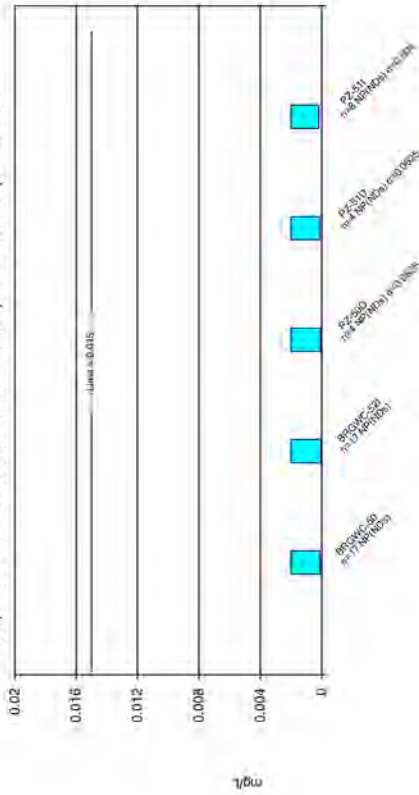
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

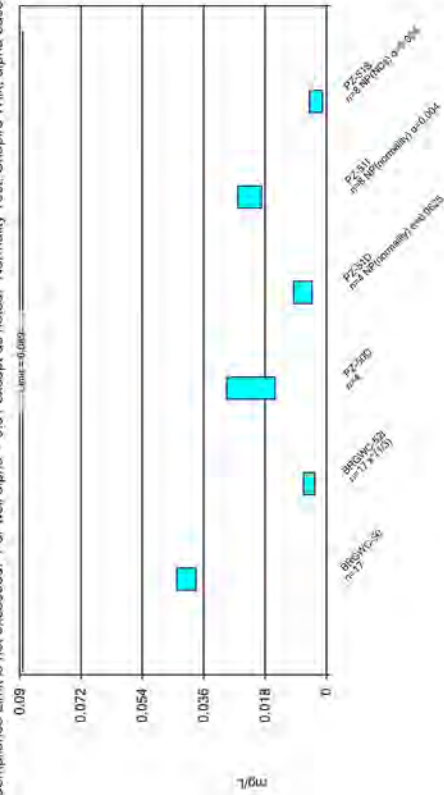
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

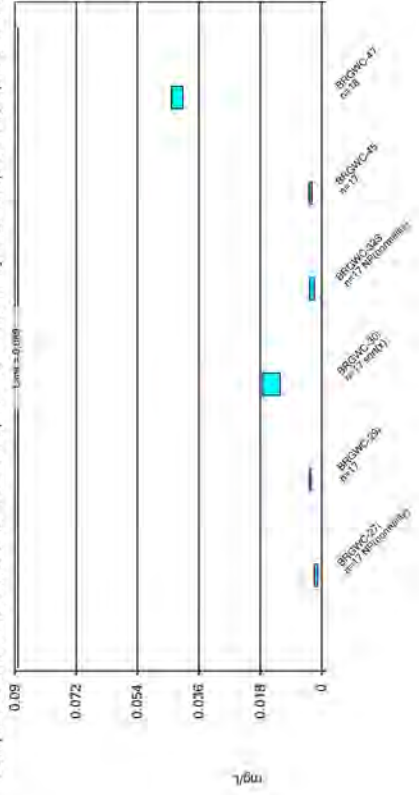
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

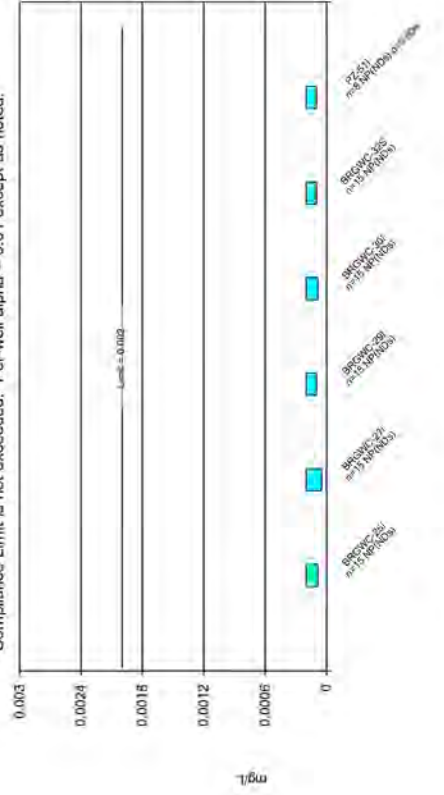
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

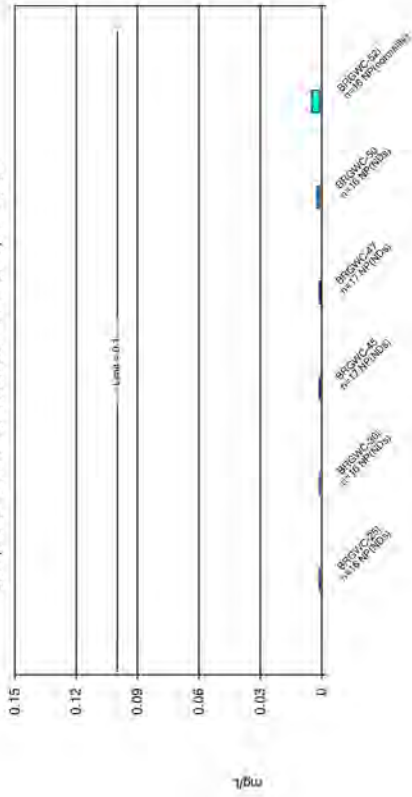
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

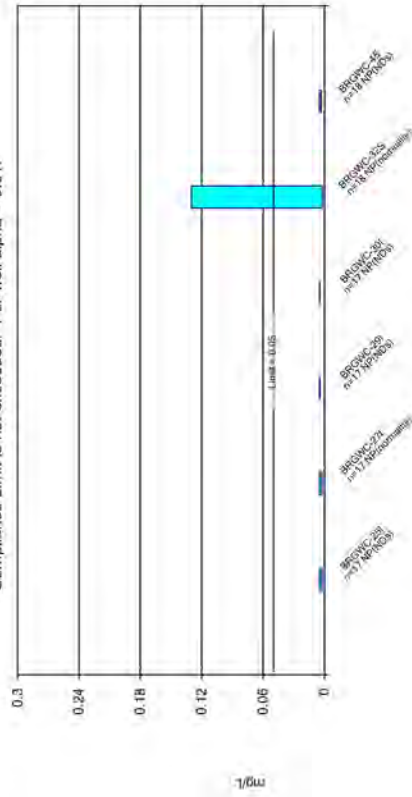
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Molybdenum Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Int
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

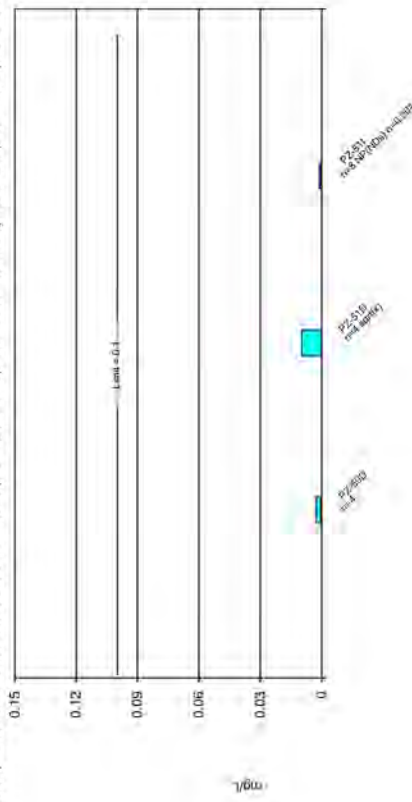
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Int
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

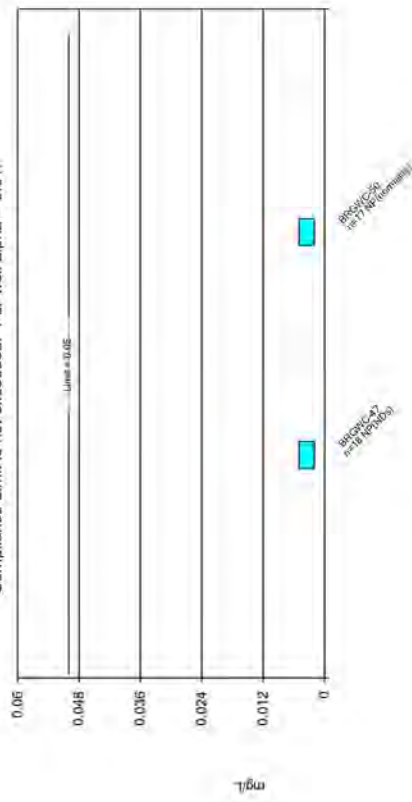
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Int
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

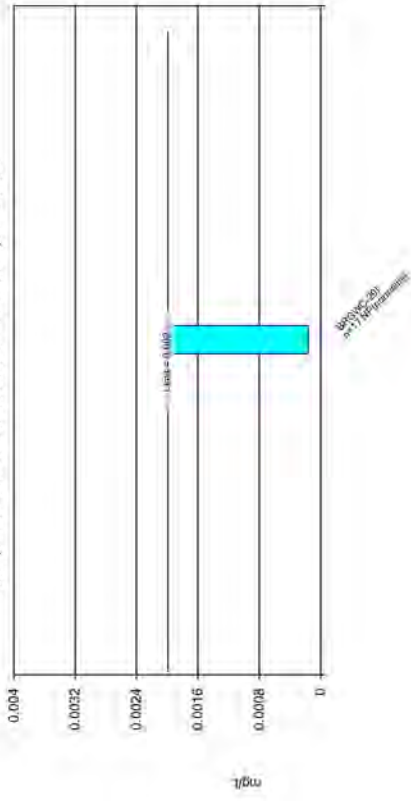
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Int
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thiallium Analysis Run 11/4/2022 3:59 PM View: Pond BCD Appendix IV - Confidence Interval
Plant Branch Client: Southern Company Data: Plant Branch AP

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50
9/6/2016		<0.003				
9/8/2016	<0.003		<0.003			
11/21/2016	<0.003	<0.003	<0.003			
2/22/2017	<0.003	<0.003	<0.003			
6/14/2017	0.0007 (J)	<0.003	<0.003			
9/27/2017	<0.003	<0.003	<0.003			
2/14/2018	<0.003	<0.003	<0.003			
3/6/2018				<0.003	<0.003	
3/15/2018						<0.003
5/1/2018				<0.003	<0.003 (D)	<0.003
6/27/2018	<0.003		<0.003		<0.003	
6/28/2018		<0.003		<0.003		<0.003
7/31/2018				<0.003		
8/1/2018					<0.003	<0.003
8/23/2018				<0.003	<0.003	
9/19/2018				<0.003	<0.003	
10/29/2018				<0.003	<0.003	<0.003
11/28/2018				<0.003	<0.003	<0.003
12/18/2018	<0.003	<0.003				
12/19/2018			<0.003		<0.003	<0.003
12/20/2018				0.0024 (J)		
1/16/2019						<0.003
8/27/2019		<0.003	<0.003			
8/28/2019	<0.003			0.00046 (J)	<0.003	
8/29/2019						0.00052 (J)
10/16/2019	<0.003				<0.003	<0.003
12/3/2019				0.00088 (J)		
12/4/2019		<0.003	<0.003			
3/4/2020	<0.003				<0.003	<0.003
3/5/2020		<0.003	0.0014 (J)	0.0016 (J)		
8/19/2020	<0.003	<0.003	<0.003			
8/20/2020				0.0031	<0.003	<0.003
9/15/2020	<0.003					
9/16/2020		<0.003	<0.003	0.0012 (J)	0.00035 (J)	
9/17/2020						0.00041 (J)
3/2/2021				0.0014 (J)	<0.003	
3/3/2021	<0.003	<0.003				
3/4/2021			<0.003			0.00092 (J)
9/23/2021				<0.003	<0.003	
9/27/2021						<0.003
9/28/2021	<0.003	<0.003	<0.003			
2/2/2022		0.0013 (J)	<0.003	<0.003	<0.003	
2/3/2022	<0.003					<0.003
8/23/2022					<0.003	
8/24/2022	<0.003	<0.003				<0.003
8/25/2022			<0.003	<0.003		
Mean	0.002865	0.0029	0.002906	0.002447	0.002853	0.002579
Std. Dev.	0.0005578	0.0004123	0.0003881	0.0008933	0.0006246	0.0009413
Upper Lim.	0.003	0.003	0.003	0.003	0.003	0.003
Lower Lim.	0.0007	0.0013	0.0014	0.0014	0.00035	0.00092

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
8/10/2018	<0.003				
8/23/2018	0.00085 (J)				
9/19/2018	<0.003				
10/29/2018	<0.003				
11/28/2018	<0.003				
12/20/2018	<0.003				
1/17/2019	<0.003				
1/18/2019					<0.003
1/19/2019				<0.003	
2/13/2019	<0.003				
8/29/2019	<0.003				
10/16/2019	<0.003				
10/18/2019				<0.003	<0.003
3/4/2020	0.00043 (J)				
8/20/2020	<0.003			0.0017 (J)	<0.003
9/17/2020	<0.003			<0.003	0.00043 (J)
3/3/2021			0.0013 (J)		0.0018 (J)
3/4/2021	0.00091 (J)			0.00079 (J)	
3/5/2021		0.00056 (J)			
9/27/2021				0.0012 (J)	<0.003
9/28/2021	<0.003	<0.003	<0.003		
2/2/2022	<0.003			<0.003	<0.003
2/3/2022		<0.003	<0.003		
8/24/2022			<0.003	<0.003	<0.003
8/25/2022	<0.003	<0.003			
Mean	0.002599	0.00239	0.002575	0.002336	0.002529
Std. Dev.	0.0008968	0.00122	0.00085	0.0009479	0.0009463
Upper Lim.	0.003	0.003	0.003	0.003	0.003
Lower Lim.	0.00091	0.00056	0.0013	0.00079	0.00043

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				<0.005		
9/8/2016	<0.005	<0.005	<0.005		<0.005	
11/17/2016	<0.005					
11/18/2016		<0.005				
11/21/2016			0.0019 (J)	<0.005	<0.005	
2/21/2017	<0.005	<0.005				
2/22/2017			<0.005	<0.005	<0.005	
6/13/2017	0.0006 (J)	0.0009 (J)				
6/14/2017			0.002 (J)	<0.005	<0.005	
9/27/2017	<0.005	0.0007 (J)	0.0016 (J)	<0.005	<0.005	
2/14/2018	<0.005	<0.005	<0.005	<0.005	<0.005	
3/6/2018						<0.005 (X)
5/1/2018						0.0021 (J)
6/26/2018	0.00072 (J)					
6/27/2018		<0.005	<0.005		<0.005	
6/28/2018				<0.005 (X)		<0.005 (X)
7/31/2018						<0.005
8/23/2018						0.00075 (J)
9/19/2018						<0.005
10/29/2018						<0.005
11/28/2018						0.00096 (J)
12/18/2018	0.00091 (J)		<0.005	<0.005		
12/19/2018					<0.005	
12/20/2018		<0.005				<0.005
8/27/2019	<0.005			<0.005	<0.005	
8/28/2019		0.0014 (J)	0.00051 (J)			0.00058 (J)
10/15/2019	0.00052 (J)					
10/16/2019			0.00065 (J)			
12/3/2019						0.0007 (J)
12/4/2019		0.0011 (J)		0.00056 (J)	0.00053 (J)	
3/4/2020	<0.005	<0.005	0.00044 (J)			
3/5/2020				<0.005	<0.005	<0.005
8/19/2020	<0.005	<0.005	<0.005	<0.005	<0.005	
8/20/2020						<0.005
9/15/2020	<0.005		<0.005			
9/16/2020		<0.005		<0.005	<0.005	<0.005
3/2/2021	<0.005					<0.005
3/3/2021		<0.005	0.0015 (J)	<0.005		
3/4/2021					<0.005	
9/23/2021						<0.005
9/28/2021	<0.005	<0.005	<0.005	<0.005	<0.005	
2/2/2022	<0.005			<0.005	<0.005	<0.005
2/3/2022			<0.005			
2/4/2022		<0.005				
8/23/2022	<0.005					
8/24/2022			<0.005	0.00283 (J)		
8/25/2022		<0.005			<0.005	<0.005
Mean	0.003985	0.004065	0.003447	0.004611	0.004737	0.003894
Std. Dev.	0.001887	0.001743	0.001957	0.001169	0.001084	0.00186
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.00091	0.0014	0.0015	0.00283	0.00053	0.00096

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I
3/6/2018	<0.005 (X)					
3/15/2018		0.0014 (J)				
5/1/2018	0.0018 (JD)	<0.005				
6/27/2018	0.0016 (J)					
6/28/2018		<0.005				
8/1/2018	0.0028 (J)	0.00074 (J)				
8/10/2018			<0.005			
8/23/2018	<0.005		<0.005			
9/19/2018	<0.005		0.0013 (J)			
10/29/2018	0.0012 (J)	<0.005	0.0038 (J)			
11/28/2018	0.0019 (J)	<0.005	0.0016 (J)			
12/19/2018	0.00075 (J)	<0.005				
12/20/2018			0.0032 (J)			
1/16/2019		<0.005				
1/17/2019			0.0032 (J)			
1/19/2019						<0.005
2/13/2019			<0.005			
8/28/2019	0.0018 (J)					
8/29/2019		<0.005	0.00067 (J)			
10/16/2019	<0.005	<0.005	0.0026 (J)			
10/18/2019						<0.005
3/4/2020	0.00049 (J)	0.00046 (J)	0.0047 (J)			
8/20/2020	0.00089 (J)	<0.005	0.0031 (J)			<0.005
9/16/2020	<0.005					
9/17/2020		<0.005	<0.005			<0.005
3/2/2021	<0.005					
3/3/2021					0.0014 (J)	
3/4/2021		<0.005	0.003 (J)			<0.005
3/5/2021				0.00087 (J)		
9/23/2021	0.002 (J)					
9/27/2021		<0.005				<0.005
9/28/2021			<0.005	<0.005	<0.005	
2/2/2022	0.0056		<0.005			<0.005
2/3/2022		<0.005		0.0012 (J)	0.0015 (J)	
8/23/2022	0.00228 (J)					
8/24/2022		0.0025 (J)			0.00308 (J)	0.00222 (J)
8/25/2022			<0.005	0.00235 (J)		
Mean	0.002951	0.004124	0.003657	0.002355	0.002745	0.004652
Std. Dev.	0.001837	0.001675	0.001473	0.001874	0.001689	0.0009829
Upper Lim.	0.005	0.005	0.005	0.002914	0.00374	0.005
Lower Lim.	0.0012	0.0025	0.0026	3.31E-05	0.0002464	0.00222

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-51S
1/18/2019	<0.005
10/18/2019	<0.005
8/20/2020	<0.005
9/17/2020	<0.005
3/3/2021	<0.005
9/27/2021	<0.005
2/2/2022	0.002 (J)
8/24/2022	<0.005
Mean	0.004625
Std. Dev.	0.001061
Upper Lim.	0.005
Lower Lim.	0.002

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				0.0206		
9/8/2016	0.0378	0.0184	0.0199		0.0593	
11/17/2016	0.0448					
11/18/2016		0.0173				
11/21/2016			0.0221 (J)	0.0237 (J)	0.0532 (BR)	
2/21/2017	0.0447	0.015				
2/22/2017			0.0179	0.0219	0.0498	
6/13/2017	0.0351	0.0143				
6/14/2017			0.0157	0.0197	0.0421	
9/27/2017	0.0383	0.017	0.0165	0.0213	0.0411	
2/14/2018	0.0327	0.0166	0.0163	0.0236	0.0417	
3/6/2018						0.1
5/1/2018						0.084
6/26/2018	0.031					
6/27/2018		0.015	0.017		0.038	
6/28/2018				0.023		0.067
7/31/2018						0.087 (J+X)
8/23/2018						0.084
9/19/2018						0.086
10/29/2018						0.098 (J+X)
11/28/2018						0.11
12/18/2018	0.03		0.017	0.029		
12/19/2018					0.036	
12/20/2018		0.015				0.093
8/27/2019	0.027			0.027	0.032	
8/28/2019		0.019	0.02			0.11
10/15/2019	0.027					
10/16/2019			0.019			
12/3/2019						0.099
12/4/2019		0.016		0.021	0.028	
3/4/2020	0.026	0.015	0.018			
3/5/2020				0.025	0.026	0.078
8/19/2020	0.027	0.016	0.019	0.026	0.025	
8/20/2020						0.083
9/15/2020	0.024		0.017			
9/16/2020		0.016		0.022	0.024	0.085
3/2/2021	0.026					0.061
3/3/2021		0.016	0.021	0.028		
3/4/2021					0.024	
9/23/2021						0.064
9/28/2021	0.023	0.013	0.017	0.035	0.02	
2/2/2022	0.023			0.031	0.023	0.063
2/3/2022			0.016			
2/4/2022		0.015				
8/23/2022	0.0259					
8/24/2022			0.0175	0.0389		
8/25/2022		0.0161			0.0231	0.0574
Mean	0.03078	0.01592	0.01805	0.02569	0.03449	0.08386
Std. Dev.	0.007065	0.001471	0.001838	0.00533	0.01191	0.01632
Upper Lim.	0.03483	0.01685	0.0192	0.02874	0.04195	0.09373
Lower Lim.	0.02632	0.015	0.0169	0.02236	0.02702	0.07398

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I
3/6/2018	0.0519					
3/15/2018		0.021				
5/1/2018	0.057 (D)	0.024				
6/27/2018	0.046					
6/28/2018		0.021				
8/1/2018	0.043 (J+X)	0.02 (J+X)				
8/10/2018			0.038			
8/23/2018	0.038		0.03 (JX)			
9/19/2018	0.036		0.03			
10/29/2018	0.041 (J+X)	0.019 (J+X)	0.025 (J+X)			
11/28/2018	0.039	0.02	0.017			
12/19/2018	0.04	0.02				
12/20/2018			0.013			
1/16/2019		0.02				
1/17/2019			0.017			
1/19/2019						0.017
2/13/2019			0.025			
8/28/2019	0.035					
8/29/2019		0.018	0.017			
10/16/2019	0.032	0.017	0.015			
10/18/2019						0.014
3/4/2020	0.038	0.019	0.022			
8/20/2020	0.035	0.019	0.017			0.013
9/16/2020	0.028					
9/17/2020		0.02	0.02			0.015
3/2/2021	0.036					
3/3/2021					0.08	
3/4/2021		0.025	0.019			0.016
3/5/2021				0.043		
9/23/2021	0.031					
9/27/2021		0.017				0.014
9/28/2021			0.013	0.034	0.057	
2/2/2022	0.028		0.013			0.015
2/3/2022		0.016		0.033	0.057	
8/23/2022	0.0285					
8/24/2022		0.0166			0.0584	0.0154
8/25/2022			0.0179	0.0257		
Mean	0.03797	0.01956	0.02052	0.03393	0.0631	0.01493
Std. Dev.	0.007891	0.002402	0.007012	0.007091	0.01129	0.00126
Upper Lim.	0.04274	0.02107	0.02435	0.05003	0.08	0.01626
Lower Lim.	0.03319	0.01806	0.0161	0.01782	0.057	0.01359

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-51S
1/18/2019	0.031
10/18/2019	0.032
8/20/2020	0.03
9/17/2020	0.033
3/3/2021	0.037
9/27/2021	0.025
2/2/2022	0.027
8/24/2022	0.0223
Mean	0.02966
Std. Dev.	0.004711
Upper Lim.	0.03466
Lower Lim.	0.02467

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-45	BRGWC-47	BRGWC-50	PZ-50D
9/8/2016	0.0002 (J)	0.0011 (J)				
11/18/2016	0.0002 (J)					
11/21/2016		0.0012 (J)				
2/21/2017	0.0002 (J)					
2/22/2017		0.0014 (J)				
6/13/2017	0.0002 (J)					
6/14/2017		0.0012 (J)				
9/27/2017	0.0001 (J)	0.001 (J)				
2/14/2018	<0.0005	<0.0005				
3/6/2018			<0.0005	<0.0005		
3/15/2018					<0.0005	
5/1/2018			<0.0005	<0.0005 (D)	<0.0005	
6/27/2018	0.00014 (J)	0.0008 (J)		<0.0005		
6/28/2018			<0.0005		0.003 (J)	
7/31/2018			<0.0005			
8/1/2018				<0.0005	0.0025 (J)	
8/23/2018			7.9E-05 (J)	5.5E-05 (J)		
9/19/2018			<0.0005	<0.0005		
10/29/2018			<0.0005	<0.0005	0.0042	
11/28/2018			<0.0005	5.6E-05 (J)	0.0029 (J)	
12/18/2018		0.00071 (J)				
12/19/2018				<0.0005 (X)	0.0043	
12/20/2018	<0.0005 (X)		<0.0005			
1/16/2019					0.0038	
8/28/2019	0.00012 (J)	0.0008 (J)	<0.0005	<0.0005		
8/29/2019					0.0029 (J)	
10/16/2019		0.00072 (J)		<0.0005	0.0027 (J)	
10/17/2019	<0.0005		<0.0005			
12/3/2019			<0.0005			
12/4/2019	0.00012 (J)					
3/4/2020	0.00012 (J)	0.00073 (J)		<0.0005	0.0052	
3/5/2020			<0.0005			
8/19/2020	9.9E-05 (J)	0.00074 (J)				
8/20/2020			4.6E-05 (J)	4.7E-05 (J)	0.0044	
9/15/2020		0.00071 (J)				
9/16/2020	0.00011 (J)		<0.0005	<0.0005		
9/17/2020					0.0065	
3/2/2021			<0.0005	<0.0005		
3/3/2021	7.1E-05 (J)	0.00094				
3/4/2021					0.0059	
3/5/2021						<0.0005
9/23/2021			<0.0005	<0.0005		
9/27/2021					0.006	
9/28/2021	<0.0005	0.00079				5.9E-05 (J)
2/2/2022			<0.0005	<0.0005		
2/3/2022		0.00083			0.0071	<0.0005
2/4/2022	5.4E-05 (J)					
8/23/2022				<0.0005		
8/24/2022		0.000845			0.00831	
8/25/2022	<0.0005		<0.0005			0.000269 (J)
Mean	0.0002352	0.0008832	0.0004539	0.0004254	0.004159	0.000332
Std. Dev.	0.0001743	0.0002286	0.0001381	0.0001716	0.002169	0.0002121

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-45	BRGWC-47	BRGWC-50	PZ-50D
Upper Lim.	0.0005	0.001026	0.0005	0.0005	0.005518	0.0004024
Lower Lim.	0.0001	0.00074	7.9E-05	5.6E-05	0.002801	-7.439E-05

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-511
1/19/2019	6.4E-05 (J)
10/18/2019	<0.0005
8/20/2020	7.7E-05 (J)
9/17/2020	9.6E-05 (J)
3/4/2021	9.7E-05 (J)
9/27/2021	7.1E-05 (J)
2/2/2022	7.1E-05 (J)
8/24/2022	<0.0005
Mean	0.0001845
Std. Dev.	0.0001951
Upper Lim.	0.0005
Lower Lim.	6.4E-05

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50
9/6/2016		<0.001				
9/8/2016	7E-05 (J)		<0.001			
11/18/2016	9E-05 (J)					
11/21/2016		8E-05 (J)	8E-05 (J)			
2/21/2017	<0.001					
2/22/2017		<0.001	0.0001 (J)			
6/13/2017	<0.001					
6/14/2017		<0.001	<0.001			
9/27/2017	<0.001	<0.001	<0.001			
2/14/2018	<0.001	<0.001	<0.001			
3/6/2018				<0.001	<0.001	
3/15/2018						0.038
5/1/2018				<0.001	<0.001 (D)	0.011
6/27/2018	<0.001		0.00011 (J)		0.00014 (J)	
6/28/2018		<0.001		<0.001		0.087
7/31/2018				<0.001		
8/1/2018					0.00011 (J)	0.042
8/23/2018				<0.001	0.00018 (J)	
9/19/2018				<0.001	0.00015 (J)	
10/29/2018				9.8E-05 (J)	0.00019 (J)	0.083
11/28/2018				<0.001	0.00022 (J)	0.031
12/18/2018		<0.001				
12/19/2018			<0.001 (X)		<0.001	0.042
12/20/2018	<0.001			<0.001 (X)		
1/16/2019						0.028
8/27/2019		<0.001	<0.001			
8/28/2019	<0.001			<0.001	0.00017 (J)	
8/29/2019						0.0071
10/16/2019					0.00018 (J)	0.014
10/17/2019	<0.001	<0.001	<0.001	<0.001		
12/3/2019				0.00011 (J)		
12/4/2019	<0.001	<0.001	<0.001			
3/4/2020	<0.001				0.00024 (J)	0.013
3/5/2020		<0.001	<0.001	<0.001		
8/19/2020	<0.001	<0.001	<0.001			
8/20/2020				0.00014 (J)	<0.001	0.0079
9/16/2020	<0.001	<0.001	<0.001	<0.001	<0.001	
9/17/2020						0.021
3/2/2021				0.0002 (J)	<0.001	
3/3/2021	<0.001	<0.001				
3/4/2021			<0.001			0.019
9/23/2021				<0.001	<0.001	
9/27/2021						0.0095
9/28/2021	<0.001	<0.001	<0.001			
2/2/2022		0.00014 (J)	<0.001	<0.001	0.00015 (J)	
2/3/2022						0.0085
2/4/2022	<0.001					
8/23/2022					<0.001	
8/24/2022		<0.001				0.00818
8/25/2022	<0.001		<0.001	<0.001		
Mean	0.0008978	0.0009011	0.0008494	0.0008183	0.0005406	0.02766
Std. Dev.	0.0002975	0.000288	0.0003465	0.0003619	0.0004238	0.02475

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50
Upper Lim.	0.001	0.001	0.001	0.001	0.001	0.03637
Lower Lim.	9E-05	0.00014	0.00011	0.0002	0.00015	0.0123

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-511
8/3/2018	0.0015
1/19/2019	0.0016
10/18/2019	0.00083 (J)
8/20/2020	0.0019 (J)
9/17/2020	0.033
10/27/2020	0.0051
3/4/2021	0.017
9/27/2021	0.0031
2/2/2022	0.0043
8/24/2022	0.00478
Mean	0.007311
Std. Dev.	0.01016
Upper Lim.	0.01225
Lower Lim.	0.001149

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				<0.01		
9/8/2016	<0.01	0.001 (J)	<0.01		<0.01	
11/17/2016	<0.01					
11/18/2016		<0.01				
11/21/2016			<0.01	<0.01	<0.01	
2/21/2017	<0.01	<0.01				
2/22/2017			<0.01	<0.01	0.0012 (J)	
6/13/2017	<0.01	<0.01				
6/14/2017			<0.01	<0.01	0.0009 (J)	
9/27/2017	<0.01	<0.01	<0.01	<0.01	0.0011 (J)	
2/14/2018	<0.01	<0.01	<0.01	<0.01	<0.01	
3/6/2018						<0.01
5/1/2018						<0.01
6/26/2018	<0.01					
6/27/2018		<0.01	<0.01		<0.01	
6/28/2018				<0.01		<0.01
7/31/2018						<0.01
8/23/2018						<0.01
9/19/2018						<0.01
10/29/2018						<0.01
11/28/2018						<0.01
12/18/2018	<0.01		<0.01	<0.01		
12/19/2018					<0.01	
12/20/2018		0.003 (J)				<0.01
8/27/2019	0.0016 (J)			0.0051 (J)	0.0019 (J)	
8/28/2019		<0.01	<0.01			<0.01
10/15/2019	0.00098 (J)					
10/16/2019			<0.01			
12/3/2019						<0.01
12/4/2019		<0.01		<0.01	0.0014 (J)	
3/4/2020	<0.01	<0.01	0.02			
3/5/2020				<0.01	0.0014 (J)	0.00053 (J)
8/19/2020	<0.01	<0.01	<0.01	<0.01	0.0021 (J)	
8/20/2020						0.001 (J)
9/15/2020	<0.01		<0.01			
9/16/2020		<0.01		0.014	0.0025 (J)	0.0014 (J)
3/2/2021	<0.01					<0.01
3/3/2021		<0.01	<0.01	<0.01		
3/4/2021					0.002 (J)	
9/23/2021						<0.01
9/28/2021	<0.01	<0.01	<0.01	<0.01	0.0021 (J)	
2/2/2022	<0.01			<0.01	0.0021 (J)	<0.01
2/3/2022			<0.01			
2/4/2022		<0.01				
8/23/2022	<0.01					
8/24/2022			<0.01	<0.01		
8/25/2022		<0.01			<0.01	<0.01
Mean	0.008975	0.009059	0.01059	0.009947	0.004629	0.008496
Std. Dev.	0.002895	0.00268	0.002425	0.00158	0.004109	0.003464
Upper Lim.	0.01	0.01	0.02	0.014	0.01	0.01
Lower Lim.	0.0016	0.003	0.01	0.0051	0.0012	0.0014

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-51I	PZ-51S
3/6/2018	<0.01				
3/15/2018		<0.01			
5/1/2018	<0.01 (D)	<0.01			
6/27/2018	<0.01				
6/28/2018		0.0023 (J)			
8/1/2018	<0.01	0.0046 (J)			
8/10/2018			0.0017 (J)		
8/23/2018	<0.01		<0.01		
9/19/2018	<0.01		<0.01		
10/29/2018	<0.01	<0.01	<0.01		
11/28/2018	<0.01	<0.01	<0.01		
12/19/2018	0.0018 (J)	<0.01			
12/20/2018			<0.01		
1/16/2019		<0.01			
1/17/2019			<0.01		
1/18/2019					<0.01
1/19/2019				<0.01	
2/13/2019			<0.01		
8/28/2019	0.00092 (J)				
8/29/2019		<0.01	<0.01		
10/16/2019	<0.01	0.0005 (J)	<0.01		
10/18/2019				<0.01	0.00042 (J)
3/4/2020	0.00078 (J)	0.00071 (J)	<0.01		
8/20/2020	0.00064 (J)	0.00065 (J)	<0.01	<0.01	0.00063 (J)
9/16/2020	<0.01				
9/17/2020		0.00098 (J)	<0.01	0.00098 (J)	<0.01
3/2/2021	<0.01				
3/3/2021					<0.01
3/4/2021		0.001 (J)	<0.01	0.0008 (J)	
9/23/2021	<0.01				
9/27/2021		<0.01		<0.01	<0.01
9/28/2021			<0.01		
2/2/2022	<0.01		<0.01	<0.01	<0.01
2/3/2022		<0.01			
8/23/2022	<0.01				
8/24/2022		<0.01		<0.01	<0.01
8/25/2022			<0.01		
Mean	0.008008	0.006514	0.009512	0.007722	0.007631
Std. Dev.	0.003841	0.004389	0.002013	0.004217	0.004386
Upper Lim.	0.01	0.01	0.01	0.01	0.01
Lower Lim.	0.0018	0.00098	0.0017	0.0008	0.00042

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				0.0006 (J)		
9/8/2016	0.0073 (J)	0.0149	0.0122		0.0025 (J)	
11/17/2016	0.0086 (J)					
11/18/2016		0.0131				
11/21/2016			0.0122	<0.001	0.001 (J)	
2/21/2017	0.0079 (J)	0.0099 (J)				
2/22/2017			0.0136	0.0016 (J)	<0.001	
6/13/2017	0.0083 (J)	0.0094 (J)				
6/14/2017			0.0113	0.0015 (J)	<0.001	
9/27/2017	0.0087 (J)	0.0095 (J)	0.0094 (J)	0.0007 (J)	<0.001	
2/14/2018	<0.001	0.0112	<0.001	<0.001	<0.001	
3/6/2018						0.0162
5/1/2018						0.015
6/26/2018	0.006 (J)					
6/27/2018		0.0093 (J)	0.0069 (J)		<0.001	
6/28/2018				0.00078 (J)		0.01
7/31/2018						0.0098 (J)
8/23/2018						0.0093 (J)
9/19/2018						0.0084 (J)
10/29/2018						0.0064 (J)
11/28/2018						0.0071 (J)
12/18/2018	0.0055 (J)		0.0067 (J)	0.0011 (J)		
12/19/2018					<0.001	
12/20/2018		0.0081 (J)				0.069
8/27/2019	0.0042 (J)			0.0014 (J)	<0.001	
8/28/2019		0.01	0.0061			0.011
10/15/2019	0.0043 (J)					
10/16/2019			0.0058			
10/17/2019		0.011 (J)		<0.001	<0.001	0.0098 (J)
12/3/2019						0.0076
12/4/2019		0.0086		0.0012 (J)	<0.001	
3/4/2020	0.0039 (J)	0.008	0.007			
3/5/2020				0.0011 (J)	<0.001	0.0091
8/19/2020	0.0039 (J)	0.0078	0.0065	0.0008 (J)	<0.001	
8/20/2020						0.022
9/15/2020	0.0035 (J)		0.0064			
9/16/2020		0.008		0.0008 (J)	<0.001	0.0049 (J)
3/2/2021	0.003 (J)					0.0057
3/3/2021		0.0062	0.0095	0.0015 (J)		
3/4/2021					<0.001	
9/23/2021						0.0049 (J)
9/28/2021	0.0029 (J)	0.0047 (J)	0.0069	0.001 (J)	<0.001	
2/2/2022	0.0027 (J)			0.0012 (J)	<0.001	0.0054
2/3/2022			0.0077			
2/4/2022		0.0076				
8/23/2022	0.00342					
8/24/2022			0.0066	0.00163		
8/25/2022		0.0079			<0.001	0.00357
Mean	0.005007	0.009178	0.007988	0.001106	0.001083	0.01238
Std. Dev.	0.002378	0.002378	0.003074	0.0003155	0.0003536	0.01443
Upper Lim.	0.006497	0.01062	0.009914	0.00119	0.0025	0.015
Lower Lim.	0.003517	0.007739	0.006062	0.0007782	0.001	0.0054

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I
3/6/2018	<0.001					
3/15/2018		1.3				
5/1/2018	0.0125 (D)	1.4				
6/27/2018	0.0076 (J)					
6/28/2018		1.3				
8/1/2018	0.004 (J)	1.4				
8/3/2018						0.041
8/10/2018			0.0043 (J)			
8/23/2018	0.0016 (J)		0.0026 (J)			
9/19/2018	0.0018 (J)		0.0028 (J)			
10/29/2018	0.0014 (J)	1.4	0.0015 (J)			
11/28/2018	0.0016 (J)	1.4	0.0012 (J)			
12/19/2018	0.0014 (J)	1.5				
12/20/2018			<0.001			
1/16/2019		1.4				
1/17/2019			<0.001			
1/19/2019						0.018
2/13/2019			<0.001			
8/28/2019	0.00037 (J)					
8/29/2019		1.3	0.00063 (J)			
10/16/2019	0.00032 (J)	1.4	<0.001			
10/18/2019						0.017
3/4/2020	0.0011 (J)	1.5	<0.001			
8/20/2020	0.00043 (J)	1.4	<0.001			0.02
9/16/2020	0.00053 (J)					
9/17/2020		1.4	0.00046 (J)			0.022
10/27/2020				0.0037 (J)	0.00041 (J)	0.02
3/2/2021	0.0005 (J)					
3/3/2021					0.0004 (J)	
3/4/2021		1.4	<0.001			0.019
3/5/2021				0.0038 (J)		
9/23/2021	<0.001					
9/27/2021		1.3				0.02
9/28/2021			<0.001	0.2	<0.001	
2/2/2022	<0.001		<0.001			0.023
2/3/2022		1.5		0.1	<0.001	
8/23/2022	<0.001					
8/24/2022		1.42			0.000306 (J)	0.0239
8/25/2022			<0.001	0.506		
Mean	0.002175	1.395	0.001382	0.1627	0.0006232	0.02239
Std. Dev.	0.003099	0.06615	0.000966	0.2084	0.0003464	0.006881
Upper Lim.	0.001751	1.42	0.0015	0.5119	0.0004605	0.0239
Lower Lim.	0.0004698	1.3	0.00063	-0.1865	0.0002954	0.018

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-51S
8/2/2018	0.0079 (J)
1/18/2019	0.0082 (J)
10/18/2019	0.0063
8/20/2020	0.0039 (J)
9/17/2020	0.0062
3/3/2021	0.005
9/27/2021	0.0022 (J)
2/2/2022	0.0028 (J)
8/24/2022	0.00193
Mean	0.004937
Std. Dev.	0.002373
Upper Lim.	0.007228
Lower Lim.	0.002645

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				1.01 (U)		
9/8/2016	0.862 (U)	1.74	1.13		0.706 (U)	
11/17/2016	1.2 (U)					
11/18/2016		0.571 (U)				
11/21/2016			1.59	0.201 (U)	0.0569 (U)	
2/21/2017	1.31	1.28 (U)				
2/22/2017			1.64	0.57 (U)	1.07 (U)	
6/13/2017	0.738 (U)	0.521 (U)				
6/14/2017			1.32	0.726 (U)	0.459 (U)	
9/27/2017	0.583 (U)	0.595 (U)	1.7	0.884 (U)	0.807 (U)	
2/14/2018	1.41 (J+X)	1.18 (U)	1.89 (J+X)	1.14 (U)	1.67 (J+X)	
3/6/2018						1.25 (U)
5/1/2018						0.423 (U)
6/26/2018	0.968 (U)					
6/27/2018		1.3 (U)	1.66 (J+X)		1.34 (UX)	
6/28/2018				1.4 (UX)		0.283 (U)
7/31/2018						0.243 (U)
8/23/2018						1.1 (U)
9/19/2018						0.369 (U)
10/29/2018						0.401 (U)
11/28/2018						0.901 (U)
12/18/2018	1.13 (U)		0.759 (U)	0.661 (U)		
12/19/2018					1.21 (U)	
12/20/2018		0.527 (U)				0.657 (U)
8/27/2019	0.91 (U)			1.35	0.86 (U)	
8/28/2019		0.643 (U)	1.76			0.528 (U)
10/15/2019	1.06 (U)					
10/16/2019			1.69 (U)			
10/17/2019		1.07 (U)		1.25 (U)	1.2 (U)	0.977 (U)
3/4/2020	1.34	1.18	1.23			
3/5/2020				1.35	0.483 (U)	0.921 (U)
8/19/2020	0.467 (U)	0.684 (U)	0.876 (U)	1 (U)	0.482 (U)	
8/20/2020						0.501 (U)
9/15/2020	0.205 (U)		1.23 (U)			
9/16/2020		0.175 (U)		0.43 (U)	0.195 (U)	0.254 (U)
3/2/2021	0.161 (U)					0.107 (U)
3/3/2021		0.829 (U)	1.31 (U)	0.415 (U)		
3/4/2021					0.32 (U)	
9/23/2021						0.619 (U)
9/28/2021	4.44	3.58	1.49	0.749 (U)	0.947 (U)	
2/2/2022	0.64 (U)			1.21 (U)	0.0265 (U)	0.219 (U)
2/3/2022			0.798 (U)			
2/4/2022		0.335 (U)				
8/23/2022	1.9					
8/24/2022			1.97	3.26		
8/25/2022		1.79			1.32	1.65
Mean	1.137	1.059	1.414	1.036	0.7737	0.6335
Std. Dev.	0.9613	0.798	0.3731	0.6789	0.4878	0.4179
Upper Lim.	1.536	1.415	1.648	1.353	1.079	0.8864
Lower Lim.	0.5768	0.5721	1.18	0.6195	0.468	0.3806

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I
3/6/2018	1.75 (J+X)					
3/15/2018		1.31				
5/1/2018	2.02 (J+XD)	1.69 (J+X)				
6/27/2018	0.878 (U)					
6/28/2018		1.04 (U)				
8/1/2018	0.638 (U)	1.67				
8/10/2018			1.91			
8/23/2018	1.14 (U)		1.86 (J+X)			
9/19/2018	1.45 (UX)		1.64 (UX)			
10/29/2018	1.09 (U)	0.992 (U)	1.36 (U)			
11/28/2018	1.67 (UX)	1.76 (UX)	1.07 (U)			
12/19/2018	1.3	2.15 (J+X)				
12/20/2018			0.892 (U)			
1/16/2019		1.39				
1/17/2019			1.1 (U)			
1/19/2019						1.86
2/13/2019			1.68			
8/28/2019	0.804 (U)					
8/29/2019		1.33	1.44			
10/16/2019	1.28 (U)	2.51	2.13			
10/18/2019						11.7 (U)
3/4/2020	0.862 (U)	1.73	2.3			
8/20/2020	1.64	2.78	2.97			0.937 (U)
9/16/2020	0.51 (U)					
9/17/2020		0.717 (U)	2.04			1.76
3/2/2021	0.571 (U)					
3/3/2021					2.54	
3/4/2021		1.22	2.04			0.966 (U)
3/5/2021				2.11		
9/23/2021	0.527 (U)					
9/27/2021		2.07				0.771 (U)
9/28/2021			3.28	1.05	1.89	
2/2/2022	0.145 (U)		2.33			0.992 (U)
2/3/2022		1.15		1	2.23	
8/23/2022	3.74					
8/24/2022		1.87			3.33	0.625
8/25/2022			4.97	2.26		
Mean	1.223	1.611	2.06	1.605	2.498	2.451
Std. Dev.	0.8064	0.5523	0.9825	0.6728	0.6152	3.764
Upper Lim.	1.593	1.957	2.558	3.133	3.894	11.7
Lower Lim.	0.716	1.264	1.453	0.07744	1.101	0.625

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-51S
1/18/2019	1.22
10/18/2019	17.1 (U)
8/20/2020	1.19
9/17/2020	0.952 (U)
3/3/2021	0.599 (U)
9/27/2021	0.00107 (U)
2/2/2022	0.0266 (U)
8/24/2022	1.2
Mean	2.786
Std. Dev.	5.805
Upper Lim.	17.1
Lower Lim.	0.00107

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				0.43		
9/8/2016	0.14 (J)	0.31	0.2 (J)		0.15 (J)	
11/17/2016	0.27 (J)					
11/18/2016		0.19 (J)				
11/21/2016			0.37	0.24 (J)	0.04 (J)	
2/21/2017	0.6	0.35				
2/22/2017			0.37	0.2 (J)	0.08 (J)	
6/13/2017	0.19 (J)	0.19 (J)				
6/14/2017			0.38	0.15 (J)	0.09 (J)	
9/27/2017	0.5	0.4	0.4	0.41	<0.1	
2/14/2018	<0.1	<0.1	<0.1	<0.1	<0.1	
3/6/2018						0.94
5/1/2018						<0.1
6/26/2018	0.15 (J)					
6/27/2018		0.26 (J)	0.085 (J)		<0.1	
6/28/2018				0.93 (J+X)		0.69 (J+X)
7/31/2018						<0.1
8/23/2018						<0.1
9/19/2018						<0.1
10/29/2018						<0.1
11/28/2018						<0.1
12/18/2018	0.29 (J)		0.26 (J)	0.54		
12/19/2018					0.23 (J)	
12/20/2018		0.26 (J)				0.12 (J)
3/19/2019		0.2 (J)				
3/20/2019	0.17 (JD)		0.091 (J)	0.31	<0.1	0.066 (J)
8/27/2019	0.15 (J)			0.12 (J)	<0.1	
8/28/2019		0.074 (J)	0.055 (J)			<0.1
10/15/2019	0.16 (J)					
10/16/2019			0.11 (J)			
12/3/2019						0.19 (J)
12/4/2019		0.18 (J)		0.26 (J)	0.11 (J)	
3/4/2020	0.07 (J)	<0.1	<0.1			
3/5/2020				0.051 (J)	<0.1	<0.1
8/19/2020	0.17	0.19	0.12	0.14	<0.1	
8/20/2020						<0.1
9/15/2020	0.15		0.057 (J)			
9/16/2020		0.15		0.13	<0.1	0.052 (J)
3/2/2021	0.15					0.067 (J)
3/3/2021		0.24	0.13	0.13		
3/4/2021					<0.1	
9/23/2021						0.06 (J)
9/28/2021	0.15	0.16	0.081 (J)	0.11	<0.1	
2/2/2022	0.15			0.1	<0.1	<0.1
2/3/2022			0.11			
2/4/2022		0.14				
8/23/2022	0.186					
8/24/2022			0.103	0.318		
8/25/2022		0.234			0.138	0.166
Mean	0.2081	0.2071	0.1734	0.2594	0.1077	0.1764
Std. Dev.	0.1353	0.08675	0.1234	0.215	0.03756	0.2312
Upper Lim.	0.27	0.2596	0.37	0.3461	0.11	0.166

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
Lower Lim.	0.14	0.1546	0.085	0.1334	0.09	0.067

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I
3/6/2018	1.1					
3/15/2018		0.84 (JX)				
5/1/2018	0.595 (D)	0.91				
6/27/2018	0.27 (J)					
6/28/2018		1.1 (J+X)				
8/1/2018	0.48	2				
8/10/2018			1.6 (O)			
8/23/2018	0.34		0.32			
9/19/2018	0.23 (J)		0.22 (J)			
10/29/2018	<0.1	0.24 (J)	0.14 (J)			
11/28/2018	0.063 (J)	0.41	0.24 (J)			
12/19/2018	0.28 (J)	0.54				
12/20/2018			0.3			
1/16/2019		1.1				
1/17/2019			0.23 (J)			
1/19/2019						<0.1
2/13/2019			<0.1			
3/19/2019	<0.1					
3/20/2019		0.21 (J)	0.135 (JD)			
8/28/2019	<0.1					
8/29/2019		0.41	0.087 (J)			
10/16/2019	0.076 (J)	0.39	0.22 (J)			
10/18/2019						<0.1
3/4/2020	<0.1	0.14 (J)	0.1 (J)			
8/20/2020	<0.1	0.39	0.23			<0.1
9/16/2020	<0.1					
9/17/2020		0.46	0.074 (J)			<0.1
10/27/2020				0.28	0.21	<0.1
3/2/2021	<0.1					
3/3/2021					0.28	
3/4/2021		0.6	0.28			0.061 (J)
3/5/2021				0.16		
9/23/2021	<0.1					
9/27/2021		0.43				<0.1
9/28/2021			0.12	0.11	0.26	
2/2/2022	<0.1		0.098 (J)			<0.1
2/3/2022		0.42		0.15	0.27	
8/23/2022	<0.1					
8/24/2022		0.497			0.318	0.148
8/25/2022			0.157	0.106		
Mean	0.2334	0.6159	0.1795	0.1612	0.2676	0.101
Std. Dev.	0.257	0.4444	0.08022	0.07055	0.03897	0.02184
Upper Lim.	0.34	0.8057	0.2297	0.2794	0.3329	0.148
Lower Lim.	0.076	0.3536	0.1292	0.04298	0.2023	0.061

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-51S
1/18/2019	0.13 (J)
10/18/2019	0.09 (J)
8/20/2020	0.056 (J)
9/17/2020	0.062 (J)
3/3/2021	0.083 (J)
9/27/2021	0.072 (J)
2/2/2022	0.053 (J)
8/24/2022	0.131
Mean	0.08463
Std. Dev.	0.03101
Upper Lim.	0.1175
Lower Lim.	0.05175

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-45	BRGWC-47
9/6/2016				<0.002		
9/8/2016	<0.002	<0.002	0.0004 (J)			
11/17/2016	<0.002					
11/18/2016		<0.002				
11/21/2016			0.0006 (J)	<0.002		
2/21/2017	<0.002	<0.002				
2/22/2017			0.0005 (J)	<0.002		
6/13/2017	<0.002	<0.002				
6/14/2017			0.0004 (J)	<0.002		
9/27/2017	<0.002	<0.002	0.0006 (J)	<0.002		
2/14/2018	<0.002	<0.002	<0.005 (o)	<0.002		
3/6/2018					<0.002	<0.002
5/1/2018					<0.002	<0.002 (D)
6/26/2018	<0.002					
6/27/2018		<0.002	0.00032 (J)			<0.002
6/28/2018				<0.002	<0.002	
7/31/2018					<0.002	
8/1/2018						<0.002
8/23/2018					<0.002	<0.002
9/19/2018					<0.002	<0.002
10/29/2018					<0.002	<0.002
11/28/2018					<0.002	<0.002
12/18/2018	<0.002		0.00038 (J)	<0.002		
12/19/2018						<0.002
12/20/2018		<0.002			<0.002	
8/27/2019	0.00011 (J)			<0.002		
8/28/2019		<0.002	0.00027 (J)		<0.002	<0.002
10/15/2019	<0.002					
10/16/2019			0.00027 (J)			<0.002
12/3/2019					<0.002	
12/4/2019		6.3E-05 (J)		<0.002		
3/4/2020	<0.002	<0.002	0.0003 (J)			0.00012 (J)
3/5/2020				<0.002	0.00026 (J)	
8/19/2020	<0.002	<0.002	0.00025 (J)	<0.002		
8/20/2020					0.00021 (J)	4.8E-05 (J)
9/15/2020	<0.002		0.00029 (J)			
9/16/2020		<0.002		0.00011 (J)	5.3E-05 (J)	6.6E-05 (J)
3/2/2021	<0.002				<0.002	<0.002
3/3/2021		<0.002	0.00033 (J)	<0.002		
9/23/2021					<0.002	<0.002
9/28/2021	<0.002	<0.002	<0.002	<0.002		
2/2/2022	<0.002			<0.002	<0.002	<0.002
2/3/2022			<0.002			
2/4/2022		<0.002				
8/23/2022	<0.002					<0.002
8/24/2022			<0.002	<0.002		
8/25/2022		<0.002			<0.002	
Mean	0.001889	0.001886	0.0006819	0.001889	0.001696	0.00168
Std. Dev.	0.0004584	0.0004698	0.0006628	0.0004584	0.0007011	0.0007372
Upper Lim.	0.002	0.002	0.0006	0.002	0.002	0.002
Lower Lim.	0.00011	6.3E-05	0.00029	0.00011	0.00026	0.00012

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I
3/15/2018	<0.002				
5/1/2018	<0.002				
6/28/2018	0.00054 (J)				
8/1/2018	<0.002				
8/10/2018		<0.002			
8/23/2018		<0.002			
9/19/2018		<0.002			
10/29/2018	0.0003 (J)	<0.002			
11/28/2018	<0.002	<0.002			
12/19/2018	<0.002				
12/20/2018		<0.002			
1/16/2019	<0.002				
1/17/2019		<0.002			
1/19/2019					<0.002
2/13/2019		<0.002			
8/29/2019	4.9E-05 (J)	<0.002			
10/16/2019	8.5E-05 (J)	<0.002			
10/18/2019					<0.002
3/4/2020	0.0001 (J)	<0.002			
8/20/2020	6.7E-05 (J)	<0.002			<0.002
9/17/2020	0.00015 (J)	<0.002			0.00036 (J)
3/3/2021				0.00013 (J)	
3/4/2021	0.00016 (J)	4.2E-05 (J)			0.00017 (J)
3/5/2021			5.6E-05 (J)		
9/27/2021	<0.002				<0.002
9/28/2021		<0.002	<0.002	<0.002	
2/2/2022		<0.002			<0.002
2/3/2022	<0.002		<0.002	<0.002	
8/24/2022	<0.002			<0.002	<0.002
8/25/2022		<0.002	<0.002		
Mean	0.001144	0.001885	0.001514	0.001533	0.001566
Std. Dev.	0.000942	0.0004749	0.000972	0.000935	0.0008048
Upper Lim.	0.002	0.002	0.002	0.002	0.002
Lower Lim.	0.0001	4.2E-05	5.6E-05	0.00013	0.00017

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47
9/6/2016			0.0117 (J)			
9/8/2016	0.0021 (J)	0.004 (J)		<0.01		
11/18/2016	<0.01					
11/21/2016		0.0039 (J)	0.0108 (J)	<0.01		
2/21/2017	<0.01					
2/22/2017		0.0043 (J)	0.0103 (J)	0.0023 (J)		
6/13/2017	0.0017 (J)					
6/14/2017		0.0036 (J)	0.0101 (J)	0.0022 (J)		
9/27/2017	0.0016 (J)	0.0038 (J)	0.0116 (J)	0.0021 (J)		
2/14/2018	0.0018 (J)	0.0034 (J)	0.0115 (J)	0.0023 (J)		
3/6/2018					0.0031 (J)	0.0399 (J)
5/1/2018					0.0038 (J)	0.0475 (JD)
6/27/2018	0.0016 (J)	0.0034 (J)		0.0023 (J)		0.044 (J)
6/28/2018			0.013 (J)		0.0028 (J)	
7/31/2018				<0.25 (o)		
8/1/2018						0.039 (J)
8/23/2018					0.0033 (J)	0.044 (J)
9/19/2018					0.0033 (J)	0.043 (J)
10/29/2018					0.003 (J)	0.039 (J)
11/28/2018					0.0035 (J)	0.044 (J)
12/18/2018		0.0032 (J)	0.014 (J)			
12/19/2018				0.0018 (J)		0.043 (J)
12/20/2018	0.0015 (J)				0.003 (J)	
8/27/2019			0.016 (J)	0.0022 (J)		
8/28/2019	0.0016 (J)	0.0033 (J)			0.0034 (J)	0.044
10/16/2019		0.0029 (J)				0.038
12/3/2019					0.0033 (J)	
12/4/2019	0.0014 (J)		0.013 (J)	0.0022 (J)		
3/4/2020	0.0014 (J)	0.0029 (J)				0.042
3/5/2020			0.016 (J)	0.0022 (J)	0.003 (J)	
8/19/2020	0.0014 (J)	0.0029 (J)	0.018 (J)	0.002 (J)		
8/20/2020					0.0034 (J)	0.044
9/15/2020		0.003 (J)				
9/16/2020	0.0014 (J)		0.016 (J)	0.0022 (J)	0.0036 (J)	0.039
3/2/2021					0.0043 (J)	0.044
3/3/2021	0.0012 (J)	0.0032 (J)	0.014 (J)			
3/4/2021				0.002 (J)		
9/23/2021					0.0023 (J)	0.042
9/28/2021	0.0011 (J)	0.0029 (J)	0.023 (J)	0.0021 (J)		
2/2/2022			0.021 (J)	0.0035 (J)	0.0022 (J)	0.04
2/3/2022		0.0026 (J)				
2/4/2022	0.001 (J)					
8/23/2022						0.0474
8/24/2022		0.00304 (J)	0.0238			
8/25/2022	<0.01			0.0043 (J)	<0.01	
Mean	0.002106	0.003314	0.01493	0.002688	0.003312	0.04243
Std. Dev.	0.001405	0.0004687	0.004314	0.001061	0.0006642	0.002802
Upper Lim.	0.0021	0.003608	0.01735	0.0035	0.003728	0.04413
Lower Lim.	0.0012	0.00302	0.01219	0.0021	0.002896	0.04074

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-50	BRGWC-52I	PZ-50D	PZ-51D	PZ-51I	PZ-51S
3/15/2018	0.038 (J)					
5/1/2018	0.042 (J)					
6/28/2018	0.04 (J)					
8/1/2018	0.036 (J)					
8/10/2018		0.0087 (J)				
8/23/2018		0.0089 (J)				
9/19/2018		0.005 (J)				
10/29/2018	0.041 (J)	0.0048 (J)				
11/28/2018	0.041 (J)	0.0052 (J)				
12/19/2018	0.043 (J)					
12/20/2018		0.0042 (J)				
1/16/2019	0.042 (J)					
1/17/2019		0.0039 (J)				
1/18/2019						0.0012 (J)
1/19/2019					0.019 (J)	
2/13/2019		<0.01				
8/29/2019	0.039	0.0052 (J)				
10/16/2019	0.034	0.0023 (J)				
10/18/2019					0.019 (J)	<0.01
3/4/2020	0.042	0.002 (J)				
8/20/2020	0.04	0.0022 (J)			0.019 (J)	<0.01
9/17/2020	0.052	0.0058 (J)			0.021 (J)	<0.01
3/3/2021				0.0093 (J)		<0.01
3/4/2021	0.05	0.003 (J)			0.026 (J)	
3/5/2021			0.019 (J)			
9/27/2021	0.038				0.02 (J)	<0.01
9/28/2021		0.0035 (J)	0.02 (J)	0.0096 (J)		
2/2/2022		0.0041 (J)			0.021 (J)	<0.01
2/3/2022	0.038		0.024 (J)	0.0096 (J)		
8/24/2022	0.0428			0.0042 (J)	0.0222	<0.01
8/25/2022		0.0162	0.0255			
Mean	0.04111	0.005294	0.02213	0.008175	0.0209	0.004525
Std. Dev.	0.004465	0.003416	0.003119	0.002654	0.002371	0.001344
Upper Lim.	0.0439	0.006682	0.02921	0.0096	0.026	0.005
Lower Lim.	0.03831	0.003294	0.01504	0.0042	0.019	0.0012

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-511
9/6/2016				<0.0002		
9/8/2016	<0.0002	<0.0002	<0.0002		<0.0002	
11/17/2016	<0.0002					
11/18/2016		<0.0002				
11/21/2016			<0.0002	<0.0002	<0.0002	
2/21/2017	<0.0002	<0.0002				
2/22/2017			<0.0002	<0.0002	<0.0002	
6/13/2017	<0.0002	5E-05 (J)				
6/14/2017			7E-05 (J)	7E-05 (J)	9E-05 (J)	
9/27/2017	4E-05 (J)	4.7E-05 (J)	4E-05 (J)	4E-05 (J)	0.0001 (J)	
2/14/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
6/26/2018	<0.0002					
6/27/2018		<0.0002	<0.0002		<0.0002	
6/28/2018				<0.0002		
12/18/2018	<0.0002		<0.0002	<0.0002		
12/19/2018					<0.0002	
12/20/2018		<0.0002				
1/19/2019						<0.0002
8/27/2019	<0.0002			<0.0002	<0.0002	
8/28/2019		<0.0002	<0.0002			
10/18/2019						<0.0002
8/19/2020	8.3E-05 (J)	<0.0002	9.8E-05 (J)	8.2E-05 (J)	8.2E-05 (J)	
8/20/2020						9.9E-05 (J)
9/15/2020	<0.0002		<0.0002			
9/16/2020		<0.0002		<0.0002	<0.0002	
9/17/2020						<0.0002
3/2/2021	<0.0002					
3/3/2021		<0.0002	<0.0002	<0.0002		
3/4/2021					<0.0002	<0.0002
9/27/2021						<0.0002
9/28/2021	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
2/2/2022	<0.0002			<0.0002	<0.0002	<0.0002
2/3/2022			<0.0002			
2/4/2022		<0.0002				
8/23/2022	<0.0002					
8/24/2022			<0.0002	<0.0002		<0.0002
8/25/2022		<0.0002			<0.0002	
Mean	0.0001815	0.0001798	0.0001739	0.0001728	0.0001781	0.0001874
Std. Dev.	4.941E-05	5.331E-05	5.52E-05	5.69E-05	4.54E-05	3.571E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Lower Lim.	8.3E-05	5E-05	9.8E-05	8.2E-05	0.0001	9.9E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-30I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
9/6/2016		<0.001				
9/8/2016	<0.001					
11/17/2016	<0.001					
11/21/2016		<0.001				
2/21/2017	<0.001					
2/22/2017		<0.001				
6/13/2017	<0.001					
6/14/2017		<0.001				
9/27/2017	<0.001	<0.001				
2/14/2018	<0.001	<0.001				
3/6/2018			<0.001	<0.001		
3/15/2018					<0.001	
5/1/2018			<0.001	<0.001 (D)	0.0022 (J)	
6/26/2018	<0.001					
6/27/2018				<0.001		
6/28/2018		<0.001	<0.001		<0.001	
7/31/2018			<0.001			
8/1/2018				<0.001	0.0033 (J)	
8/10/2018						0.0032 (J)
8/23/2018			<0.001	<0.001		0.005 (J)
9/19/2018			<0.001	<0.001		0.0061 (J)
10/29/2018			<0.001	<0.001	<0.001	0.0065 (J)
11/28/2018			<0.001	<0.001	<0.001	0.0027 (J)
12/18/2018	<0.001	<0.001				
12/19/2018				<0.001	<0.001	
12/20/2018			<0.001			<0.001
1/16/2019					<0.001	
1/17/2019						<0.001
2/13/2019						<0.001
8/27/2019	<0.001	<0.001				
8/28/2019			<0.001	<0.001		
8/29/2019					<0.001	<0.001
10/15/2019	<0.001					
10/16/2019				<0.001	<0.001	<0.001
12/3/2019			<0.001			
12/4/2019		<0.001				
8/19/2020	0.00081 (J)	0.00078 (J)				
8/20/2020			0.00076 (J)	<0.001	<0.001	0.0012 (J)
9/15/2020	0.0008 (J)					
9/16/2020		0.0022 (J)	<0.001	<0.001		
9/17/2020					<0.001	0.0007 (J)
3/2/2021	0.001 (J)		<0.001	<0.001		
3/3/2021		<0.001				
3/4/2021					<0.001	0.001 (J)
9/23/2021			<0.001	<0.001		
9/27/2021					<0.001	
9/28/2021	0.00089 (J)	0.001 (J)				<0.001
2/2/2022	0.0011 (J)	0.0012 (J)	<0.001	<0.001		<0.001
2/3/2022					<0.001	
8/23/2022	0.00105			0.000296 (J)		
8/24/2022		0.00141			<0.001	
8/25/2022			0.000424 (J)			0.000471 (J)

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-30I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
Mean	0.0009781	0.001099	0.000952	0.0009586	0.001219	0.002117
Std. Dev.	7.876E-05	0.0003203	0.0001479	0.0001707	0.0006306	0.002007
Upper Lim.	0.00105	0.0012	0.001	0.001	0.0022	0.005
Lower Lim.	0.00089	0.001	0.00076	0.000296	0.001	0.001

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-50D	PZ-51D	PZ-51I
1/19/2019			<0.001
10/18/2019			<0.001
8/20/2020			<0.001
9/17/2020			<0.001
3/3/2021		0.0068 (J)	
3/4/2021			<0.001
3/5/2021	0.0017 (J)		
9/27/2021			<0.001
9/28/2021	0.0021 (J)	0.0029 (J)	
2/2/2022			<0.001
2/3/2022	0.0012 (J)	0.0017 (J)	
8/24/2022		0.00171	0.000313 (J)
8/25/2022	0.00109		
Mean	0.001523	0.003278	0.0009141
Std. Dev.	0.0004676	0.002415	0.0002429
Upper Lim.	0.002584	0.009763	0.001
Lower Lim.	0.0004608	0.0001132	0.000313

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45
9/6/2016				<0.005		
9/8/2016	<0.005	0.0043 (J)	0.0039 (J)		<0.005	
11/17/2016	<0.005					
11/18/2016		0.0047 (J)				
11/21/2016			0.0058 (J)	<0.005	<0.005	
2/21/2017	<0.005	0.0025 (J)				
2/22/2017			0.005 (J)	<0.005	0.0017 (J)	
6/13/2017	<0.005	0.0036 (J)				
6/14/2017			0.0074 (J)	0.0045 (J)	<0.005	
9/27/2017	<0.005	0.004 (J)	0.0068 (J)	0.0034 (J)	0.0019 (J)	
2/14/2018	<0.005	<0.005	<0.005	<0.005	<0.005	
3/6/2018						<0.005
5/1/2018						<0.005
6/26/2018	<0.005					
6/27/2018		0.0014 (J)	<0.005		0.0017 (J)	
6/28/2018				<0.005		<0.005
7/31/2018						<0.005
8/23/2018						<0.005
9/19/2018						<0.005
10/29/2018						<0.005
11/28/2018						<0.005
12/18/2018	<0.005		<0.005	<0.005		
12/19/2018					0.0059 (J)	
12/20/2018		<0.005				<0.005
8/27/2019	<0.005			0.0038 (J)	0.057	
8/28/2019		0.0017 (J)	<0.005			<0.005
10/15/2019	<0.005					
10/16/2019			<0.005			
12/3/2019						0.0029 (J)
12/4/2019		0.0036 (J)		0.0018 (J)	0.1	
3/4/2020	<0.005	0.0022 (J)	0.0018 (J)			
3/5/2020				<0.005	0.1	<0.005
5/12/2020					0.0989	
8/19/2020	<0.005	<0.005	<0.005	<0.005	0.099	
8/20/2020						<0.005
9/15/2020	<0.005		<0.005			
9/16/2020		0.0042 (J)		<0.005	0.12	<0.005
3/2/2021	0.0021 (J)					<0.005
3/3/2021		0.0031 (J)	0.0042 (J)	<0.005		
3/4/2021					0.14	
9/23/2021						<0.005
9/28/2021	<0.005	<0.005	0.0022 (J)	<0.005	0.13	
2/2/2022	<0.005			<0.005	0.21	<0.005
2/3/2022			<0.005			
2/4/2022		<0.005				
8/23/2022	<0.005					
8/24/2022			<0.005	<0.005		
8/25/2022		<0.005			0.218	<0.005
Mean	0.004829	0.003841	0.004829	0.004618	0.07245	0.004883
Std. Dev.	0.0007034	0.001247	0.001348	0.0008662	0.07317	0.000495
Upper Lim.	0.005	0.005	0.005	0.005	0.13	0.005
Lower Lim.	0.0021	0.0025	0.0042	0.0045	0.0019	0.0029

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-47	BRGWC-50
3/6/2018	<0.005	
3/15/2018		<0.005
5/1/2018	<0.005 (D)	<0.005
6/27/2018	<0.005	
6/28/2018		<0.005
8/1/2018	0.0015 (J)	0.0031 (J)
8/23/2018	<0.005 (X)	
9/19/2018	0.002 (J)	
10/29/2018	<0.005	0.002 (J)
11/28/2018	<0.005	0.0017 (J)
12/19/2018	<0.005	<0.005
1/16/2019		<0.005
8/28/2019	<0.005	
8/29/2019		<0.005
10/16/2019	0.0017 (J)	0.002 (J)
3/4/2020	<0.005	0.0026 (J)
8/20/2020	0.0016 (J)	0.0037 (J)
9/16/2020	0.002 (J)	
9/17/2020		<0.005
3/2/2021	0.0028 (J)	
3/4/2021		0.0039 (J)
9/23/2021	<0.005	
9/27/2021		0.0022 (J)
2/2/2022	<0.005	
2/3/2022		<0.005
8/23/2022	<0.005	
8/24/2022		0.00176 (J)
Mean	0.003978	0.003704
Std. Dev.	0.001509	0.00139
Upper Lim.	0.005	0.005
Lower Lim.	0.002	0.002

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 4:00 PM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I
9/8/2016	<0.002
11/21/2016	0.0002 (J)
2/22/2017	0.0002 (J)
6/14/2017	0.0002 (J)
9/27/2017	0.0002 (J)
2/14/2018	0.00018 (J)
6/27/2018	0.00017 (J)
12/18/2018	0.00017 (J)
8/28/2019	0.00017 (J)
10/16/2019	0.00017 (J)
3/4/2020	0.00016 (J)
8/19/2020	0.00016 (J)
9/15/2020	0.00016 (J)
3/3/2021	0.00018 (J)
9/28/2021	<0.002
2/3/2022	<0.002
8/24/2022	<0.002
Mean	0.0006071
Std. Dev.	0.0007966
Upper Lim.	0.002
Lower Lim.	0.00016

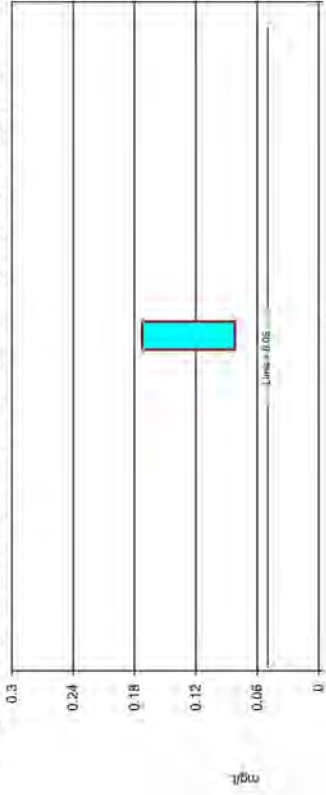
Confidence Intervals - Selenium BRGWC-32S

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/5/2022, 11:45 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Selenium (mg/L)	BRGWC-32S	0.1727	0.08187	0.05	Yes	10	0.1273	0.05091	0	None	No	0.01	Param.

Parametric Confidence Interval

Compliance limit is exceeded. Per-well alpha = 0.01. Normally Test: Shapiro Wilk, alpha based on n.



SPSS/PC-329
1/1/02

Constituent: Selenium Analysis Run 11/5/2022 11:45 AM View: Pond BCD Appendix IV - Confidence Inter

Plant Branch Client: Southern Company Data: Plant Branch AP

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/5/2022 11:45 AM View: Pond BCD Appendix IV - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWC-32S

8/27/2019	0.057
12/4/2019	0.1
3/5/2020	0.1
5/12/2020	0.0989
8/19/2020	0.099
9/16/2020	0.12
3/4/2021	0.14
9/28/2021	0.13
2/2/2022	0.21
8/25/2022	0.218
Mean	0.1273
Std. Dev.	0.05091
Upper Lim.	0.1727
Lower Lim.	0.08187

FIGURE I.

Appendix IV Trend Tests - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 1/9/2023, 10:29 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cadmium (mg/L)	BRGWC-50	-0.008185	-69	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0004021	-70	-63	Yes	17	11.76	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWC-32S	0.03432	107	68	Yes	18	22.22	n/a	n/a	0.01	NP

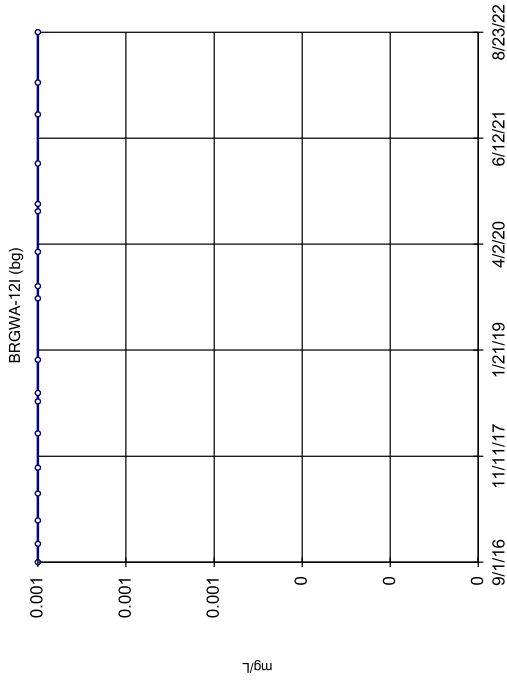
Appendix IV Trend Tests - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 1/9/2023, 10:29 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cadmium (mg/L)	BRGWA-12I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-12S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-23S (bg)	0	5	63	No	17	88.24	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-2I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-2S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-5I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-5S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWA-6S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Cadmium (mg/L)	BRGWC-50	-0.008185	-69	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-12I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-12S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-23S (bg)	-0.0006981	-57	-63	No	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2I (bg)	0	-16	-63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0004021	-70	-63	Yes	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5I (bg)	-0.0001378	-49	-53	No	15	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5S (bg)	0	26	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-6S (bg)	0	9	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-50	0	33	63	No	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	PZ-51I	0.001128	12	30	No	10	0	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-12I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-12S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-23S (bg)	-0.0003899	-38	-63	No	17	29.41	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-2I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-2S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-5I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-5S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWA-6S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Selenium (mg/L)	BRGWC-32S	0.03432	107	68	Yes	18	22.22	n/a	n/a	0.01	NP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

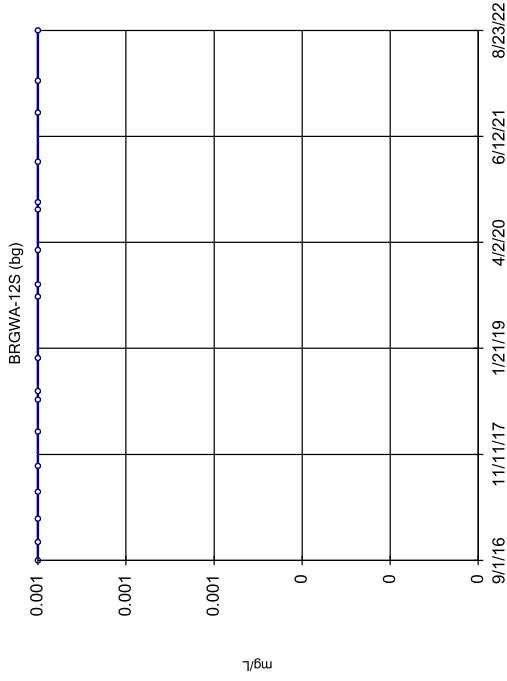


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 68
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

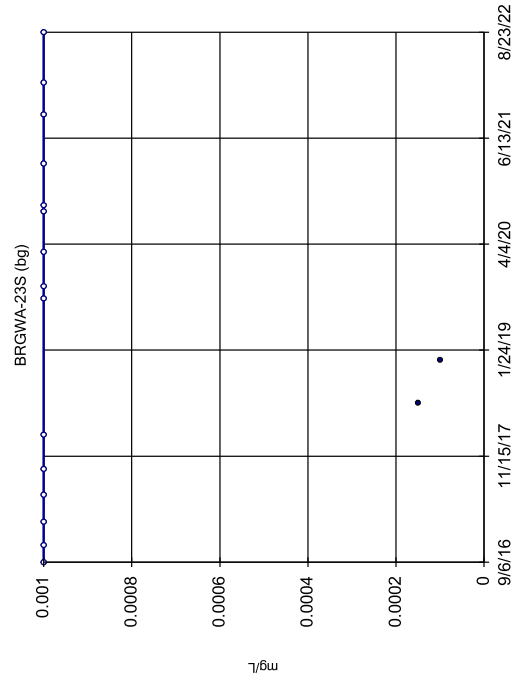


n = 18
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 68
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

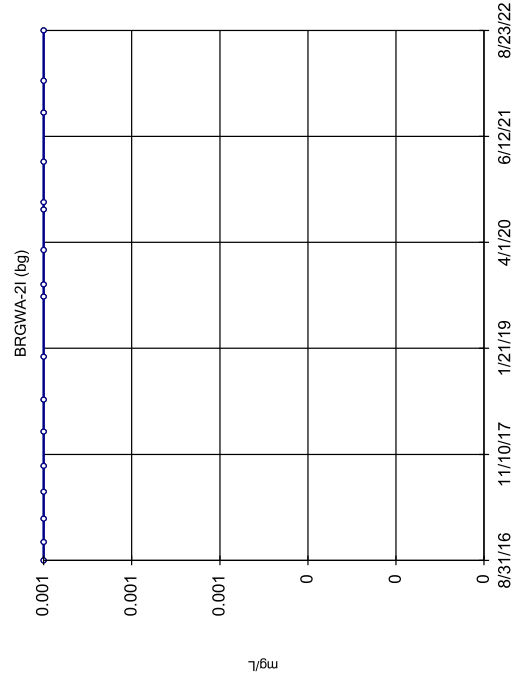


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Slope = 0
units per year.
Mann-Kendall
statistic = 5
critical = 63
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

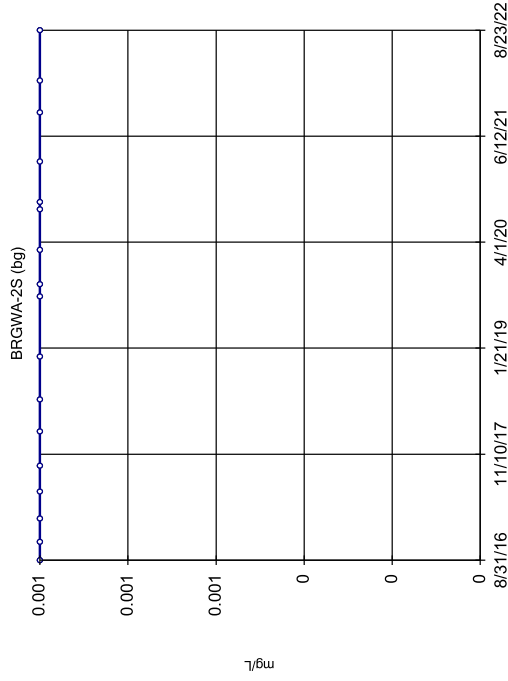


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

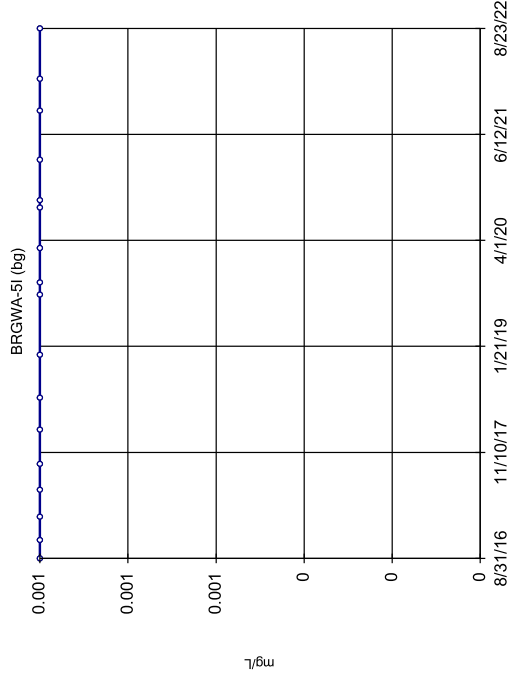


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

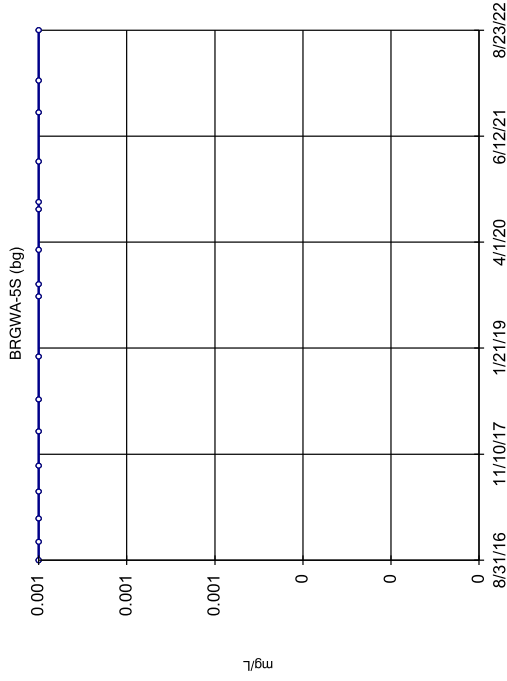


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

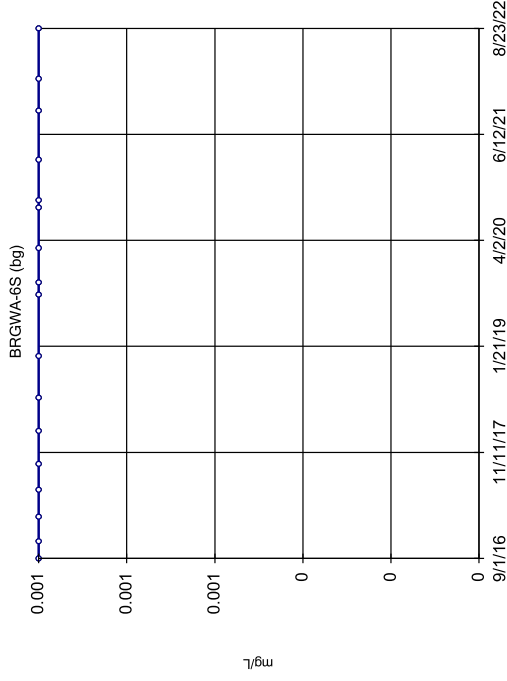


n = 17
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

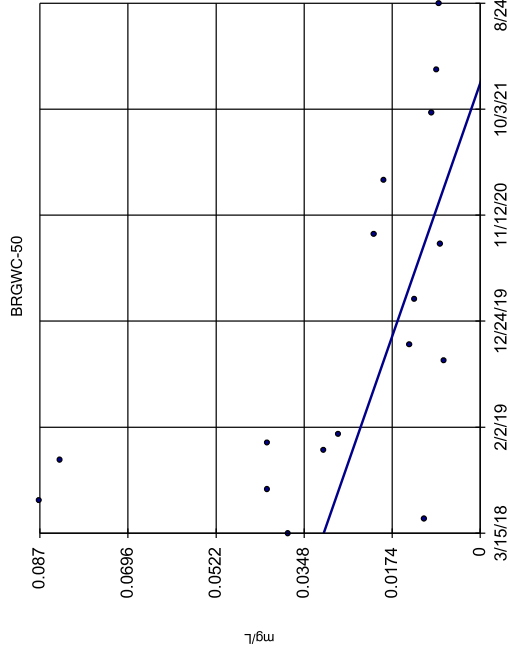
Sen's Slope Estimator



n = 17
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

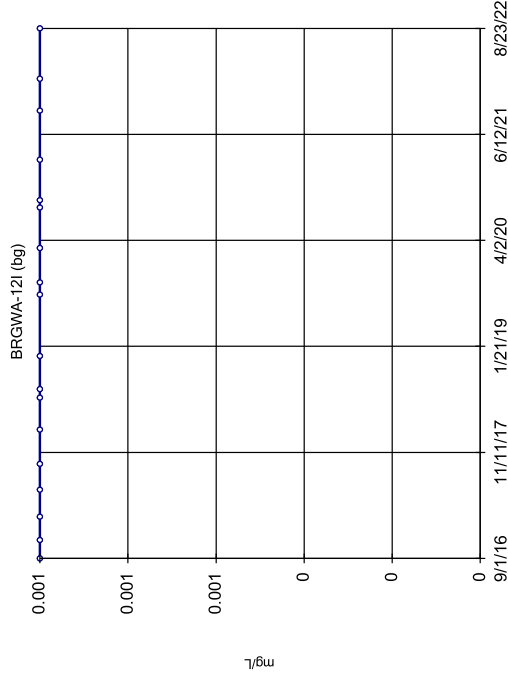
Sen's Slope Estimator



n = 17
 Slope = -0.008185
 units per year.
 Mann-Kendall
 statistic = -69
 critical = -63
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cadmium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

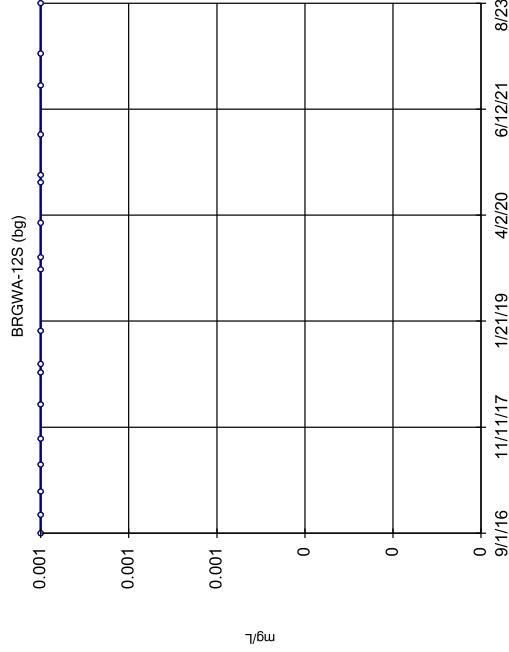
Sen's Slope Estimator



n = 18
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

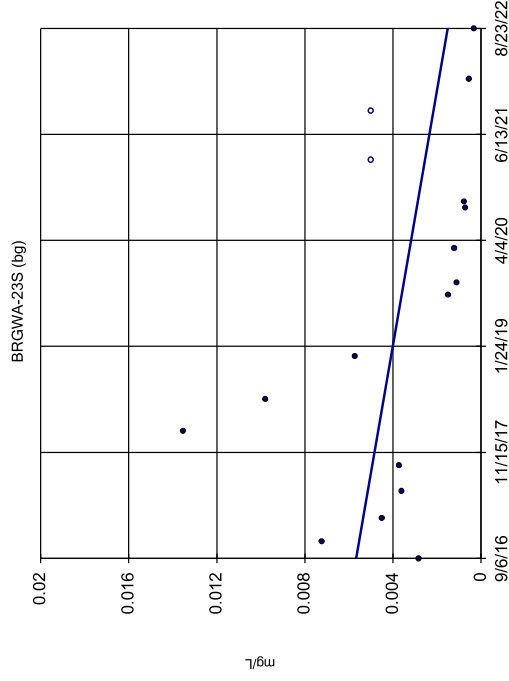
Sen's Slope Estimator



n = 18
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

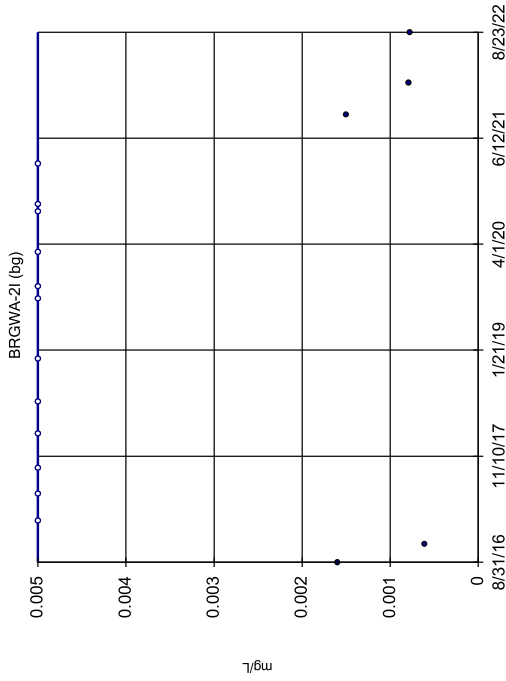


n = 17
 Slope = -0.0006881
 units per year.
 Mann-Kendall
 statistic = -57
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

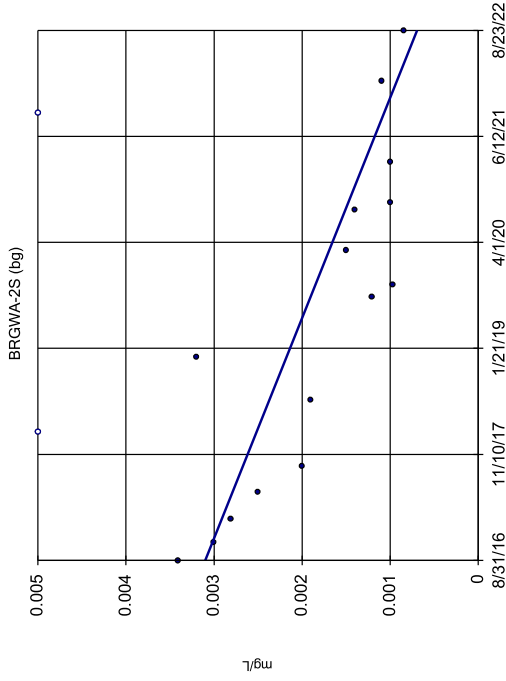


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nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

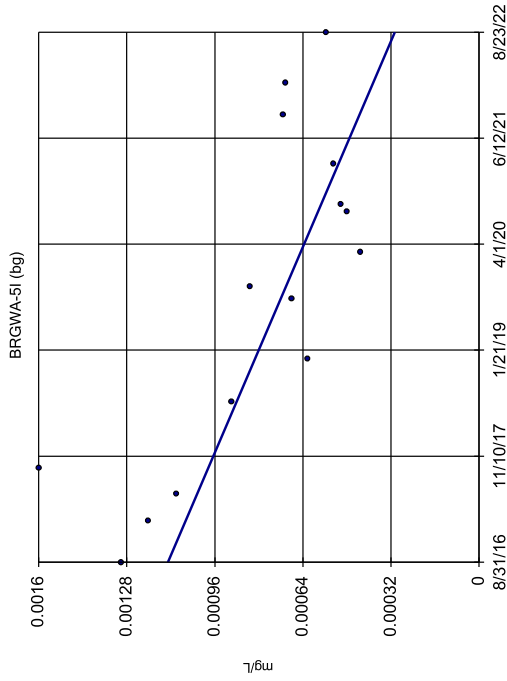


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confidence level
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tail).

Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG

Sen's Slope Estimator

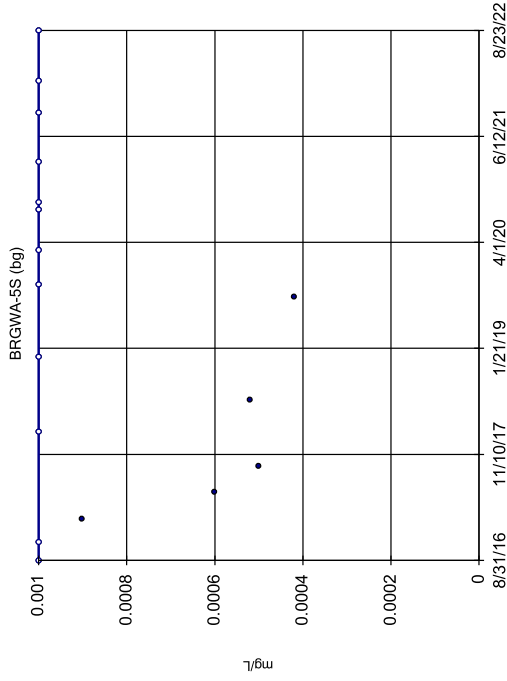


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confidence level
(α = 0.005 per
tail).

Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

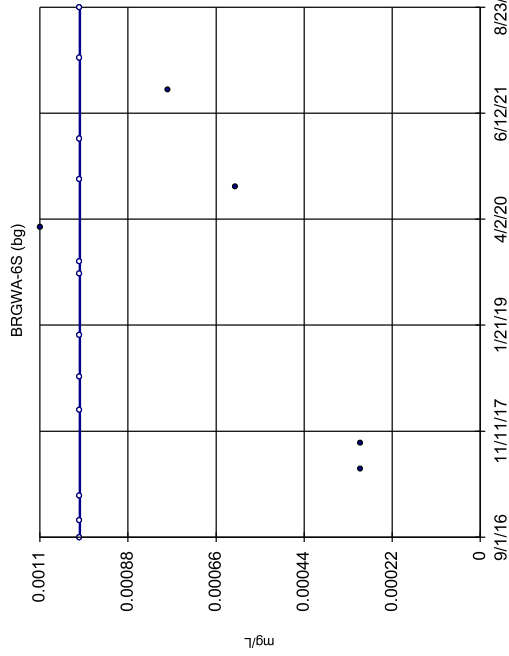
Sen's Slope Estimator



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nificant at 99%
confidence level
(α = 0.005 per
tail).

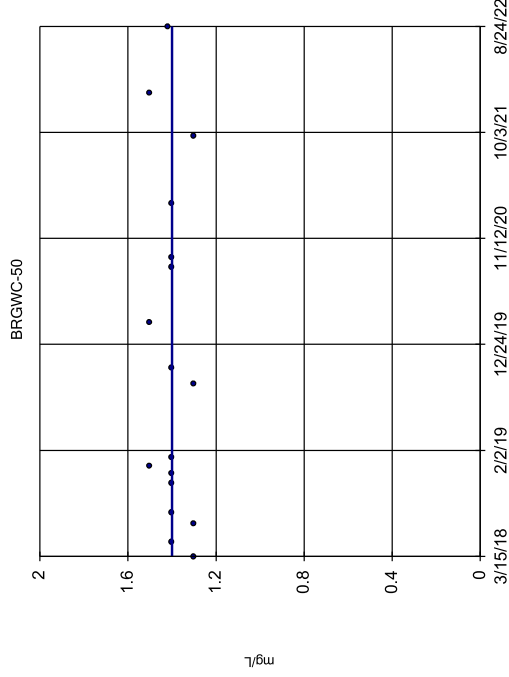
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



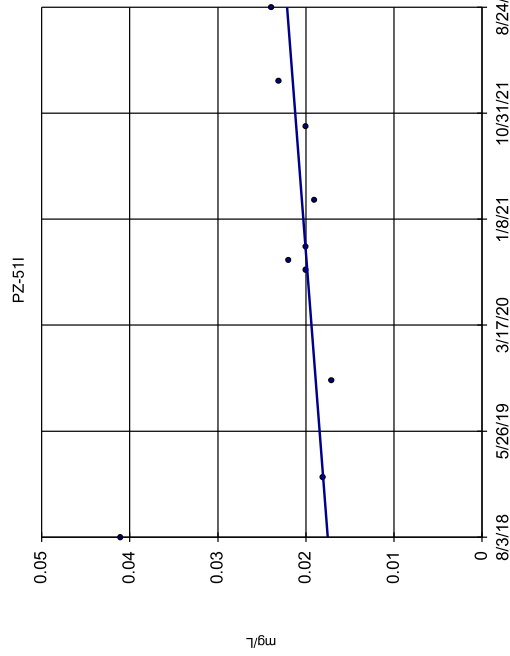
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



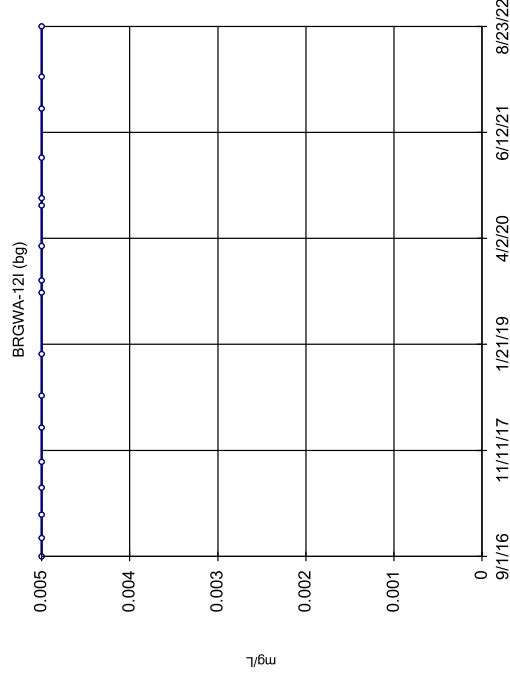
Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator



Constituent: Cobalt Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

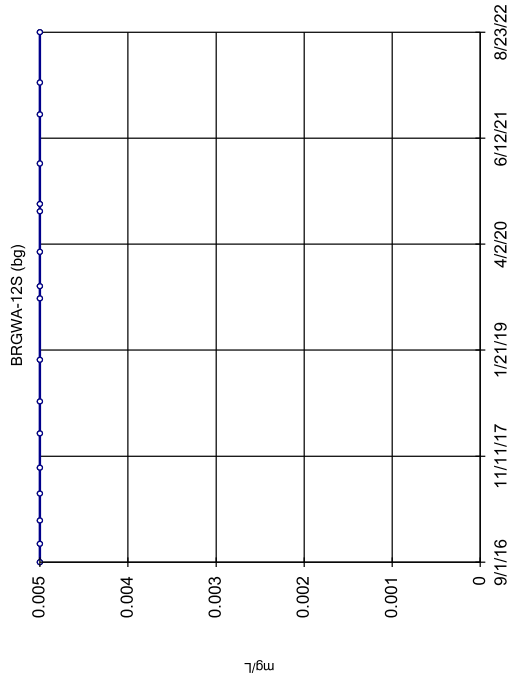
Sen's Slope Estimator



Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

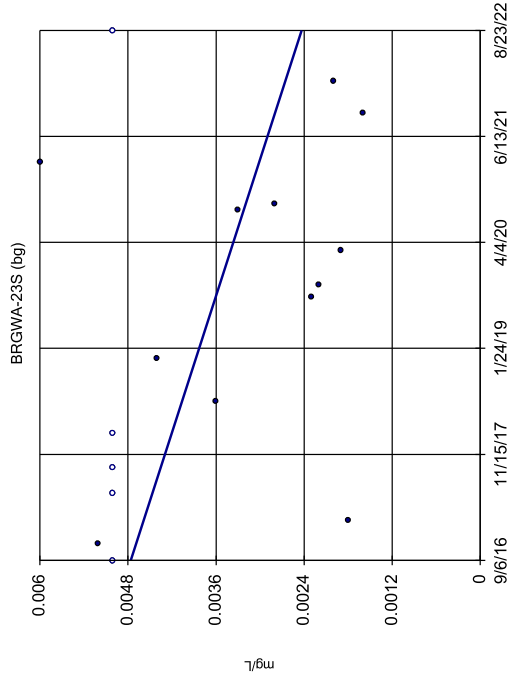


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

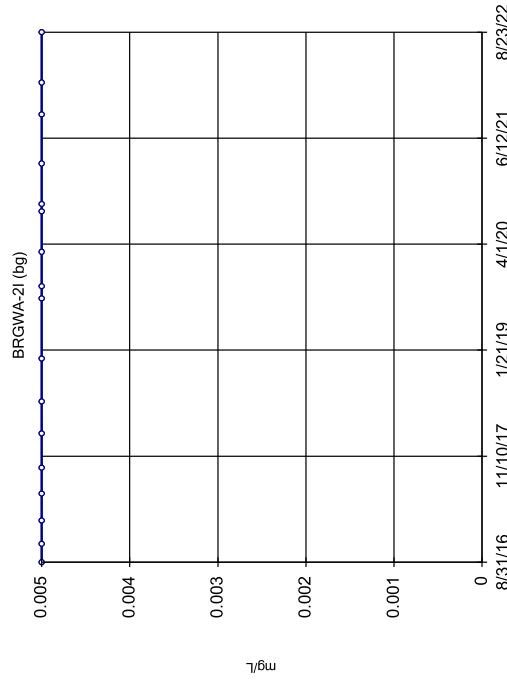


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units per year.
Mann-Kendall
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critical = -63
Trend not sig-
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confidence level
($\alpha = 0.005$ per
tail).

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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

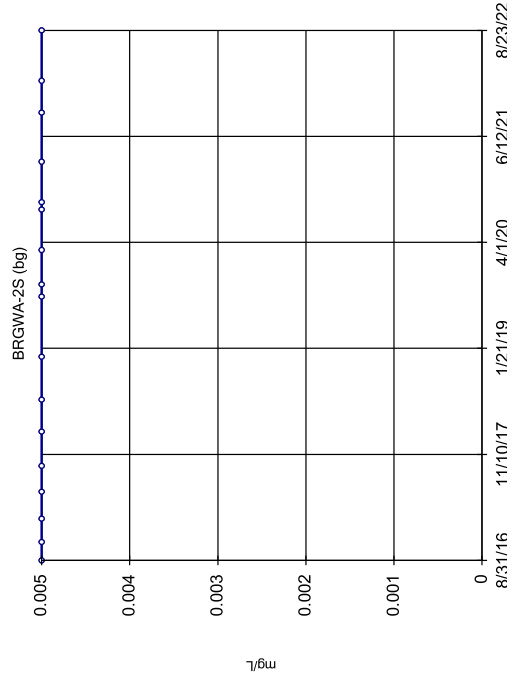


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

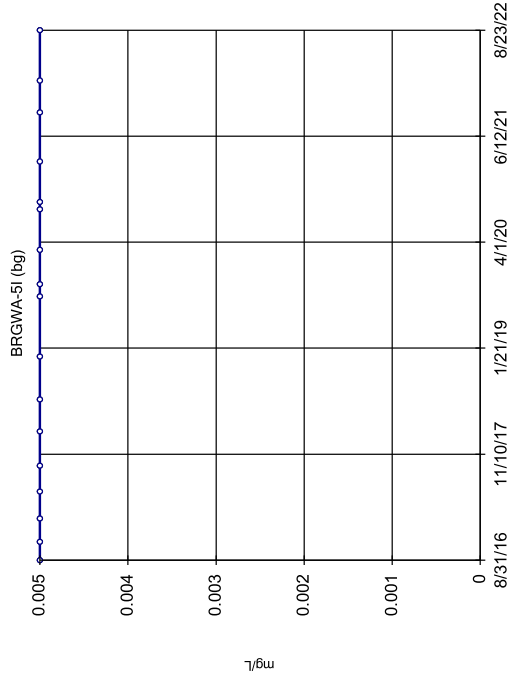


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

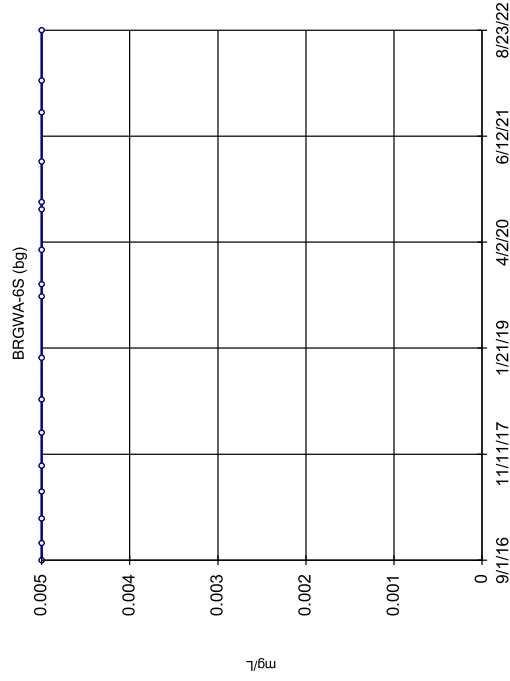


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Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

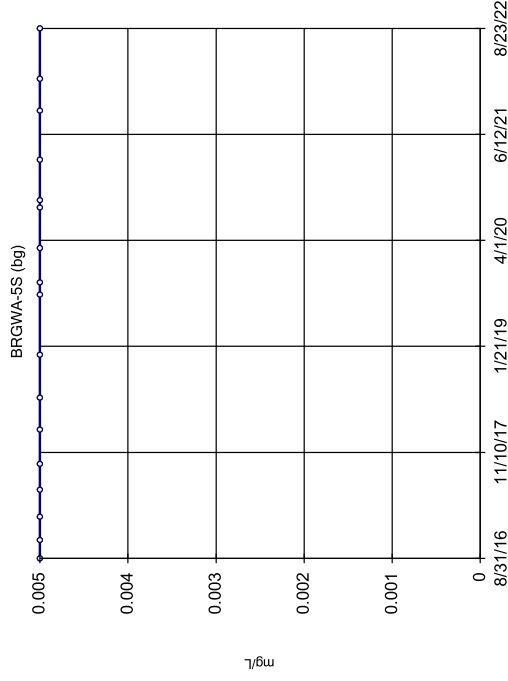


n = 17
Slope = 0
units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

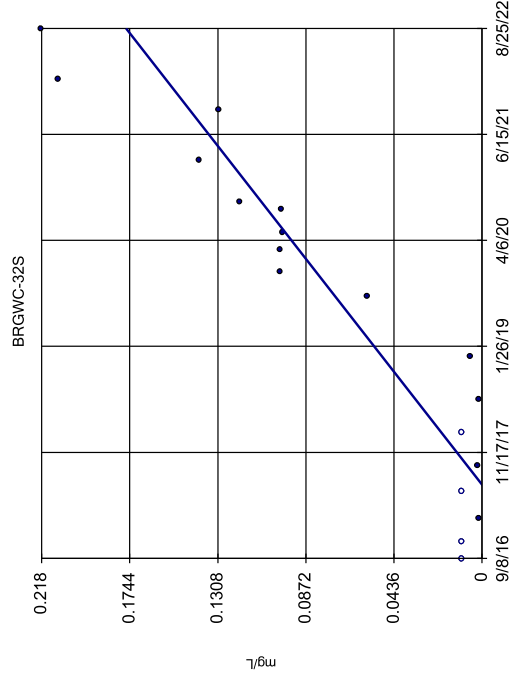


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units per year.
Mann-Kendall
statistic = 0
critical = 63
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting, UG
Hollow symbols indicate censored values.

Sen's Slope Estimator



n = 18
Slope = 0.03432
units per year.
Mann-Kendall
statistic = 107
critical = 68
Increasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Selenium Analysis Run 1/9/2023 10:25 AM View: Pond BCD - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

APPENDIX E

Semi-Annual Remedy Selection & Design Progress Report



Prepared for

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

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

PLANT BRANCH ASH PONDS B, C, AND D

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW8862

February 2023

CERTIFICATION STATEMENT

This *Semiannual Remedy Selection and Design Progress Report, Plant Branch Ash Ponds B, C, and D (AP-BCD)* has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically § 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, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).

Report Prepared by:



 Digitally signed by
Lauren Fitzgerald
Date: 2023.02.26
13:50:59 -05'00'

Lauren E. Fitzgerald
Georgia Professional Engineer No. 048960

February 28, 2023
Date

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Assessment of Corrective Measures
AP	ash pond
CCR	coal combustion residuals
CFR	Code of Federal Regulations
cm/sec	centimeters per second
CSM	conceptual site model
ft/day	feet per day
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GWPS	Groundwater Protection Standard
ISS	in-situ stabilization
K_h	hydraulic conductivity
KGS	Kentucky Geological Survey
MCL	maximum contaminant level
mg/L	milligrams per liter
MNA	monitored natural attenuation
ORP	Oxidation-reduction potential
PRB	permeable reactive barrier
PWR	partially weathered rock
SEP	sequential extraction procedure
SSI	statistically significant increase
SSL	statistically significant level
USEPA	United States Environmental Protection Agency
XRD	X-ray diffraction

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 Branch Ash Ponds B, C, and D (AP-BCD or Site) in accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR § 257.97(a), and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a) (State CCR Rule). Plant Branch ceased producing electricity prior to April 2015, therefore AP-BCD is not subject to the CCR Rule. AP-BCD is managed directly under the State CCR Rule, which incorporates the CCR Rule by reference. This semiannual progress report describes the progress made since the issuance of the prior semiannual progress report in July 2022 in selecting and designing a remedy. Potentially applicable groundwater corrective measures were previously described in the *Assessment of Corrective Measures Report – Plant Branch Ash Ponds B, C, and D (AP-BCD)* (Golder, 2020) (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 at the Site. 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 (Golder, 2021a, 2021b, 2022 and Geosyntec, 2022).

1.2 Site Background and Overview of AP-BCD Pond Closure

Ash Pond B is an approximately 52-acre ash pond that was formed by damming a valley. Placement of CCR in the ash pond began in late 1967. Ash Pond C is an approximately 69-acre ash pond that was also formed by damming a valley. CCR placement in Ash Pond C began in the early 1970s. Ash Pond D is an approximately 46-acre ash pond that began receiving CCR in about 1980. All units ceased receiving waste prior to the effective date

of the CCR rule promulgated in April 2015, thereby designating this site as a Phase II site.

Georgia Power intends to close Ash Ponds B, C, and D (**Figure 1**) via closure by removal in accordance with § 257.102 and corresponding State Rule 391-3-4-.10(7)(b). By removing the CCR from each of the Ash Ponds, the proposed method provides a source control measure which reduces the potential for migration of CCR constituents to groundwater.

1.3 Regulatory Program Status and Nature and Extent

Pursuant to the CCR Rule, CCR compliance groundwater monitoring-related activities have been performed for AP-BCD since 2018. Georgia Power initiated a groundwater assessment monitoring program on November 13, 2019, after identifying statistically significant increases (SSI) of Appendix III constituents.

Statistical analyses of the Appendix IV assessment monitoring groundwater data collected in March 2020 identified statistically significant levels (SSL) for cobalt (Co) and cadmium (Cd) at concentrations exceeding the state and/or federal Groundwater Protection Standards (GWPS)¹. Pursuant to § 257.96, Georgia Power initiated an ACM program for AP-BCD in July 2020. The ACM Report was submitted to GA EPD on December 4, 2020 and posted to the CCR compliance website (Golder, 2020). Statistical analyses of the Appendix IV assessment monitoring groundwater data collected in August 2022 identified another SSL in the AP-BCD detection monitoring network; selenium (Se) in BRGWC-32S.

Since the ACM was initiated, assessment monitoring wells (formerly referred to as “delineation monitoring wells”) have been installed and incorporated into the monitoring well network (formerly referred to as the “compliance monitoring well network”) to delineate, both horizontally and vertically, the extent of the cobalt and cadmium SSLs downgradient of AP-BCD. Delineation of the recently identified selenium SSL downgradient of AP-BCD will begin during the next semiannual groundwater monitoring event. The monitoring well network is shown on **Figure 2**; **Table 1** provides well construction details.

¹ On February 22, 2022, GA EPD adopted the federal GWPS for cobalt, lithium, lead, and molybdenum. The GWPS for cadmium is derived from the federally promulgated maximum contaminant level (MCL) of 0.005 milligrams per liter (mg/L).

Statistical analysis of the August 2022 semiannual assessment monitoring groundwater data identified SSLs of the following Appendix IV constituents at concentrations exceeding the applicable GWPS at AP-BCD:

- Cadmium: BRGWC-50
- Cobalt: BRGWC-50 and PZ-51I
- Selenium: BRGWC-32S

Details are provided in the *2022 Semiannual Groundwater Monitoring and Corrective Action Report (2022 Semiannual Groundwater Report)* (Geosyntec, 2023).

The groundwater data collected between August and October 2022 were used to generate the cadmium and cobalt iso-concentration maps presented on **Figures 3 and 4**, respectively. An iso-concentration map for selenium downgradient of AP-BCD will be included in the July 2023 semiannual progress report. Based on the groundwater data reported in the 2022 Semiannual Groundwater Report, the horizontal and vertical delineation status of identified cobalt and cadmium SSLs is the following.

- BRGWC-50 – cadmium is horizontally delineated downgradient by PZ-61I and vertically by PZ-50D.
- BRGWC-50 and PZ-51I – cobalt is horizontally delineated downgradient by surface water location LR+9A and vertically delineated by PZ-51D.

Based on GA EPD guidance, monitoring wells with SSLs were further evaluated by Groundwater Stats Consulting using the Sen's Slope/Mann Kendall trend test. The full statistical evaluation is included as an Appendix to the 2022 Semiannual Groundwater Report. A statistically significant decreasing trend (at 99% confidence) was identified for cadmium in BRGWC-50, while no statistically significant trends (at 99% confidence) were identified for cobalt in BRGWC-50 or PZ-51I when the August 2022 data were analyzed. While the downgradient (in the direction of groundwater flow from AP-BCD) delineation of cobalt SSLs in BRGWC-50 and PZ-51I is complete, the full nature and extent of cobalt impacts is still under investigation, particularly in the areas upgradient and north of BRGWC-50. Concentration trends of selenium in BRGWC-32S will be included in the statistical analysis completed for the January 2023 semiannual groundwater sampling event.

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate cobalt and cadmium that are present at SSLs in groundwater at AP-BCD. 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 on this risk evaluation, concentrations of cobalt and cadmium detected in groundwater at AP-BCD between August 2016 and March 2020 are not expected to pose a risk to human health or the environment (Geosyntec, 2020). Cobalt and cadmium data collected since March 2020 are consistent with data used in the risk evaluation; therefore, the conclusions provided in the *2020 Risk Evaluation Report* are supported by current conditions.

Georgia Power will continue to adaptively manage the Site and use ongoing data collection to evaluate the need for additional wells at AP-BCD. Pursuant to § 257.96, groundwater in the vicinity of AP-BCD 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-BCD. 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. In-Situ Stabilization (ISS)
4. Monitored Natural Attenuation (MNA)
5. Permeable Reactive Barrier (PRB)
6. Phytoremediation
7. Subsurface Vertical Barrier Walls

ISS, PRB, phytoremediation, and subsurface vertical barrier wall corrective measures have since been removed from consideration based on data evaluations presented in previous semiannual progress reports (Golder, 2021a, 2021b, 2022, and Geosyntec, 2022).

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Golder, 2020) 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 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 a “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 tiered 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, namely, in-situ injection and hydraulic containment.

1.5 Semiannual Potable Water Survey

An updated potable well survey of potential groundwater wells within a two-mile radius of AP-BCD was conducted in December 2022 and consisted of reviewing federal, state, county records, and online sources. Surveys conducted by Environmental Data Resources (EDR) are included in **Appendix A**. Additional federal, state, county records and online sources outside of the EDR survey were also reviewed. The Putnam County Health Department did not respond to Geosyntec's request for information due to inadequate resources. Georgia Power abandoned the Skills Center Well on January 5th, 2023, which was the only potable well on the site property. The findings from the 2022 well survey are consistent with the 2021 well survey (Golder, 2022).

2.0 SUMMARY OF WORK COMPLETED

The following section summarizes the field investigations and data evaluations completed in support of the ACM program since the issuance of the prior semiannual progress report in July 2022 (Geosyntec, 2022). The routine monitoring events associated with the assessment monitoring program are discussed in the 2022 Semiannual Groundwater Report (Geosyntec, 2023).

2.1 Field Activities

Additional field investigation activities since the issuance of the prior semiannual progress report include piezometer installation and additional aquifer testing. These activities are detailed below.

2.1.1 Well and Piezometer Installation and Sampling

In August and September 2022, three assessment monitoring wells (PZ-64I, PZ-65I, and PZ-66I) were installed to refine the nature and extent of cobalt groundwater concentrations up- and side-gradient of BRGWC-50 (**Figure 2**), the primary well exhibiting an SSL of cobalt. In addition, three piezometers were installed in the vicinity of AP-B and AP-D to provide additional data to characterize groundwater flow conditions downgradient of these units. PZ-67 was installed downgradient of AP-B, and PZ-68D and PZ-69I downgradient of AP-D. These piezometers may be sampled during future assessment monitoring events to characterize groundwater quality downgradient of AP-B and AP-D in support of the ACM efforts. A well installation report describing the installation and development of these three assessment monitoring wells and three piezometers was completed and submitted to GA EPD on November 18, 2022 and provided as an appendix to the 2022 Semiannual Groundwater Report.

Groundwater samples were collected from PZ-64I, PZ-65I, and PZ-66I in October 2022 and analyzed for the complete Appendix III and Appendix IV constituent list along with select geochemical parameters in support of the ACM program and remedy evaluation for AP-BCD. The groundwater samples were sent to GEL Laboratories under chain of custody procedures. Additionally, field parameters were collected from PZ-67 downgradient of AP-B in support of the remedy evaluation. Details of the sampling methods are provided in the 2022 Semiannual Groundwater Report; applicable results are discussed in Section 3.

2.1.2 Aquifer Testing

In October 2022, slug testing was conducted at PZ-64I, PZ-65I, PZ-66I, and PZ-67 in order to collect additional hydraulic conductivity data in the study area. The pneumatic slug method was used at locations with appropriate screened zones (fully submerged) and well riser that was not vented at the top (PZ-64I, PZ-65I, and PZ-66I), while a pump-down and recovery method was used at PZ-67. For the pneumatic method, the well casing was pressurized using compressed nitrogen gas to displace the water within the piezometer. After the pressure was released using a manual valve, the groundwater recovery was measured using a downhole pressure transducer and data logger (Level Troll 700) until the water level reached 95% of the static pre-test conditions. For the pump-down method, a submersible pump was used to remove water from the piezometer, and the recharge measured using a downhole pressure transducer until the water level reached 95% of the static pre-test conditions.

Following collection of the displacement and recovery data, the processing and analysis was completed using the AQTESOLV curve-matching software to estimate horizontal hydraulic conductivity (K_h). Both the Bouwer-Rice (1971) and Kentucky Geological Society (KGS) or Hvorslev methods (as appropriate) were used to estimate K_h for each piezometer and the results for each method are presented for comparative purposes in **Table 3**.

2.2 Data Analysis Activities

In addition to the field activities discussed above, this section describes further data analysis including aquifer solids characterization and groundwater geochemical characterization.

2.2.1 Soil Characterization

Total metal and mineralogical characterization data using whole rock analysis were reported for aquifer solids collected from the installation of PZ-64I, PZ-65I, and PZ-66I. Whole rock analysis is an analytical method for lithochemical classification of samples providing elemental analysis of sample mineralogy. The laboratory results are included as **Appendix B**.

2.2.2 Groundwater Analytical Analysis

The analytical groundwater data reported for the assessment monitoring event conducted in August 2022 and the subsequent sampling of PZ-64I, PZ-65I, and PZ-66I in October

2022 were evaluated in support of characterizing the nature and extent of cobalt impacts. In addition, this data was used to assess if previously identified correlations observed between the cobalt SSLs and other groundwater constituents including pH and sulfate extended laterally downgradient. Finally, field parameters were collected from PZ-67 to assess the extent of potential low pH geochemical conditions in the vicinity of AP-B.

3.0 SUMMARY OF RESULTS

This section presents the results of the field and data analysis efforts outlined in Section 2.

3.1 Summary of Field Activities

3.1.1 Aquifer Testing

The newly installed assessment monitoring wells (PZ-64I, PZ-65I, PZ-66I) were screened within the lower portion of the saprolite and partially weathered rock (PWR), at or near the top of the underlying bedrock; associated boring logs for these wells are provided in the well installation report included in the 2022 Semiannual Groundwater Report. The resulting K_h for these three wells ranged from 1.3×10^{-5} centimeters per second (cm/sec) (0.037 feet per day (ft/day)) to 1.4×10^{-4} cm/sec (0.406 ft/day), consistent with previous observations for the saprolite/PWR unit at the Site, which ranged from 4.3×10^{-5} to 7.6×10^{-3} cm/sec. Piezometer PZ-67 was screened within the shallow saprolite, near the water table. The estimated K_h at this location is 2.4×10^{-6} cm/sec (0.007 ft/day). A summary of the input parameters and results of the data analysis is included in **Table 3** and the curve-matching data plots generated in AQTESOLV are included in **Appendix C**.

3.2 Summary of Data Analysis Activities

3.2.1 Soil Characterization

Total metals and whole rock analyses were completed on solids collected during the installation of PZ-64I, PZ-65I, PZ-66I to complement the inorganic and mineralogic characterization completed for other locations downgradient of AP-BCD (specifically AP-B) as discussed in previous semiannual remedy selection and design progress reports (Geosyntec, 2022). The quantitative total metals analysis (see **Table 4**) indicated the presence of SSL constituents cadmium and cobalt up to 0.13 and 20 milligram per kilogram (mg/kg), respectively, in the solid phase. These concentrations are comparable to the approximate concentrations for cadmium (0.18 mg/kg) and cobalt (25 mg/kg) reported in the earth's crust. Based on previous total metals results (Geosyntec, 2022), these concentrations of cobalt and cadmium in the solid phase downgradient of AP-BCD are lower relative to background locations (cadmium in background ranges from 0.66 to 2.2 mg/kg, cobalt in background ranges from 36 to 72 mg/kg), however the different downgradient geochemical conditions (low pH, high sulfate, etc.) could serve as or contribute to the mechanism for mobilization of the SSL constituents from the solid to the aqueous phase.

Overall, the mineralogy of the aquifer matrix in PZ-64I through PZ-66I (see **Table 5**) confirmed the abundance of silicates (SiO_2) and aluminum oxides (Al_2O_3) downgradient of AP-B that was observed in x-ray diffraction (XRD) results presented in the previous semiannual remedy selection and design progress reports (Geosyntec, 2022). The characterization of aquifer solids downgradient of AP-B indicate aluminum and iron-rich rocks with moderately high concentrations of silica (56 to 68 weight % SiO_2). The presence of iron oxides could potentially provide surface sites for adsorption of cobalt and cadmium onto the solid phase.

3.2.2 Groundwater Geochemical Analysis

Review of the groundwater analytical data (**Table 6**) collected during the August and October 2022 groundwater sampling indicate that downgradient monitoring wells and piezometers screened in the transition zone between the PWR and bedrock generally have a lower pH, higher sulfate concentration, and higher oxidation-reduction potential (ORP) where cobalt and/or cadmium impacts are observed compared to wells where impacts are not observed. This is consistent with prior groundwater data reported for previous assessment monitoring events. Low pH and relatively high ORP conditions were observed to extend further east of AP-B with a pH a pH of 3.97 in PZ-67. The correlations between aqueous cobalt concentrations and pH, sulfate, or ORP are presented in **Figure 5**.

4.0 UPDATED CONCEPTUAL SITE MODEL

As noted previously, the closure strategy for AP-BCD will be closure by removal, 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. Data collected since the previous progress report are consistent with and generally agree with the CSM described in the previous semiannual remedy selection and design progress report (Geosyntec, 2022). While the current CSM focuses on the SSL impacts of cobalt and cadmium downgradient of AP-B, it will be updated in the July 2023 semiannual progress report to reflect activities completed to delineate the selenium SSL downgradient of AP-D.

- A statistically significant decreasing trend was observed for cadmium in BRGWC-50 (**Figure 6**).
- No statistically significant concentration trends were observed for cobalt in BRGWC-50 or PZ-51I when the August 2022 data were analyzed (**Figure 6**).
- Downgradient lateral extent of cobalt and cadmium are delineated by sampling of surface water from Lake Sinclair (**Figures 3 and 4**). Additional characterization to delineate the full extent of cobalt in the vicinity of AP-BCD (specifically AP-B) is under evaluation.
- The characterization of aquifer solids downgradient of AP-BCD indicate iron oxides could potentially provide surface sites and ion exchange capacities to attenuate cobalt and cadmium.
- Previous data analyses conducted for select aquifer solid samples suggests that cobalt and cadmium in soils both upgradient and downgradient of AP-BCD 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 that iron oxides affect the transport of cobalt and cadmium in groundwater.
- Exceedances of cobalt downgradient of AP-B, appear to be correlated to the relatively lower pH, higher sulfate, higher ORP, and higher dissolved concentrations of iron and/or manganese geochemistry of the downgradient groundwater (**Figure 5**). However, the apparent correlations are variable and specific evaluations are needed to explain the site variability.

5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

Based on the data collected to date, the following potential corrective measures will be retained for further evaluation.

- Geochemical Injections:
 - Geochemical injections include the use of an injection well network, or other means of introducing reagents or air into the subsurface, to promote conditions suitable for the attenuation of cobalt and cadmium. Previous treatability efforts completed by Golder and included in the most recent semiannual remedy selection and design progress report (Geosyntec, 2022) suggested the potential for in-situ attenuation of cobalt and cadmium utilizing injections of buffer materials to increase the pH. In addition, in-situ remediation via injection of remedial amendments (e.g., potentially sulfate and/or electron donor) to promote sulfate-reducing conditions, could lead to the stable, abiotic precipitation of metal sulfides, including cadmium and cobalt sulfides. Alternatively, reduction of metals including cadmium and cobalt may be achieved through the injection of a bioaugmentation culture and microbially mediated precipitation of sulfides. Therefore, the applicability of injection mechanisms for the treatment of cadmium and cobalt remains a potentially viable option.
- Hydraulic Containment (Pump and Treat):
 - Hydraulic containment refers to the use of groundwater 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.
- 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 suggest that the aquifer matrix has the potential for attenuation of 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.

Because the selenium SSL was only recently observed, the evaluation and application of these retained corrective measures to address the selenium SSL observed in BRGWC-32S will be included in the July 2023 semiannual progress report. The newly installed assessment wells (PZ-68D and PZ-69I) will be sampled in January 2023 for delineating selenium concentrations horizontally and vertically from detection well BRGWC-32S. The nature and extent of selenium concentrations will be the first step for the assessment of corrective measures for selenium impacts observed at the Site.

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 AND 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 closure construction of AP-BCD, 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 (Golder, 2020) 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 continue assessment of 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-BCD 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 cadmium and cobalt and begin evaluation of selenium in assessment monitoring wells. The newly installed assessment wells will be sampled in January 2023 for the delineation of selenium at the Site.*
- *Evaluate if additional lateral or vertical assessment monitoring wells are necessary to characterize the nature and extent of selenium downgradient of AP-D.*
- *Evaluate the redox classifications of the detection and assessment monitoring wells and the potential influence of redox on the aqueous cobalt, cadmium, and selenium concentrations.*
- *Evaluate if additional lateral assessment monitoring wells are necessary to characterize the nature and extent of cobalt downgradient of AP-B and to the north of PZ-64I.*
- *Evaluate the need for additional bench-scale treatability testing to support in-situ geochemical injection remedial alternatives.*

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

7.0 REFERENCES

- Geosyntec, 2020. *Risk Evaluation Report – Plant Branch Ash Ponds B, C, and D (AP-BCD)*. December 2020.
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- USEPA, 1999. *Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites*. Office of Solid Waste and Emergency Response; Directive 9200.4-17P. April 1999.
- USEPA, 2007. *Monitored Natural Attenuation of Inorganic Contaminants in Ground Water. Volume 1 – Technical Basis for Assessment*. National Risk Management Laboratory. EPA/600/R-07/139. October 2007.
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TABLES

Table 1
Monitoring Well Network Summary
Plant Branch AP-BCD, Putnam County, Georgia

Well ID	Alternate Name	Hydraulic Location	Installation Date	Easting ⁽¹⁾	Northing ⁽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 BGS)	Screen Interval Length (ft)
AP-BCD Detection Monitoring Well Network											
BRGWA-2S	PZ-2S	Upgradient BCD & E	4/2/2014	2549952.59	1167139.69	440.4	443.20	406.2	396.2	44.6	10
BRGWA-2I	PZ-2I	Upgradient BCD & E	3/14/2014	2549957.26	1167129.90	440.5	443.14	386.6	376.6	64.3	10
BRGWA-5S	PZ-5S	Upgradient BCD & E	4/3/2014	2549415.60	1170177.42	440.8	443.86	411.2	401.2	40.0	10
BRGWA-5I	PZ-5I	Upgradient BCD & E	4/3/2014	2549407.91	1170183.54	441.1	443.79	390.3	380.3	61.2	10
BRGWA-6S	PZ-6S	Upgradient BCD & E	4/1/2014	2551540.90	1170732.82	455.8	458.96	416.5	406.5	49.7	10
BRGWA-12S	PZ-12S	Upgradient BCD	3/4/2014	2557142.89	1164286.80	431.6	434.64	383.7	373.7	58.3	10
BRGWA-12I	PZ-12I	Upgradient BCD	2/20/2014	2557138.79	1164301.32	431.5	434.39	364.3	354.3	77.6	10
BRGWA-23S	PZ-23S	Upgradient BCD	7/26/2016	2557868.25	1162971.84	425.5	428.24	394.7	384.7	40.8	10
BRGWC-25I	PZ-25I	Downgradient B	7/25/2016	2561315.08	1160583.67	355.0	357.37	344.5	334.5	20.5	10
BRGWC-27I	PZ-27S	Downgradient C	7/22/2016	2559712.12	1159695.33	364.0	366.86	350.0	340.0	24.0	10
BRGWC-29I	PZ-29I	Downgradient C	7/23/2016	2561050.03	1160297.65	350.6	353.23	340.6	330.6	20.0	10
BRGWC-30I	PZ-30I	Downgradient D	7/18/2016	2557691.84	1161607.69	350.0	352.61	340.0	330.0	20.3	10
BRGWC-32S	PZ-32S	Downgradient D	7/20/2016	2558497.97	1160677.67	403.6	406.39	368.6	358.6	45.0	10
BRGWC-45	PZ-45	Downgradient B	2/3/2018	2561075.38	1162229.68	381.6	384.58	335.0	325.0	57.0	10
BRGWC-47	PZ-47	Downgradient D	1/25/2018	2559456.75	1162700.66	408.8	411.20	327.2	317.2	92.0	10
BRGWC-50	PZ-50	Downgradient B	1/31/2018	2562372.96	1161593.45	378.8	381.35	324.2	314.2	65.0	10
BRGWC-52I	PZ-52	Downgradient B	8/6/2018	2562145.22	1161274.99	381.2	383.87	317.3	307.3	73.9	10
AP-E Detection Monitoring Well Network											
BRGWA-2S	PZ-2S	Upgradient BCD & E	4/2/2014	2549952.59	1167139.69	440.4	443.20	406.2	396.2	44.6	10
BRGWA-2I	PZ-2I	Upgradient BCD & E	3/14/2014	2549957.26	1167129.90	440.5	443.14	386.6	376.6	64.3	10
BRGWA-5S	PZ-5S	Upgradient BCD & E	4/3/2014	2549415.60	1170177.42	440.8	443.86	411.2	401.2	40.0	10
BRGWA-5I	PZ-5I	Upgradient BCD & E	4/3/2014	2549407.91	1170183.54	441.1	443.79	390.3	380.3	61.2	10
BRGWA-6S	PZ-6S	Upgradient BCD & E	4/1/2014	2551540.90	1170732.82	455.8	458.96	416.5	406.5	49.7	10
BRGWC-17S	PZ-17S	Downgradient E	3/13/2014	2554687.84	1166301.32	362.2	365.32	360.5	355.5	7.1	5
BRGWC-33S	PZ-33S	Downgradient E	7/26/2016	2554064.97	1168057.09	414.2	416.68	398.2	388.2	26.4	10
BRGWC-34S	PZ-34S	Downgradient E	7/25/2016	2554231.28	1167384.17	389.2	391.96	376.2	366.2	23.0	10
BRGWC-35S	PZ-35S	Downgradient E	7/23/2016	2554476.13	1166646.02	363.7	366.31	346.7	336.7	27.4	10
BRGWC-36S	PZ-36S	Downgradient E	7/26/2016	2554693.26	1165742.82	383.1	389.84	364.4	354.4	28.7	10
BRGWC-37S	PZ-37S	Downgradient E	7/24/2016	2554979.63	1165093.07	444.4	447.05	390.8	380.8	63.6	10
BRGWC-38S	PZ-38S	Downgradient E	7/22/2016	2555016.50	1164391.82	429.8	432.24	402.0	392.0	38.2	10
AP-BCD Assessment Monitoring Well Network											
PZ-44	--	Downgradient B	2/2/2018	2561587.42	1161724.48	380.5	383.04	333.9	323.9	57.0	10
PZ-50D	--	Downgradient	10/8/2020	2562380.34	1161589.51	378.3	380.86	282.3	272.3	106.0	10
PZ-51S	--	Downgradient B	8/1/2018	2562433.07	1161613.24	377.9	380.27	337.9	332.9	45.4	5
PZ-51I	--	Downgradient	8/1/2018	2562439.35	1161631.12	378.0	380.52	323.1	313.1	65.0	10
PZ-51D	--	Downgradient B	10/9/2020	2562433.15	1161640.16	378.1	380.75	282.1	272.1	106.0	10
PZ-57I	--	Downgradient B	3/24/2021	2562170.21	1161582.31	379.4	382.50	313.8	303.8	75.9	10
PZ-58I	--	Downgradient B	3/27/2021	2562297.82	1161579.00	379.3	382.27	325.7	315.7	63.9	10
PZ-59I	--	Downgradient B	3/31/2021	2562329.80	1161654.90	379.9	383.49	323.5	313.5	66.0	10
PZ-60I	--	Downgradient B	3/29/2021	2562330.79	1161588.01	379.5	382.61	329.0	319.0	60.8	10
PZ-61I	--	Downgradient B	3/30/2021	2562429.63	1161621.94	377.7	380.64	312.0	302.0	76.0	10
PZ-62I	--	Downgradient B	1/6/2022	2562336.00	1161478.90	378.1	380.95	318.1	308.1	70.0	10

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PZ-63I	--	Downgradient B	1/5/2022	2562233.10	1161371.20	378.6	381.31	332.1	322.1	56.5	10
PZ-64I	--	Downgradient B	9/10/2022	2562404.29	1161787.72	379.4	381.94	320.6	310.6	69.3	10
PZ-65I	--	Downgradient B	9/09/2022	2562240.57	1161692.72	379.6	382.06	320.9	310.9	69.3	10
PZ-66I	--	Downgradient B	9/08/2022	2562134.65	1161747.91	380.9	383.52	323.1	313.1	68.3	10
AP-E Assessment Monitoring Well Network											
PZ-13S	--	Downgradient	3/19/2014	2555276.64	1168011.19	406.5	409.97	382.2	372.2	34.7	10
PZ-52D	--	Downgradient E	5/14/2020	2554051.53	1168053.71	414.3	417.03	364.8	354.8	59.5	10
PZ-53D	--	Downgradient E	5/17/2020	2554984.36	1164393.74	431.6	434.68	302.2	292.2	139.4	10
PZ-70I	--	Downgradient E	8/16/2022	2555374.08	1164326.66	422.9	425.70	363.4	373.4	52.9	10
Piezometers											
PZ-1D	--	Upgradient	4/4/2014	2551598.09	1171999.19	462.9	463.41	397.4	302.9	160.0	94.5
PZ-1I	--	Upgradient	3/10/2014	2551577.63	1171995.75	461.9	464.71	392.8	382.8	79.5	10
PZ-1S	--	Upgradient	3/20/2014	2551588.02	1171996.20	462.4	465.07	407.8	397.8	65.0	10
PZ-3D	--	Upgradient	3/27/2014	2550275.05	1165474.25	486.7	487.50	438.7	358.6	130.0	82
PZ-3I	--	Upgradient	3/11/2014	2550273.05	1165494.61	486.5	489.49	442.3	432.3	54.6	10
PZ-3S	--	Upgradient	3/11/2014	2550274.66	1165484.43	487.0	490.53	457.5	447.5	39.9	10
PZ-4I	--	Upgradient	3/11/2014	2551282.08	1163246.61	479.9	482.98	443.5	433.5	46.8	10
PZ-4S	--	Upgradient	3/10/2014	2551270.14	1163247.97	479.9	482.87	460.3	450.3	30.0	10
PZ-7S	--	Downgradient	4/1/2014	2553055.64	1169419.33	449.0	451.57	414.9	404.9	44.5	10
PZ-8S	--	Upgradient	4/1/2014	2551188.94	1167801.20	450.5	453.08	411.4	401.4	49.5	10
PZ-9S	--	Upgradient	3/5/2014	2553089.53	1162633.36	466.1	469.28	428.5	418.5	48.0	10
PZ-10S	--	Downgradient	3/5/2014	2554990.43	1164021.55	431.0	433.85	402.4	392.4	39.0	10
PZ-11S	--	Downgradient	2/20/2014	2557002.59	1162467.37	390.9	393.99	376.8	366.8	24.5	10
PZ-12D	PZD-12D	Downgradient	4/14/2014	2557136.26	1164311.85	431.4	434.09	350.1	290.1	141.7	60
PZ-14I	--	Downgradient	3/20/2014	2554365.65	1168398.28	419.9	422.71	376.5	366.5	53.8	10
PZ-14S	--	Downgradient	3/20/2014	2554359.23	1168398.59	420.2	423.31	393.0	383.0	37.6	10
PZ-15I	--	Downgradient	3/25/2014	2554399.25	1167721.02	400.2	403.06	321.9	311.9	88.7	10
PZ-15S	--	Downgradient	3/27/2014	2554394.06	1167720.25	400.1	402.90	370.2	360.2	39.9	10
PZ-16I	--	Downgradient	3/14/2014	2554587.53	1166980.59	379.5	382.45	351.3	341.3	38.6	10
PZ-16S	--	Downgradient	3/18/2014	2554581.44	1166977.63	379.3	382.52	370.6	360.6	19.1	10
PZ-17I	--	Downgradient	3/17/2014	2554702.42	1166313.81	362.3	365.33	329.2	319.2	43.5	10
PZ-18I	--	Downgradient	2/26/2014	2557745.51	1160766.13	359.6	362.55	331.3	321.3	38.4	10
PZ-18S	--	Downgradient	3/26/2014	2557747.42	1160757.41	359.7	362.82	345.0	335.0	24.2	10
PZ-19I	--	Downgradient	3/4/2014	2558899.87	1159797.10	368.9	371.74	335.6	325.6	43.7	10
PZ-19S	--	Downgradient	3/4/2014	2558894.60	1159805.43	368.4	371.42	350.8	340.8	28.0	10

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PZ-20I	--	Downgradient	3/5/2014	2560160.17	1159495.25	362.2	365.34	343.1	333.1	29.5	10
PZ-20S	--	Downgradient	3/5/2014	2560157.16	1159490.13	362.2	365.41	357.3	347.3	15.3	10
PZ-21I	--	Downgradient	3/10/2014	2561328.17	1160591.42	355.8	358.92	341.8	331.8	24.4	10
PZ-21S	--	Downgradient	3/11/2014	2561321.43	1160592.45	355.5	358.52	351.1	346.1	9.8	5
PZ-23I	--	Downgradient	7/29/2016	2557877.71	1162975.56	425.1	427.74	368.6	358.6	66.5	10
BRGWC-24S	PZ-24S	Downgradient A	7/27/2016	2562862.19	1162400.95	351.4	354.10	319.9	309.9	42.0	10
PZ-26I	--	Downgradient	7/26/2016	2561626.45	1160669.20	368.0	370.63	347.5	337.5	30.5	10
PZ-28I	--	Downgradient	7/24/2016	2560151.53	1159505.00	362.5	364.81	348.5	338.5	24.0	10
PZ-31S	--	Downgradient	7/26/2016	2557971.75	1160936.81	374.3	376.77	344.8	334.8	39.5	10
PZ-39	--	Downgradient	7/30/2016	2557460.52	1163675.53	432.0	434.78	397.3	387.3	44.7	10
PZ-40S	--	Downgradient A	2/14/2017	2562807.61	1162415.06	353.2	355.96	324.4	314.4	40.2	10
PZ-41S	--	Downgradient A	2/14/2017	2562759.44	1162431.76	354.3	357.17	320.5	310.5	44.2	10
PZ-42S	--	Downgradient A	2/9/2017	2562734.89	1162845.64	359.0	361.66	337.2	327.2	32.2	10
PZ-43	--	Downgradient A	2/7/2018	2562031.42	1162159.72	381.0	383.71	351.0	341.0	40.4	10
PZ-46	--	Downgradient B	2/5/2018	2560558.89	1162756.31	382.1	384.64	346.5	336.5	45.6	10
PZ-48	--	Downgradient D	1/24/2018	2558444.63	1163046.78	418.3	420.90	361.7	351.7	67.0	10
PZ-49	--	Downgradient B	1/30/2018	2561125.71	1163321.35	382.2	384.99	375.6	365.6	17.0	10
PZ-54	--	Downgradient E	5/15/2020	2555458.38	1164828.76	440.8	443.86	398.8	388.8	52.0	10
PZ-55	--	Downgradient E	5/19/2020	2554783.76	1163208.08	450.2	453.07	410.9	400.9	49.3	10
PZ-56	--	Downgradient B	5/20/2020	2554086.36	1162965.21	416.2	418.84	396.9	386.9	29.3	10
PZ-67	--	Downgradient B	9/07/2022	2561919.76	1161831.98	378.8	381.48	351.0	341.0	38.3	10
PZ-68D	--	Downgradient D	9/06/2022	2558512.90	1160690.48	402.5	405.25	328.8	318.8	84.3	10
PZ-69I	--	Downgradient D	8/31/2022	2558447.46	1160311.39	377.0	379.36	348.2	338.2	39.3	10
PB-1S	--	Downgradient	1/22/2019	2556355.89	1164910.63	400.4	403.16	372.4	362.4	38.0	10
PB-2D	--	Downgradient	12/4/2018	2556914.34	1164853.67	414.9	416.71	367.9	357.9	57.0	10
PB-4S	--	Downgradient	1/16/2019	2556069.32	1164335.20	409.3	411.15	371.3	361.3	48.0	10
PB-4D	--	Downgradient	1/16/2019	2556060.72	1164339.50	409.0	412.12	304.5	294.5	114.5	10
PB-7S	--	Downgradient	1/14/2019	2556186.30	1163831.09	399.7	402.88	376.7	366.7	33.0	10
PB-8S	--	Downgradient	1/8/2018	2556792.21	1163018.39	398.6	401.82	373.6	363.6	35.0	10
PB-8D	--	Downgradient	1/8/2018	2556786.65	1163024.53	398.2	401.74	304.2	294.2	106.0	10
PB-10S	--	Downgradient	1/16/2019	2558551.25	1163589.10	397.6	400.91	374.6	364.6	33.0	10
PB-10D	--	Downgradient	1/16/2019	2558546.62	1163593.43	397.5	400.31	322.5	312.5	85.0	10
PB-13S	--	Downgradient	12/10/2018	2556626.03	1162084.43	370.8	373.31	330.8	320.8	50.0	10
PB-13D	--	Downgradient	12/10/2018	2556638.88	1162084.53	371.1	373.77	284.1	274.1	97.0	10

Notes:

ft = feet

ft BGS = feet below ground surface

-- = not applicable

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.

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

Table 2
Evaluation of Remedial Technologies
Plant Branch AP-BCD, Putnam County, Georgia

Regulatory Citation for Criteria: Corrective Measure	Description	40 CFR 257.96(C)(1) Performance	40 CFR 257.96(C)(1) Reliability	40 CFR 257.96(C)(1) Ease of Implementation	40 CFR 257.96(C)(1) Potential Impacts
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 cadmium (Cd) and cobalt (Co). However, the main attenuation mechanism for Co and Cd is sorption, which is more dependent on pH than redox. Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals; which might also increase the attenuation of Cd. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co and Cd onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co.	The effective immobilization of Co at neutral to alkaline pH can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. This immobilization has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether Cd can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics. Cd attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Cd is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to Co.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Co and Cd in groundwater.	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. The potential for clogging of aquifer matrix and/or injection well infrastructure is an implantation consideration. 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 evaluated and implemented. Consideration of groundwater flow to nearby sensitive environments may be needed.
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, reinjection into the groundwater, or reuse [e.g., land application, coal combustion residual (CCR) conditioning, etc.]. It is applicable to a variable mix of inorganic constituents, including dissolved Co and Cd.	Pump and treat (P&T) can be effective at providing hydraulic control, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At AP-BCD, implementation of the corrective measure is contingent on completing additional assessment activities (i.e., high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/ effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co and Cd. 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.
In-Situ Stabilization (ISS)	In-situ stabilization is a technique that uses mixing of subsurface soil or CCR with additives (typically Cementous in nature) to solidify the subsurface material in place and reduce future dissolution of compounds into groundwater. Additives typically include Portland cement, and the solidification is completed in-situ using large diameter augers.	Groundwater impacts would be addressed through source control and subsequent natural attenuation. This alternative would isolate/secure the source in a bound matrix, and over time, allow the concentrations of Co and Cd in downgradient groundwater to decline to below applicable standards.	In-situ stabilization can be a reliable corrective measure for Co and Cd in groundwater. Reliability is dependent on the permeability of the subsurface and effectiveness of the stabilization.	Difficult. Implementation of ISS will require a detailed design effort with bench scale treatability study to determine the appropriate amendment mix. Pilot testing will also be needed to verify the ability of equipment to solidify material at depth.	Potential impacts of the remedy will be negligible.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Co and Cd at AP-BCD are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation, and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Cd, the main attenuation processes include sorption to iron and manganese oxides (Co and Cd), and formation of sparingly soluble sulfide minerals (Co).	Physical and chemical MNA mechanisms for Co and Cd, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for Co and Cd are already occurring at the site as evidenced by groundwater data from the assessment wells. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for Co and Cd at AP-BCD will further enhance ongoing MNA.	Reliable as long as the aquifer conditions that result in Co and Cd attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Co and/or Cd, or in combination with a second technology.	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.
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 most likely viable for the concurrent removal of Co and Cd. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB would be contingent on finalization of the nature and extent of characterization. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been shown to effectively address Co and Cd in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for concurrent removal/immobilization of these constituents. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Cadmium redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for Co. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Cd.	Reliable groundwater corrective measure technology, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Site-specific geology (i.e., partially weathered bedrock layer) poses a possible constructability challenge when attempting to key PRB material into competent bedrock. 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.	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.
Phytoremediation	Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-BCD, this corrective measure would likely use an engineered 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 Cd and Co within the root zone as well as incidental uptake of dissolved Cd and Co 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 Cd and Co concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Given the current groundwater flow velocities, the approach is currently not considered viable. However, changing site conditions may make the corrective measure viable for the area downgradient of AP-BCD. Additional aquifer testing and/or groundwater flow modeling may be needed to confirm the suitability at that time.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell® units.	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above and below-ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.
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. 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. Though highly effective, vertical barrier walls may serve as groundwater dams, so mounding of groundwater behind barrier walls, or flow of groundwater around the ends of barrier walls, should be considered in corrective action design.	Barrier walls are a proven technology for groundwater cutoff at impoundments. Conventionally installed slurry walls are typically limited by installation depth, which is approximately 90 feet below ground surface (bgs). However, site-specific geologic and technology-specific considerations specific to AP-BCD may limit this depth to shallower installations. Within the context of AP-BCD, 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 cobalt and cadmium 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 and compatibility testing with groundwater from the former CCR Unit will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater may be required. O&M requirements are expected to include upkeep of infrastructure components (e.g., pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Minimal impacts are expected following the construction of the remedy. Short-term impacts during remedy construction 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. Groundwater extraction may unintentionally alter the geochemistry within the wall that may result in the mobilization of other constituents that require treatment.

Note: Corrective measures to address Selenium (Se) will be included in the July 2023 Semiannual Remedy Selection and Design Progress Report

Table 2
Evaluation of Remedial Technologies
Plant Branch AP-BCD, Putnam County, Georgia

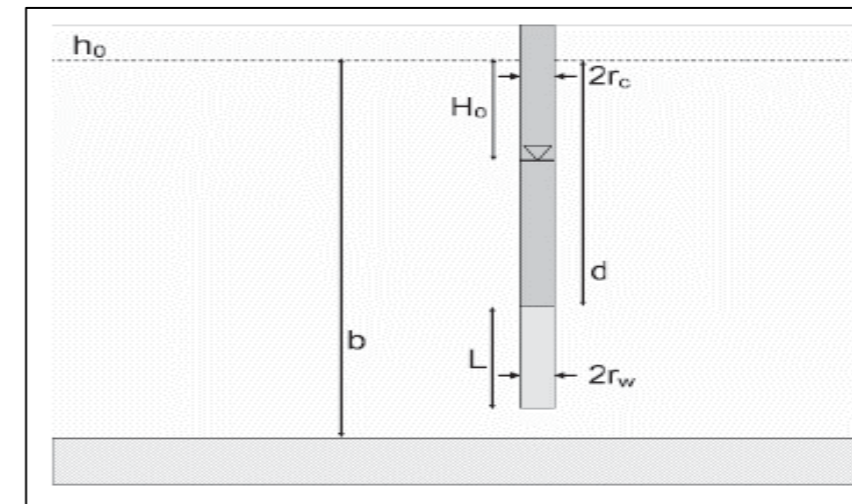
Regulatory Citation for Criteria: Corrective Measure	40 CFR 257.96(C)(2) Time Requirement to Begin/Complete	40 CFR 257.96(C)(3)		Relative Costs	Evaluation of Retainage
		Institutional Requirements	Other Env or Public Health Requirements		
Geochemical Approaches (In-Situ Injection)	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot- testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.	No institutional requirements are expected at this time.	None expected at this point. Potential for mobilization of redox-sensitive constituents exists during implementation of an anaerobic attenuation approach. Following installation, the remedy is passive.	Medium. Dependent on expanse of injection network required and injectate volume required per derived design parameters.	Remedial approach retained due to limited area of SSL exceedances, a targeted injection layout may result in decreased concentrations of Co and Cd in groundwater below the GWPS.
Hydraulic Containment ("Pump and Treat")	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for Co and Cd.	Depending on the effluent management strategy, modifications to the existing National Pollutant Discharge Elimination System (NPDES) permit may be required or obtaining a new UIC permit may be needed if groundwater reinjection is chosen.	Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high. Dependent on remedy duration, complexity of above-ground treatment system, and volume of water processed.	During ash pond closure, there will be an on-site wastewater treatment plant that may be available for treatment of extracted groundwater. Therefore, P&T is a potentially viable interim corrective measure for cobalt and cadmium in groundwater at Plant Branch and will be retained for further evaluation.
In-Situ Stabilization (ISS)	In-situ stabilization around the area of exceedance is predicted to take a number of years to complete, depending on the availability of specialized contractors, materials, and equipment.	No institutional requirements are expected at this time.	Changes to groundwater chemistry relative to the mobility of Appendix IV constituents following completion of ISS, where large volumes of amendments (i.e., Portland cement) are added to the subsurface, are unknown and would require pilot testing.	High. High cost for installation due to need for specialty contractors.	Not retained for further analysis; strategy is deemed impractical because AP-BCD will be closed by removal.
Monitored Natural Attenuation (MNA)	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame following pond closure. Engineering measures will be implemented during closure of AP-BCD 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.	No institutional requirements are expected at this time.	Little to no physical disruption to remediation areas and no adverse construction related impacts are expected on the surrounding community.	Low. Minimal cost requirements.	Under current conditions, attenuation processes for Cd and Co are already occurring as evidenced by groundwater data from assessment wells. Therefore, MNA is a potentially viable corrective measure for Co and Cd in groundwater at Plant Branch and will be retained for further evaluation.
Permeable Reactive Barrier	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.	No institutional requirements are expected at this time.	None expected at this point. 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. Relatively high cost for installation. Minimal O&M requirements if replacement is not necessary.	Because there is limited space available downgradient of wells where COCs exceed groundwater protection standards, PRB has not been retained for further consideration.
Phytoremediation	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.	No institutional requirements are expected at this time.	None expected at this point. Following installation, the remedy is passive and does not require external energy.	Medium. Mid-range cost for installation and minimal O&M requirements.	Not retained for further analysis; due to the depth of groundwater and the limited physical space for installation of a phytoremediation system between the AP-BCD and the adjacent surface water bodies, phytoremediation has been removed from consideration for groundwater corrective action at AP-BCD.
Subsurface Vertical Barrier Walls	Installation of a barrier wall can be accomplished relatively quickly (i.e., 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 and coupled with other approaches.	No institutional requirements are expected at this time.	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. Dependent on length and depth of wall, remedy duration and complexity of above-ground treatment system.	Because there is limited space available downgradient of wells where COCs exceed groundwater protection standards, Subsurface Vertical Barrier Walls have not been retained for further consideration.

Table 3
Summary of Estimated Horizontal Hydraulic Conductivity Values
Plant Branch AP-BCD, Putnam County, Georgia

Well ID/Test No.	Screen Zone Material	Slug Test Type	Well Information						Horizontal Hydraulic Conductivity (Kh)					
			Depth to Sensor [ft bTOC]	Static DTW [ft bTOC]	DTW after Pressure Release [ft bTOC]	Top Screen Depth [ft TOC]	Bottom Screen Depth [ft bTOC]	Total Depth [ft bTOC]	Bouwer-Rice Kh [ft/day]	KGS or Hvorslev Kh [ft/day]	Geomean Kh [ft/day]	Bouwer-Rice Kh [cm/sec]	KGS or Hvorslev Kh [cm/sec]	Geomean Kh [cm/sec]
PZ-64I Test 1	Saprolite/PWR	Pneumatic	67.30	38.42	40.95	59.00	69.00	69.30	0.036	0.039	0.037	1.3E-05	1.4E-05	1.3E-05
PZ-65I Test 1	Saprolite/PWR	Pneumatic	67.30	36.40	40.63	59.00	69.00	69.30	0.407	0.406	0.406	1.4E-04	1.4E-04	1.4E-04
PZ-66I Test 1	Saprolite/PWR	Pneumatic	66.30	36.25	40.09	58.00	68.00	68.30	0.207	0.238	0.222	7.3E-05	8.4E-05	7.8E-05
PZ-66I Test 2		Pneumatic	66.30	36.25	39.95	58.00	68.00	68.30	0.207	0.237		7.3E-05	8.3E-05	
PZ-67 Test 1	Saprolite	Pumping	36.30	30.10	33.08	28.00	38.00	38.30	0.027	0.028	0.007	9.7E-06	9.8E-06	2.4E-06
PZ-67 Test 2		Pumping	36.30	30.60	34.26	28.00	38.00	38.30	0.003	0.005		9.8E-07	1.9E-06	
PZ-67 Test 3		Pumping	36.30	30.19	38.06	28.00	38.00	38.30	0.002	0.004		7.9E-07	1.5E-06	

Notes:

- Ho** Observed initial displacement (change in water level from static)
- H** Static water column height
- b** Saturated thickness of aquifer. If bottom of aquifer is unknown set b=bottom of well.
- Kv/Kh** Ratio of vertical to horizontal hydraulic conductivity
- d** Depth to top of well screen - this is the length from the water level (or top confining unit) to the top of the screen.
- L** Length of well screen
- T** Transducer Depth below the water table
- r(c)** Inside radius of well casing
- r(eq)** Radius of downhole equipment
- r(w)** Radius of well open or perforated interval
- r(sk)** Outside radius of well skin disturbed zone enveloping filter pack
- bTOC** Below Top Of Casing
- DTW** Depth To Water



1. For tests in which pumping was performed in lieu of applying pressurized gas, depth to water after pressure release refers to the depth after pumping is stopped.

Table 4
Summary of Soil Total Metals
Plant Branch AP-BCD, Putnam County, Georgia

Well ID	PZ-64I	PZ-65I	PZ-66I
Sample Date	11/7/2022	10/11/2022	10/6/2022
Analysis^(1,2)			
Antimony	< 0.8	< 0.8	< 0.8
Arsenic	1	0.7	1.1
Barium	1100	540	930
Beryllium	2	2	2
Cadmium	0.13	0.12	0.08
Chromium	53	92	70
Cobalt	20	15	6
Iron	21000	46000	29000
Lead	24	17	35
Lithium	13	13	13
Manganese	660	790	430
Molybdenum	0.4	0.4	3.2
Selenium	< 0.7	< 0.7	< 0.7
Thallium	0.56	0.43	0.61

Notes:

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

(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of microgram per gram (µg/g)

(2) Metals were analyzed by EPA Method 6010D, 6020B, a 7470A, anions were analyzed by EPA Method 300.0

Table 5
Summay of Whole Rock Analysis
Plant Branch AP-BCD, Putnam County, Georgia

Well ID	PZ-64I	PZ-65I	PZ-66I	Units
Sample Date	11/7/2022	10/11/2022	10/6/2022	
Analysis ^(1,2)				
Al ₂ O ₃	17.9	17	16.2	%
CaO	0.99	3.91	0.51	%
Cr ₂ O ₃	0.02	0.07	0.03	%
Fe ₂ O ₃	2.75	8.01	3.57	%
K ₂ O	3.9	2.6	3.94	%
LOI	4.48	5.17	4.74	%
MgO	0.92	4.06	0.7	%
MnO	0.08	0.13	0.05	%
Na ₂ O	1.96	1.47	1.19	%
P ₂ O ₅	0.04	0.06	0.05	%
SiO ₂	66	56.2	67.7	%
TiO ₂	0.34	0.54	0.53	%
V ₂ O ₅	0.01	0.03	< 0.01	%
Sum	99.4	99.3	99.2	%

Notes:

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

(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of microgram per gram (µg/g)

(2) Metals were analyzed by EPA Method 6010D, 6020B, a 7470A, anions were analyzed by EPA Method 300.0

Table 6
Summary of Groundwater Analytical Data
Plant Branch AP-BCD, Putnam County, Georgia

Well ID:	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	
Sample Date:	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/25/2022	8/24/2022	8/24/2022	8/25/2022	8/25/2022	8/23/2022	8/24/2022	8/25/2022	
Parameter ^(1,2,3)																		
APPENDIX III	Boron	0.00532 J	0.00592 J	0.00538 J	< 0.0052	< 0.0052	< 0.0052	0.00653 J	0.0498	1.38	1.03	1.13	2.15	1.07	0.0458	0.547	0.406	1.56
	Calcium	4.65	13.9	18.2	14.3	3.97	6.09	15.8	8.09	51.5	64	61	316	48.5	33.5	323	215	38.3
	Chloride	2.18	2.02	3.59	3.64	2.39	5.46	2.50	3.16	5.38	4.65	5.84	4.91	3.96	14.9	4.49	15.8	6.27
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.129	0.151	0.157	0.186	0.234	0.103	0.318	0.138	0.166	< 0.033	0.497	0.157
	Sulfate	0.452	5.66	0.521	2.21	0.479	0.636	1.84	24.4	158	176	298	935	254	114	1,410	1,400	142
	TDS	45	117	101	107	52	55	104	103	315	311	383	1,540	437	248	2,060	1,990	296
APPENDIX IV	Antimony	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0241	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	Arsenic	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.00283 J	< 0.002	< 0.002	0.00228 J	0.00250 J	< 0.002
	Barium	0.012	0.00954	0.0379	0.0241	0.014	0.0607	0.0602	0.0573	0.0259	0.0161	0.0175	0.0389	0.0231	0.0574	0.0285	0.0166	0.0179
	Beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.000845	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00831	< 0.0002
	Cadmium	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.00818	< 0.0003
	Chromium	0.00908 J	< 0.003	0.00435 J	0.00647 J	0.0143	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
	Cobalt	0.000844 J	0.000767 J	< 0.0003	0.000553 J	< 0.0003	< 0.0003	< 0.0003	0.000308 J	0.00342	0.0079	0.0066	0.00163	< 0.0003	0.00357	< 0.0003	1.42	< 0.0003
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.129	0.151	0.157	0.186	0.234	0.103	0.318	0.138	0.166	< 0.033	0.497	0.157
	Lead	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	Lithium	< 0.003	0.0262	< 0.003	< 0.003	0.00314 J	< 0.003	0.00451 J	0.00792 J	< 0.003	< 0.003	0.00304 J	0.0238	0.00430 J	< 0.003	0.0474	0.0428	0.0162
	Mercury	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067
	Molybdenum	< 0.0002	0.0024	< 0.0002	0.00151	< 0.0002	< 0.0002	0.000413 J	< 0.0002	0.00105	< 0.0002	< 0.0002	0.00141	< 0.0002	0.000424 J	0.000296 J	< 0.0002	0.000471 J
	Comb. Radium 226/228	0.531 U	1.70 U	0.735 U	2.3	0.203 U	1.69 U	0.558 U	1.59 U	1.90 U	1.79 U	1.97	3.26	1.32 U	2.44	3.74	1.87 U	4.97
Selenium	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.218	< 0.0015	< 0.0015	0.00176 J	< 0.0015	
Thallium	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	
GEOCHEM	Alkalinity (Bicarbonate as CaCO3)	32.6	62.4	73.8	72.8	58.2	32	65.8	30.4	75.6	33.4	< 1.45	132	30.2	43.4	28.4	9.4	57.2
	Alkalinity (Carbonate as CaCO3)	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45
	Alkalinity (total) as CaCO3	32.6	62.4	73.8	72.8	58.2	32	65.8	30.4	75.6	33.4	< 1.45	132	30.2	43.4	28.4	9.4	57.2
	Iron	0.0763 J	0.183	0.151	< 0.033	0.0701 J	< 0.033	< 0.033	0.114	0.193	0.0361 J	24.8	1.41	< 0.033	0.166	0.101	0.2	1.16
	Magnesium	4.86	8.82	8.51	10.4	4.06	8.53	4	4.69	21.4	3.53	7.83	4.73	30.9	5.73	17.9	125	151
	Manganese	0.0391	0.0134	0.014	< 0.001	0.00329 J	0.00103 J	0.00506	0.036	1.68	0.674	1.2	1.15	0.0107	0.302	0.0103	83.4	0.601
	Potassium	0.439	5.88	0.635	0.909	0.685	2.55	3.37	2.52	4.2	5.03	10.2	6.13	2.25	3.19	11.8	11.4	4.96
Sodium	3.36	5.73	4.03	4.93	2.44	5.41	10.3	9.81	16.7	14.6	17.5	30.5	26.6	14.5	42.5	51.7	19.2	
FIELD	DO (Field)	3	0.91	1.63	5.47	7.04	6.96	2.56	4.74	0.07	1.73	0.09	1	2.79	0.24	0.3	0.23	0.28
	Flow Rate	225	125	150	275	220	300	100	125	300	250	300	250	170	225	150	250	250
	Oxidation-reduction potential	68.3	81.8	74.7	64.7	77	140.6	119.2	90.2	126.2	111.1	87.1	102.6	122.1	77.7	45	180.6	-39
	Temp (Field)	20.61	20.93	20.09	18.97	20.04	21.51	23.72	26.08	20.09	20.3	21.1	21.24	20.27	21.91	23.61	21.8	20.51
	EC (field)	55.77	118.47	134.88	141.26	56.92	74.95	131.58	98.56	422.59	447.74	479	1589.2	574.39	272.83	1647.4	1552.8	323.93
	pH (Field)	5.95	6.67	6.36	6.24	6.51	5.9	6.39	5.65	6.11	6.03	4.39	6.38	6.06	5.74	5.61	5.01	6.21
Turbidity	0.48	1.22	3	3.75	1.71	1	1.3	3.68	1.6	1.45	0.98	4.27	0.88	2.84	1.42	0.36	0.52	

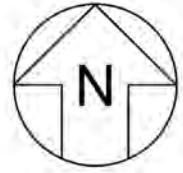
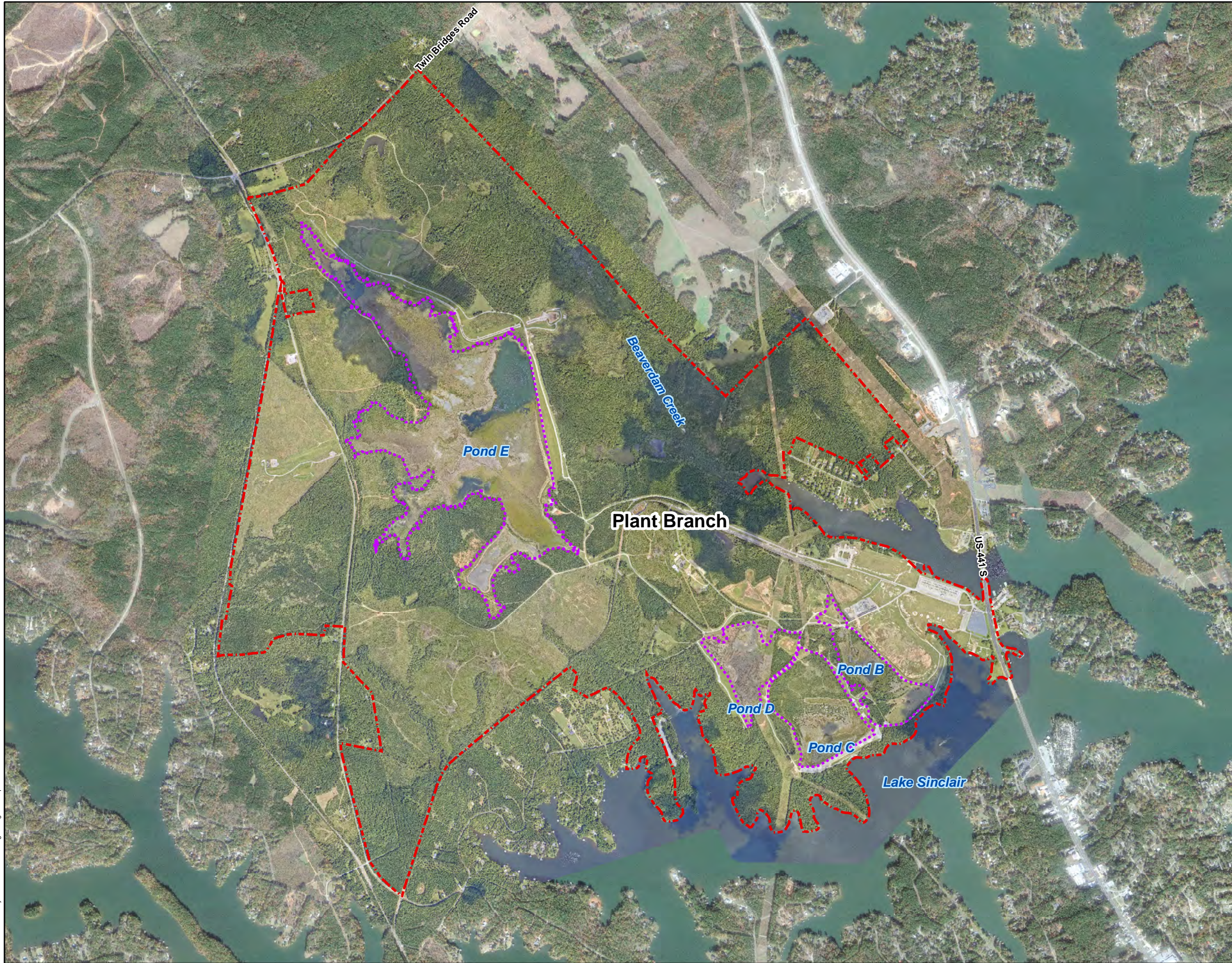
Notes:
 -- = Parameter was not analyzed
 < = Indicates the parameter was not detected above the analytical method detection limit (MDL).
 J = Indicates the parameter was estimated a detected between the MDL a the reporting limit (RL).
 TDS = total dissolved solids
 U = Indicates the parameter was not 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. (sta ard units) a combined radium reported as picocuries per liter (pCi/L).
 (2) Metals were analyzed by EPA Method 6010D, 6020B, a 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540-2011, a 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 6
Summary of Groundwater Analytical Data
Plant Branch AP-BCD, Putnam County, Georgia

Well ID:	PZ-44	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-64I	PZ-64I	PZ-65I	PZ-66I	PZ-67	
Sample Date:	8/25/2022	8/25/2022	8/24/2022	8/24/2022	8/24/2022	8/25/2022	8/24/2022	8/25/2022	8/24/2022	8/24/2022	8/25/2022	8/25/2022	10/12/2022	11/7/2022	10/11/2022	10/11/2022	10/6/2022	
Parameter ^(1,2,3)																		
APPENDIX III	Boron	1.59	0.278	0.00563 J	0.459	0.036	0.496	0.464	0.055	0.293	0.277	0.473	0.672	0.0152	--	0.0299	0.115	--
	Calcium	27.2	210	7.94	197	118	53	146	267	281	214	104	45.1	320	--	230	200	--
	Chloride	6.28	26.2	4.58	9.64	17.5	8.41	10.7	53	26.7	19.2	9.97	6.15	55.3	--	48.7	10.8	--
	Fluoride	0.184	0.106	0.131	0.148	0.318	0.235	1.09	1.8	1.32	0.103	< 0.033	0.235	0.0781 J	--	1.51	0.0601 J	--
	Sulfate	47	1,060	0.872	1,240	377	294	840	2,900	1,770	1,800	571	234	2,440	--	2,520	1,770	--
	TDS	167	1,750	90	1,740	715	554	1,380	4,370	2,830	2,400	918	419	3,780	--	3,790	2,800	--
APPENDIX IV	Antimony	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001	< 0.001	--
	Arsenic	< 0.002	0.00235 J	< 0.002	0.00222 J	0.00308 J	< 0.002	0.00245 J	0.0221	0.00358 J	0.00295 J	< 0.002	< 0.002	0.00896	--	0.0201	0.00489 J	--
	Barium	0.056	0.0257	0.0223	0.0154	0.0584	0.0219	0.0181	0.0121 J	0.0226	0.0133	0.0259	0.023	0.0543	--	0.026	0.0597	--
	Beryllium	< 0.0002	0.000269 J	< 0.0002	< 0.0002	< 0.0002	0.000393 J	0.0335	0.1	0.0703	0.00198	0.000219 J	< 0.0002	0.0006	--	0.0159	< 0.0002	--
	Cadmium	< 0.0003	< 0.0003	< 0.0003	0.00478	< 0.0003	< 0.0003	0.0046	0.00536	0.017	0.000859 J	0.000618 J	< 0.0003	< 0.0003	--	0.000606 J	< 0.0003	--
	Chromium	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.00324 J	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	--	0.00405 J	< 0.003	--
	Cobalt	< 0.0003	0.506	0.00193	0.0239	0.000306 J	0.0194	0.503	1.46	3.57	0.562	0.37	0.0232	9.05	8.97	0.481	0.364	--
	Fluoride	0.184	0.106	0.131	0.148	0.318	0.235	1.09	1.8	1.32	0.103	< 0.033	0.235	0.0781 J	--	1.51	0.0601 J	--
	Lead	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000894 J	< 0.0025	< 0.0005	0.00113 J	< 0.0005	< 0.0005	< 0.0005	--	0.00132 J	< 0.0005	--
	Lithium	0.00652 J	0.0255	< 0.003	0.0222	0.00420 J	0.0231	0.0488	0.164	0.101	0.00913 J	0.00617 J	0.00509 J	0.0181	--	0.102	0.0193	--
	Mercury	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	--	0.000088 J	< 0.000067	--
	Molybdenum	< 0.0002	0.00109	< 0.0002	0.000313 J	0.00171	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.000286 J	0.000741 J	0.000432 J	--	< 0.0002	0.000918 J	--
	Comb. Radium 226/228	1.60 U	2.26	1.20 U	0.625 U	3.33	0.773 U	1.16 U	3.50	2.91	1.88 U	1.52 U	2.14	--	--	0.451 U	1.36 U	--
	Selenium	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.00348 J	0.113	0.00417 J	0.0051	< 0.0015	< 0.0015	0.0171	--	0.0377	0.00393 J	--
Thallium	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.003	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	--	0.00139 J	< 0.0006	--	
GEOCHEM	Alkalinity (Bicarbonate as CaCO3)	78	57	64.2	64.6	22	27	< 1.45	< 1.45	2 J	16.8	19.2	32.8	48	--	< 1.45	68	--
	Alkalinity (Carbonate as CaCO3)	78	57	64.6	22	129	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	< 1.45	--	< 1.45	68	--
	Alkalinity (total) as CaCO3	78	57	64.2	22	129	27	< 1.45	< 1.45	2 J	16.8	19.2	32.8	48	--	< 1.45	68	--
	Iron	0.0537 J	3.62	< 0.033	0.093 J	2.89	1.35	48.9	448	0.533	0.532	1.03	2.04	1.98	--	445	25	--
	Magnesium	11.5	95.7	8.58	134	28.1	31.1	80	180	187	165	54.2	30.1	254	--	185	285	--
	Manganese	0.447	36.1	0.805	47.4	1.11	14.2	29.8	74.7	179	108	26.9	5.46	399	--	37.1	107	--
	Potassium	2.67	13.5	2.47	11.8	9.82	5.52	8.25	16.4	14.7	6.34	9.67	7.94	14.6	--	14.1	11	--
	Sodium	12.7	53.6	11.3	47.2	39.8	19	34.3	92	62.7	58.8	25.6	16.4	61.7	--	81.3	55.6	--
FIELD	DO (Field)	0.13	5.17	0.37	0.17	0.3	0.07	0.09	0.03	0.07	0.12	0.23	0.08	0.02	0.39	0.13	0	0.1
	Flow Rate	250	350	120	150	100	250	250	155	250	150	175	250	175	200	170	225	60
	Oxidation-reduction potential	90.3	56.1	178.3	175.3	-98.6	12	168.3	212.4	394	165.6	91.7	18.7	35.7	-4.7	136.3	32.9	132
	Temp (Field)	22.72	26.08	22.9	22.9	23.04	21.36	21.63	23.84	22.15	22.81	21.77	21.14	20.78	25.51	24.32	23.62	29.32
	EC (field)	196.67	1339.5	143.5	1630.5	843.49	552.37	1113.3	3130.4	2061.2	2084	956.56	489.12	2933.9	3039.9	2627.7	2816.1	3688
	pH (Field)	6.06	6.16	6.12	5.49	7.15	5.91	3.81	3.72	4.55	5.14	5.5	5.65	5.53	5.59	4.16	5.81	3.97
	Turbidity	0.52	25	1.9	1	4.8	2.76	2.22	4.4	1.14	4.5	2.1	1.2	4.41	4.69	4.8	4.31	4.88

Notes:
 -- = Parameter was not analyzed
 < = Indicates the parameter was not detected above the analytical method detection limit (MDL).
 J = Indicates the parameter was estimated a detected between the MDL a 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. (sta and units) a combined radium reported as picocuries per liter (pCi/L).
 (2) Metals were analyzed by EPA Method 6010D, 6020B, a 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540-2011, a 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.

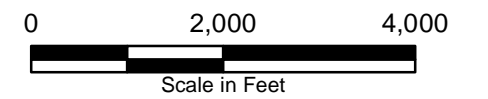
FIGURES



- LEGEND**
- - - Plant Branch Property Boundary
 - - - Approximate Ash Pond Boundary



- Notes:
1. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
 2. Property Boundary Provided by Southern Company Services.
 3. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



SITE LOCATION MAP

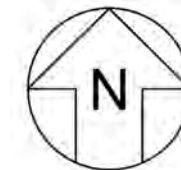
GEORGIA POWER COMPANY
 PLANT BRANCH AP-BCD
 PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
 consultants

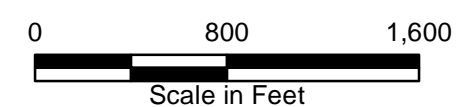
KENNESAW, GA FEBRUARY 2023

FIGURE
1



- LEGEND**
- + Detection Monitoring Well
 - + Horizontal Assessment Monitoring Well
 - + Vertical Assessment Monitoring Well
 - + Piezometer
 - + Angled Well Screen
 - + Surface Water
 - - - Plant Branch Property Boundary
 - - - Approximate Ash Pond Boundary

Notes:
 1. Property Boundary Provided by Southern Company Services.
 2. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



MONITORING WELL NETWORK AND SURFACE WATER LOCATION MAP

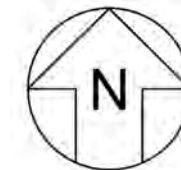
GEORGIA POWER COMPANY
 PLANT BRANCH AP-BCD
 PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA FEBRUARY 2023

FIGURE 2



- LEGEND**
- Detection Monitoring Well
 - Horizontal Assessment Monitoring Well
 - Vertical Assessment Monitoring Well
 - ⊕ Angled Well Screen
 - Surface Water
 - Groundwater Elevation Iso-Contour (August 2022)
 - Cadmium GWPS Iso-Concentration Contour (mg/L)
 - - - Plant Branch Property Boundary
 - ⋯ Approximate Ash Pond Boundary

- Notes:**
1. Concentration data from groundwater samples collected during the August 2022 semiannual monitoring event and subsequent October 2022 sampling event for PZ-64I, PZ-65I, and PZ-66I.
 2. Concentrations are reported in milligrams per liter (mg/L).
 3. Water level elevation recorded on August 22, 2022.
 4. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
 5. The Groundwater Protection Standards (GWPS) for cadmium is 0.005 mg/L.
 6. J - Estimated value.
 7. NS - Not Sampled.
 8. * - Data reported was not used to generate the iso-concentration contour.
 9. Property Boundary Provided by Southern Company Services.
 10. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



**ISO-CONCENTRATION MAP,
CADMIUM -
FALL 2022**

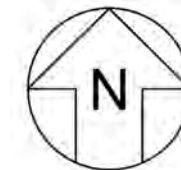
GEORGIA POWER COMPANY
PLANT BRANCH AP-BCD
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

KENNESAW, GA FEBRUARY 2023

**FIGURE
3**



- LEGEND**
- + Detection Monitoring Well
 - + Horizontal Assessment Monitoring Well
 - + Vertical Assessment Monitoring Well
 - + Angled Well Screen
 - + Surface Water
 - Groundwater Elevation Iso-Contour (August 2022)
 - Cobalt GWPS Iso-Concentration Contour (mg/L)
 - Inferred Cobalt GWPS Iso-Concentration Contour (mg/L)
 - - - Plant Branch Property Boundary
 - ⋯ Approximate Ash Pond Boundary

- Notes:**
1. Concentration data from groundwater samples collected during the August 2022 semiannual monitoring event and subsequent October 2022 sampling event for PZ-641, PZ-651, and PZ-661. PZ-641 was resampled in November 2022.
 2. Concentrations are reported in milligrams per liter (mg/L).
 3. Water level elevation recorded on August 22, 2022.
 4. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
 5. The Groundwater Protection Standards (GWPS) for cobalt is 0.0135 mg/L.
 6. J - Estimated value.
 7. * - Data reported was not used to generate the iso-concentration contour.
 8. Property Boundary Provided by Southern Company Services.
 9. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.



**ISO-CONCENTRATION MAP,
COBALT -
FALL 2022**

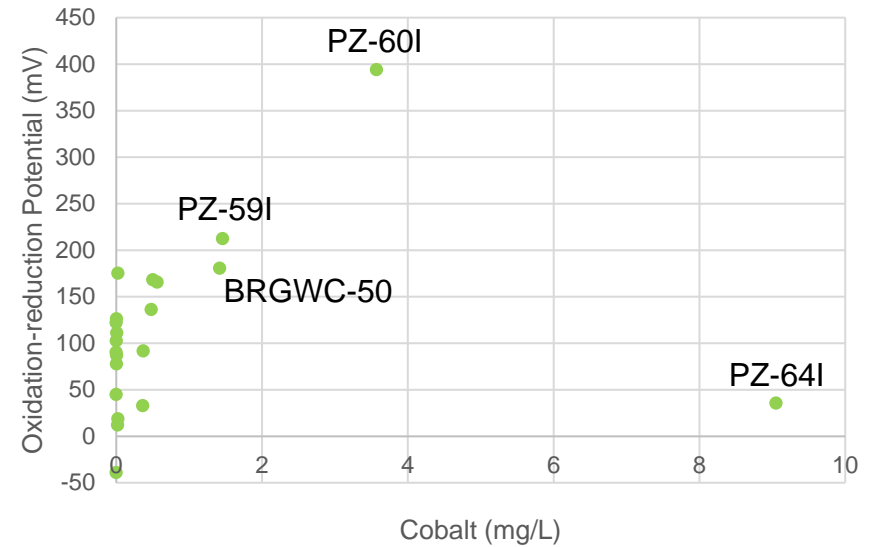
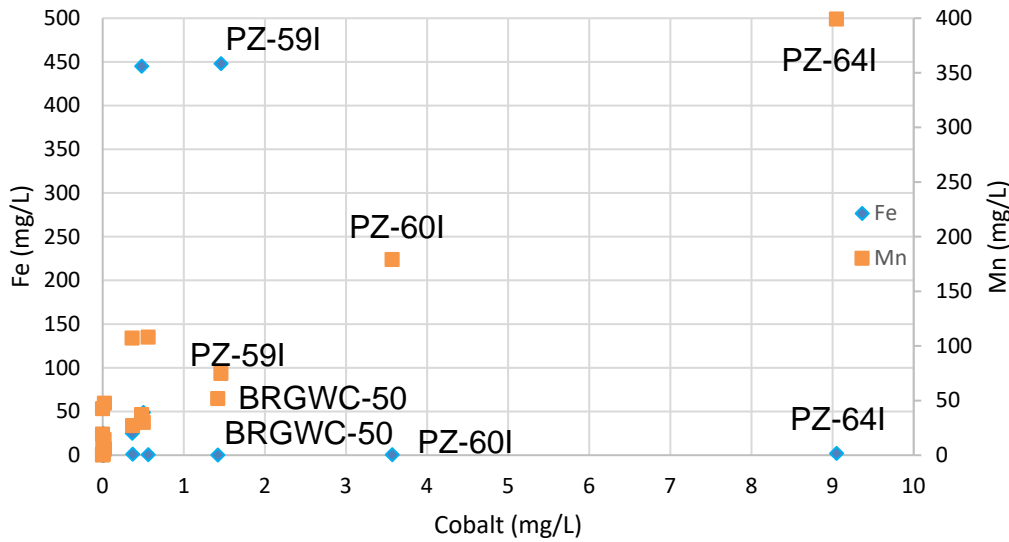
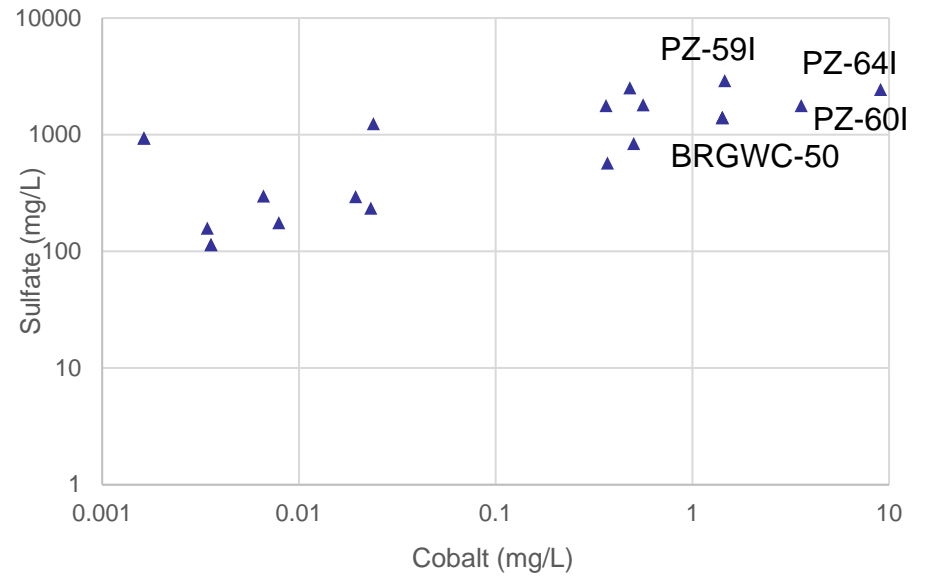
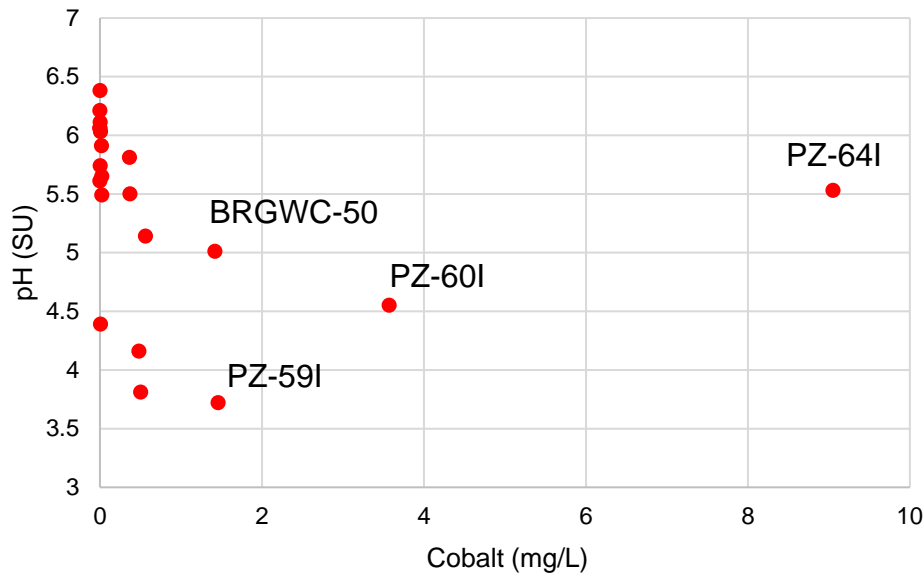
GEORGIA POWER COMPANY
PLANT BRANCH AP-BCD
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

KENNESAW, GA FEBRUARY 2023

Semiannual Remedial Selection and Design Progress Report



Notes:

1. Groundwater samples collected during the fall semi-annual sampling event between 8/23/2022 and 11/7/2022.
2. Fe = iron; Mn = manganese
3. mg/L = milligrams per liter

Cobalt Correlations: pH, ORP, Sulfate, Iron and Manganese

Georgia Power Company
Plant Branch AP-BCD
Putnam County, Georgia

Prepared For:



Prepared By:



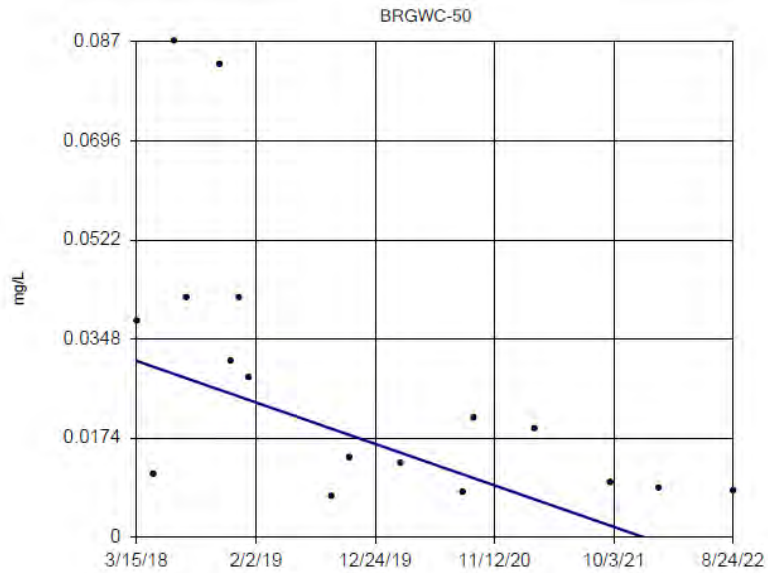
Kennesaw, GA

February 2023

Figure

5

Cadmium



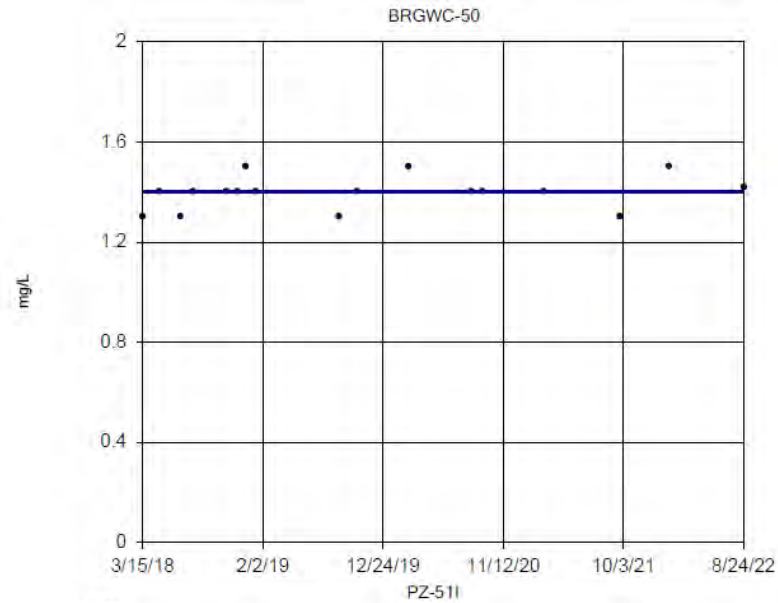
n = 17

Slope = -0.008185 units per year.

Mann-Kendall statistic = -69
critical = -63

Decreasing trend significant at 99% confidence level ($\alpha = 0.005$ per tail).

Cobalt

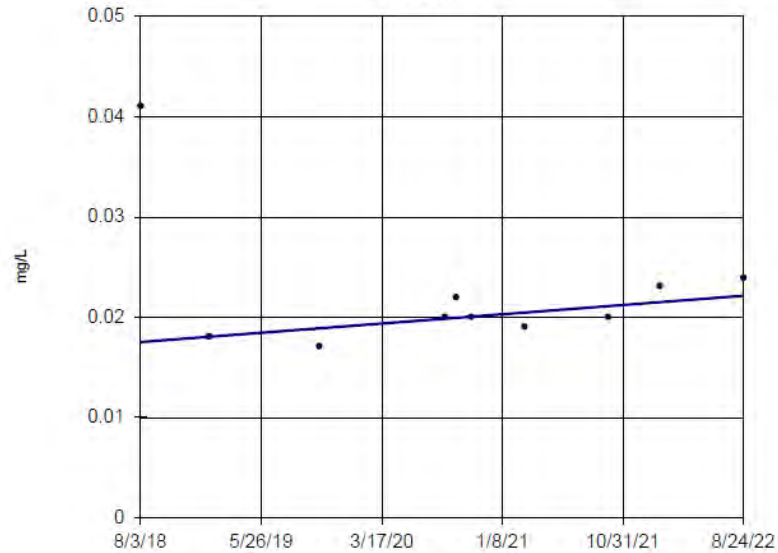


n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 33
critical = 63

Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).



n = 10

Slope = 0.001128 units per year.

Mann-Kendall statistic = 12
critical = 30

Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Notes:

1. Groundwater trends completed by Groundwater Stats Consulting using groundwater data collected for the full monitoring period through the August 2022 semiannual sampling event.
2. Trends shown are in wells where statistically significant levels (SSLs) have been identified.
3. mg/L = milligrams per liter

Cadmium and Cobalt Concentration Trends

Georgia Power Company
Plant Branch AP-BCD
Putnam County, Georgia

Prepared For:



Prepared By:



Kennesaw, GA

February 2023

Figure

6

APPENDIX A

Potable Well Survey

Plant Branch

1078-1074 Milledgeville Rd
Eatonton, GA 31024

Inquiry Number: 07204643.1r
December 15, 2022

The EDR GeoCheck® Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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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 BRANCH
1078-1074 MILLEDGEVILLE RD
EATONTON, GA 31024

TARGET PROPERTY COORDINATES

Latitude (North):	33.202258 - 33° 12' 8.13"
Longitude (West):	83.322819 - 83° 19' 22.15"
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	283479.7
UTM Y (Meters):	3675922.0
Elevation:	382 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33083-B3 LAKE SINCLAIR WEST, GA
Version Date:	1972

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

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

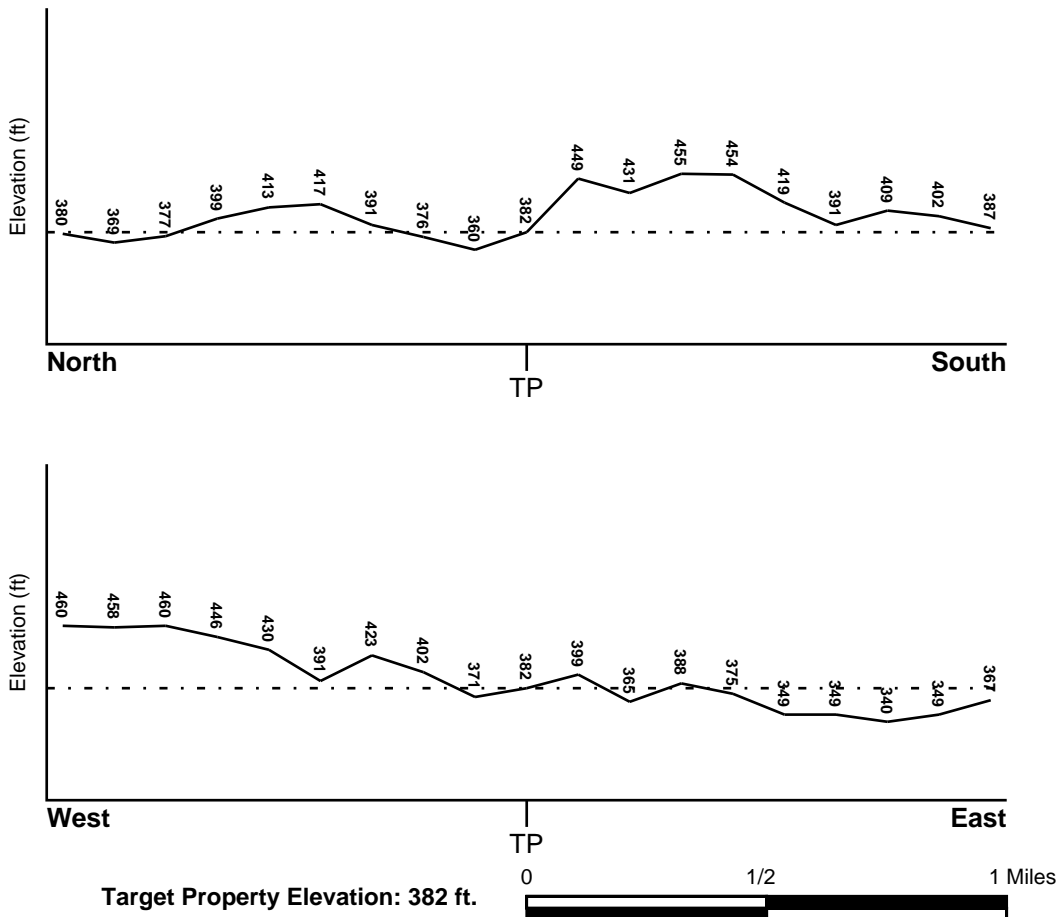
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This 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.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

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>
13009C0050D	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
Not Reported	

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
LAKE SINCLAIR WEST	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: Pennsylvanian
Series: Felsic paragneiss and schist
Code: mm1 (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

Category: Metamorphic Rocks

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: CECIL

Soil Surface Texture: sandy clay 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: HIGH

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	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.50 Min: 4.50
2	7 inches	11 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
3	11 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
4	50 inches	75 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

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: sandy loam
loam
fine sandy loam

Surficial Soil Types: sandy loam
loam
fine sandy loam

Shallow Soil Types: clay
sandy clay
gravelly - loam

Deeper Soil Types: loamy fine sand
sandy loam
weathered bedrock

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>
A1	USGS40000262392	1 - 2 Miles NNE
A2	USGS40000262391	1 - 2 Miles NNE
3	USGS40000262403	1 - 2 Miles NNE
B4	USGS40000262292	1 - 2 Miles WSW
5	USGS40000262254	1 - 2 Miles SW
B6	USGS40000262290	1 - 2 Miles WSW
9	USGS40000262386	1 - 2 Miles NE
10	USGS40000262278	1 - 2 Miles WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

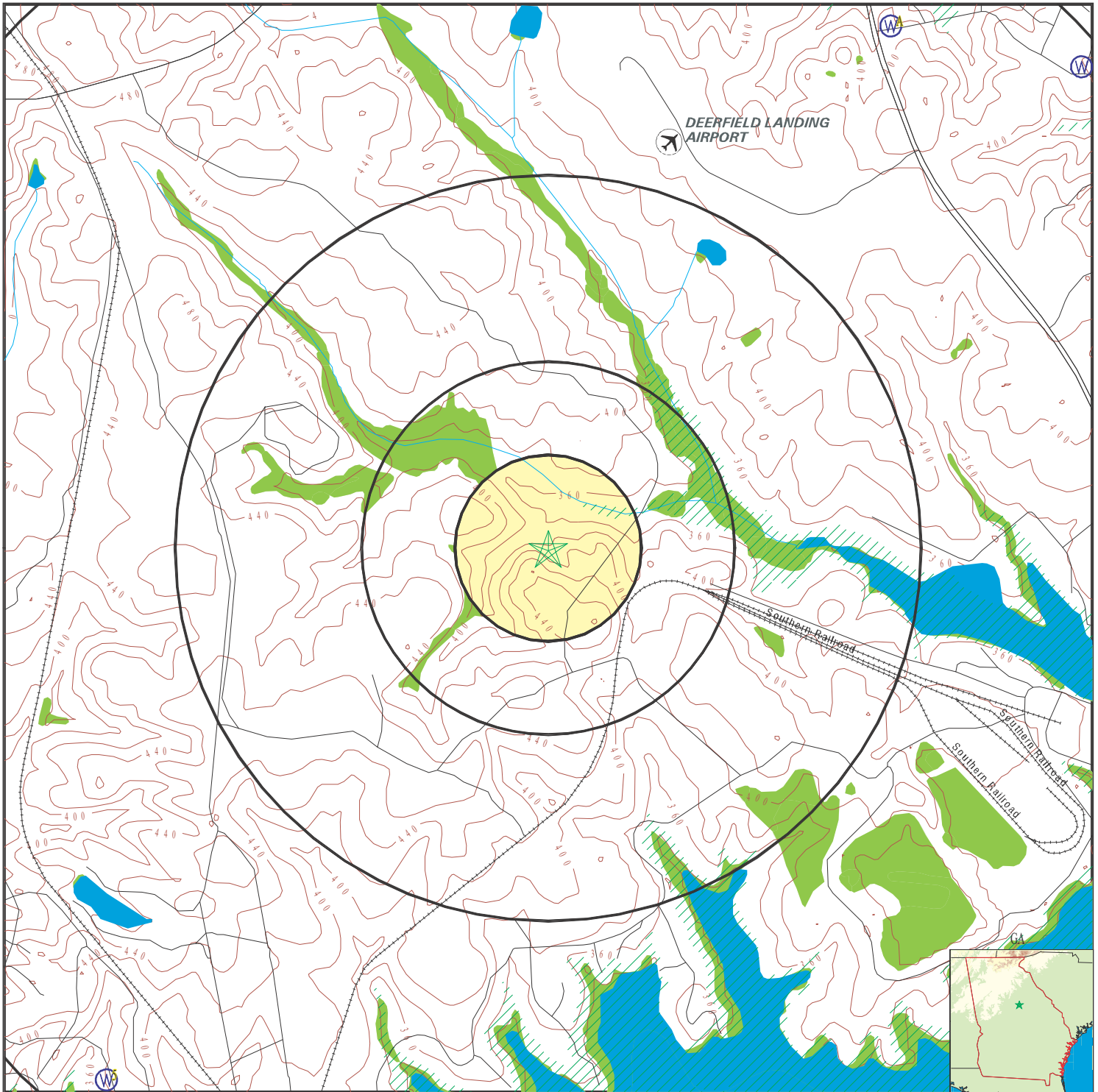
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
C7	GA2370006	1 - 2 Miles SSW
C8	GA2370008	1 - 2 Miles SSW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

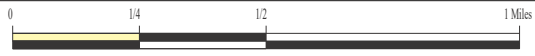
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 07204643.1r



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Wildlife Areas
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory



SITE NAME: Plant Branch
 ADDRESS: 1078-1074 Milledgeville Rd
 Eatonton GA 31024
 LAT/LONG: 33.202258 / 83.322819

CLIENT: Geosyntec Consultants
 CONTACT: Anthony Szwast
 INQUIRY #: 07204643.1r
 DATE: December 15, 2022 10:21 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

A1
NNE
1 - 2 Miles
Higher

FED USGS USGS40000262392

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z016	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

A2
NNE
1 - 2 Miles
Higher

FED USGS USGS40000262391

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z017	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

3
NNE
1 - 2 Miles
Lower

FED USGS USGS40000262403

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z013	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

B4
WSW
1 - 2 Miles
Higher

FED USGS USGS40000262292

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z021	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

**5
SW
1 - 2 Miles
Lower**

FED USGS USGS40000262254

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z020	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

**B6
WSW
1 - 2 Miles
Higher**

FED USGS USGS40000262290

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z023	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

**C7
SSW
1 - 2 Miles
Lower**

FRDS PWS GA2370006

Epa region:	04	State:	GA
Pwsid:	GA2370006	Pwsname:	PINE FOREST SUBDIVISION
Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13237
Status:	Closed	Retpopsrvd:	1003
Pwssvconn:	388	Psource longname:	Groundwater
Pwstype:	CWS	Owner:	Private
Contact:	ARCHEBELLE, DONNA	Contactorgname:	ARCHEBELLE, DONNA
Contactphone:	706-485-5252	Contactaddress1:	POB 3639
Contactaddress2:	Not Reported	Contactcity:	EATONTON
Contactstate:	GA	Contactzip:	31024-3639
Pwsactivitycode:	I		
Pwsid:	GA2370006	Facid:	15132
Facname:	PARCEL B/451 AVANT RD PLANT #4		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		
Pwsid:	GA2370006	Facid:	16589
Facname:	160 BEAR CREEK EAST PLANT #5		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		
Pwsid:	GA2370006	Facid:	16646
Facname:	143 EDGEWATER DRIVE PLANT #6		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		
Pwsid:	GA2370006	Facid:	3517
Facname:	L525/308 LITTLE RIVER TRAILPLANT #3		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		
PWS ID:	GA2370006	PWS name:	PINE FOREST SUBDIVISION
Address:	POB 390	Care of:	GREAT SOUTHEAST UTILITY CO.
City:	GREENSBORO	State:	GA
Zip:	306420390	Owner:	PINE FOREST SUBDIVISION
Source code:	Ground water	Population:	629
PWS ID:	GA2370006	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	PINE FOREST SUBDIVISION
PWS type code:	C	Retail population served:	1003
Contact:	ARCHEBELLE, DONNA	Contact address:	663 GODFREY RD.
Contact address:	EATONTON	Contact city:	GA
Contact state:	31	Contact zip:	706-485-52
Contact telephone:	Not Reported		
County:	PUTNAM	Source:	Ground water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, POST
Population:	629		
PWS ID:	GA2370006	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00000564	System name:	PINE FOREST SUBDIVISION
System address:	GREAT SE UTILITY COMPANY	System address:	POB 390
System city:	GREENSBORO	System state:	GA
System zip:	306420390		
Population served:	501 - 1,000 Persons	Treatment:	Treated
Latitude:	335554	Longitude:	0832024
Latitude:	331044	Longitude:	0832025
State:	GA	Latitude degrees:	33
Latitude minutes:	10	Latitude seconds:	44.0000
Longitude degrees:	83	Longitude minutes:	20
Longitude seconds:	25.0000		
State:	GA	Latitude degrees:	33
Latitude minutes:	19	Latitude seconds:	39.0000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Longitude degrees: 83
 Longitude seconds: 6.0000

Longitude minutes: 21

Violation id: 20101
 State: GA
 Contamination code: 1040
 Violation code: 03
 Rule code: 331
 Violation measur: 0
 State mcl: 0
 Cmp edt: 12/31/2000

Orig code: S
 Violation Year: 2000
 Contamination Name: Nitrate
 Violation name: Monitoring, Regular
 Rule name: Nitrates
 Unit of measure: Not Reported
 Cmp bdt: 01/01/2000

Violation id: 20301
 State: GA
 Contamination code: 5000
 Violation code: 52
 Rule code: 350
 Violation measur: Not Reported
 State mcl: Not Reported
 Cmp edt: Not Reported

Orig code: S
 Violation Year: 1997
 Contamination Name: Lead and Copper Rule
 Violation name: Follow-up Or Routine LCR Tap M/R
 Rule name: LCR
 Unit of measure: Not Reported
 Cmp bdt: 10/01/1997

Violation id: 20401
 State: GA
 Contamination code: 5000
 Violation code: 52
 Rule code: 350
 Violation measur: Not Reported
 State mcl: Not Reported
 Cmp edt: Not Reported

Orig code: S
 Violation Year: 2000
 Contamination Name: Lead and Copper Rule
 Violation name: Follow-up Or Routine LCR Tap M/R
 Rule name: LCR
 Unit of measure: Not Reported
 Cmp bdt: 10/01/2000

Violation id: 20604
 State: GA
 Contamination code: 7000
 Violation code: 71
 Rule code: 420
 Violation measur: Not Reported
 State mcl: Not Reported
 Cmp edt: Not Reported

Orig code: S
 Violation Year: 2004
 Contamination Name: Consumer Confidence Rule
 Violation name: CCR Complete Failure to Report
 Rule name: CCR
 Unit of measure: Not Reported
 Cmp bdt: 07/01/2004

Violation id: 20705
 State: GA
 Contamination code: 5000
 Violation code: 52
 Rule code: 350
 Violation measur: Not Reported
 State mcl: Not Reported
 Cmp edt: Not Reported

Orig code: S
 Violation Year: 2003
 Contamination Name: Lead and Copper Rule
 Violation name: Follow-up Or Routine LCR Tap M/R
 Rule name: LCR
 Unit of measure: Not Reported
 Cmp bdt: 10/01/2003

Violation id: 20805
 State: GA
 Contamination code: 7000
 Violation code: 71
 Rule code: 420
 Violation measur: Not Reported
 State mcl: Not Reported
 Cmp edt: Not Reported

Orig code: S
 Violation Year: 2005
 Contamination Name: Consumer Confidence Rule
 Violation name: CCR Complete Failure to Report
 Rule name: CCR
 Unit of measure: Not Reported
 Cmp bdt: 07/01/2005

Violation id: 21008
 State: GA
 Contamination code: 7000
 Violation code: 71
 Rule code: 420

Orig code: S
 Violation Year: 2008
 Contamination Name: Consumer Confidence Rule
 Violation name: CCR Complete Failure to Report
 Rule name: CCR

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	Not Reported		
Violation id:	21109	Orig code:	S
State:	GA	Violation Year:	2009
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2009
Cmp edt:	Not Reported		
Violation id:	21209	Orig code:	S
State:	GA	Violation Year:	2009
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2009
Cmp edt:	07/31/2009		
Violation ID:	20101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St No addtl Formal Action needed		
Enforcement Category:	Informal		
Violation ID:	20101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	20301	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	20301	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	20401	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	07/22/2003
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	20401	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	07/24/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20604	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/23/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20604	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/01/2004

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/27/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/14/2005
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/01/2004
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/01/2004
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/08/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/01/2005
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	21008	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/09/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	21109	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	08/05/2009
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	21109	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	10/07/2009
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	21209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	08/19/2009
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	21209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	08/19/2009
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20101
Contaminant:	NITRATE	Violation type:	3
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	12/31/2000 0:00:00
Enforcement date:	9/6/2001 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	0		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20101
Contaminant:	NITRATE	Violation type:	3
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	12/31/2000 0:00:00
Enforcement date:	9/6/2001 0:00:00	Enforcement action:	State Public Notif Received

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation measurement:	0		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20101
Contaminant:	NITRATE	Violation type:	3
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	12/31/2000 0:00:00
Enforcement date:	9/6/2001 0:00:00		
Enforcement action:	State No Additional Formal Action Needed		
Violation measurement:	0		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20301
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/1997 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	9/20/2001 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20401
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2000 0:00:00	Compliance end date:	7/24/2001 0:00:00
Enforcement date:	7/22/2003 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20401
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2000 0:00:00	Compliance end date:	7/24/2001 0:00:00
Enforcement date:	7/24/2001 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20604
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2004 0:00:00	Compliance end date:	7/23/2004 0:00:00
Enforcement date:	7/1/2004 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20604
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2004 0:00:00	Compliance end date:	7/23/2004 0:00:00
Enforcement date:	7/23/2004 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20705
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2003 0:00:00	Compliance end date:	7/27/2004 0:00:00
Enforcement date:	12/1/2004 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20705
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2003 0:00:00	Compliance end date:	7/27/2004 0:00:00
Enforcement date:	12/1/2004 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20705
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Compliance start date:	10/1/2003 0:00:00	Compliance end date:	7/27/2004 0:00:00
Enforcement date:	7/14/2005 0:00:00	Enforcement action:	State Public Notif Received
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20705
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2003 0:00:00	Compliance end date:	7/27/2004 0:00:00
Enforcement date:	7/27/2004 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	7/8/2005 0:00:00
Enforcement date:	7/1/2005 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	7/8/2005 0:00:00
Enforcement date:	7/8/2005 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	21008
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	Not Reported		

C8
SSW
1 - 2 Miles
Lower

FRDS PWS GA2370008

Epa region:	04	State:	GA
Pwsid:	GA2370008	Pwsname:	TALL TIMBERS-OAK OPENINGS
Cityserved:	Not Reported	Stateserved:	GA
Zipserved:	Not Reported	Fipscounty:	13237
Status:	Closed	Retpopsrvd:	733
Pwsvconn:	279	Psource longname:	Groundwater
Pwstype:	CWS	Owner:	Private
Contact:	ARCHEBELLE, DONNA	Contactorgname:	ARCHEBELLE, DONNA
Contactphone:	706-485-5252	Contactaddress1:	POB 3639
Contactaddress2:	Not Reported	Contactcity:	EATONTON
Contactstate:	GA	Contactzip:	31024-3639
Pwsactivitycode:	I		
Pwsid:	GA2370008	Facid:	15117
Facname:	WELLS 2 & 3 PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	GA2370008	Facid:	15126
Facname:	116 BLUEGILL RD/L#1 - WELL #5 PLANT	Facactivitycode:	A
Factype:	Treatment_plant	Trtprocess:	hypochlorination, post
Trtobjective:	disinfection		
Factypecode:	TP		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pwsid:	GA2370008	Facid:	21184
Facname:	308 BLUEGILL ROAD-LOT 215 WELL #6 PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		
PWS ID:	GA2370008	PWS name:	TALL TIMBERS-OAK OPENINGS
Address:	POB 390	Care of:	GREAT SOUTHEAST UTILITY CO.
City:	GREENSBORO	State:	GA
Zip:	306420390	Owner:	TALL TIMBERS-OAK OPENINGS
Source code:	Ground water	Population:	465
PWS ID:	GA2370008	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	County:	PUTNAM
Source:	Ground water	Treatment Objective:	DISINFECTION
Process:	HYPOCHLORINATION, POST	Population:	465
PWS ID:	GA2370008	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00000465	System name:	TALL TIMBERS-OAK OPENINGS
System address:	GREAT SE UTILITY COMPANY	System address:	POB 390
System city:	GREENSBORO	System state:	GA
System zip:	306420390		
Population served:	101 - 500 Persons	Treatment:	Treated
Latitude:	335554	Longitude:	0832024
Latitude:	331042	Longitude:	0832025
State:	GA	Latitude degrees:	33
Latitude minutes:	10	Latitude seconds:	42.0000
Longitude degrees:	83	Longitude minutes:	20
Longitude seconds:	25.0000		
Violation id:	10101	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/2000
Cmp edt:	12/31/2000		
Violation id:	10201	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/2000
Cmp edt:	12/31/2000		
Violation id:	10301	Orig code:	S
State:	GA	Violation Year:	1995
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/1995

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Cmp edt: Not Reported

Violation id:	10501	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2000
Cmp edt:	Not Reported		

Violation id:	10704	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2004
Cmp edt:	Not Reported		

Violation id:	10805	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2005
Cmp edt:	Not Reported		

Violation id:	10906	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2005
Cmp edt:	Not Reported		

Violation id:	11008	Orig code:	S
State:	GA	Violation Year:	2008
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	Not Reported		

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	9200002	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	COLIFORM (TCR)
Violation type:	Max Contaminant Level, Monthly (TCR)		
Violation start date:	070192	Violation end date:	073192
Violation period (months):	001	Violation awareness date:	Not Reported
Major violator:	Not Reported	Maximum contaminant level:	Not Reported
Number of required samples:	Not Reported	Number of samples taken:	Not Reported
Analysis method:	Not Reported	Analysis result:	Not Reported

Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	10/03/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St No addtl Formal Action needed		
Enforcement Category:	Informal		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	05/15/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	05/15/2001
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	10/03/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St No addtl Formal Action needed		
Enforcement Category:	Informal		
Violation ID:	10301	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	10501	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	07/22/2003
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	10501	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	08/17/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10704	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/01/2004
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10704	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/23/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/01/2005
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10805	Orig Code:	S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcemnt FY:	2005	Enforcement Action:	07/08/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/17/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/12/2006
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	02/07/2006
Enforcement Detail:	St Violation/Reminder Notice	Enforcement Category:	Informal
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	02/07/2006
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	11008	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/09/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

**9
NE
1 - 2 Miles
Higher**

FED USGS USGS40000262386

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z015	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

**10
WSW
1 - 2 Miles
Higher**

FED USGS USGS40000262278

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z022	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
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 PUTNAM County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level \geq 2 pCi/L and \leq 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 31024

Number of sites tested: 10

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.190 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

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, 2010 and 2015 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.

OTHER STATE DATABASE INFORMATION

A listing of Private Water Well locations

Georgia Department of Public Health

Telephone: (404) 657-2700

A listing of Private Water Well locations

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

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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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

STREET AND ADDRESS INFORMATION

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APPENDIX B

Analytical Laboratory Reports

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

22-November-2022

SiREM Laboratory

Attn : Jacques Smith

180B Market Place Blvd
 Knoxville, Tennessee
 37922, USA

Phone: 865-291-4695
 Fax:

Date Rec. : 12 October 2022
LR Report: CA19107-OCT22
Reference: Plant Branch
 SIREMLABUS. 02. 10. 8151

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

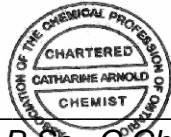
Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
Ag [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Al [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	98000	92000	91000	48000	74000	91000
As [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	1.0	0.7	1.1	1.0	0.6	0.9
Ba [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	1100	540	930	450	140	1000
Be [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	2	2	2	0.75	2	2
Bi [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.09	0.20	0.09	0.17	0.13	0.10
Ca [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	8100	25000	4300	15000	700	3900
Cd [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	0.13	0.12	0.08	0.15	0.02	0.05
Co [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	20	15	6	22	17	10
Cr [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	53	92	70	47	140	52
Cu [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	18	12	15	16	52	24
Fe [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	21000	46000	29000	49000	46000	21000
K [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	33000	19000	31000	15000	8600	31000
Li [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	13	13	13	14	17	11
Mg [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	5700	19000	5100	17000	8400	6000
Mn [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	660	790	430	840	650	460
Mo [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	0.4	0.4	3.2	0.7	0.3	0.5
Na [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	14000	13000	8700	4200	260	4100
Ni [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	16	64	21	34	29	14
P [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	150	190	200	1500	250	130
Pb [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	24	17	35	6	17	27
Sb [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 6	< 6	< 6	< 6	< 6	< 6
Sr [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	270	180	160	120	35	190
Ti [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	2200	2900	3900	6500	3100	2200
Tl [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	0.56	0.43	0.61	0.42	0.94	0.57

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - KOL 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA19107-OCT22

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
U [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	1.97	3.07	5.94	1.74	2.57	2.71
V [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	45	110	67	100	90	39
Y [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	23.2	25.2	18.4	31.7	21.5	23.6
Zn [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	59	78	81	98	76	48

Catharine Arnold

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

SGS Canada Inc.

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22-November-2022

SiREM Laboratory

Attn : Jacques Smith

180B Market Place Blvd
 Knoxville, Tennessee
 37922, USA

Phone: 865-291-4695
 Fax:

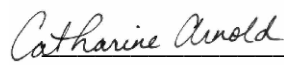

Date Rec. : 12 October 2022
LR Report: CA19110-OCT22
Reference: Plant Branch
 SIREMLABUS.02.10.8151

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: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
SiO2 [%]	19-Oct-22	19:03	24-Oct-22	09:51	66.0	56.2	67.7	57.3	62.7	68.1
Al2O3 [%]	19-Oct-22	19:03	24-Oct-22	09:51	17.9	17.0	16.2	17.2	17.6	16.5
Fe2O3 [%]	19-Oct-22	19:03	24-Oct-22	09:51	2.75	8.01	3.57	7.65	6.32	2.32
MgO [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.92	4.06	0.70	2.84	1.38	0.76
CaO [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.99	3.91	0.51	4.78	0.23	0.34
Na2O [%]	19-Oct-22	19:03	24-Oct-22	09:51	1.96	1.47	1.19	3.25	0.37	0.52
K2O [%]	19-Oct-22	19:03	24-Oct-22	09:51	3.90	2.60	3.94	1.69	2.61	4.98
TiO2 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.34	0.54	0.53	1.14	0.76	0.26
P2O5 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.04	0.06	0.05	0.35	0.08	0.02
MnO [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.08	0.13	0.05	0.13	0.07	0.03
Cr2O3 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.02	0.07	0.03	0.03	0.04	0.03
V2O5 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.01	0.03	< 0.01	0.03	0.02	< 0.01
LOI [%]	19-Oct-22	19:03	24-Oct-22	09:51	4.48	5.17	4.74	2.96	7.14	5.12
Sum [%]	19-Oct-22	19:03	24-Oct-22	09:51	99.4	99.3	99.2	99.4	99.3	99.0



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



SGS Canada Inc.

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22-November-2022

SiREM Laboratory

Attn : Jacques Smith

Date Rec. : 19 October 2022
LR Report: CA13736-OCT22

180B Market Place Blvd
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37922, USA

Copy: #1

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Fax:

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: BRGWC-33S	6: BRGWC-38S	7: BRGWC-2S
Temp Upon Receipt [°C]	---	---	---	---	8.0	8.0	8.0
Ag (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	< 0.00005	< 0.00005	< 0.00005
Ag (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Al (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.281	1.41	0.004
Al (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
As (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.0009	0.0012	< 0.0002
As (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Ba (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.0414	0.0143	0.0124
Ba (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Be (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.00238	0.00730	< 0.000007
Be (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
B (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	1.04	1.46	0.005
B (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Bi (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	< 0.00001	< 0.00001	< 0.00001
Bi (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Ca (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	121	35.2	4.85
Ca (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Cd (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.000514	0.000480	0.000008
Cd (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Co (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.0642	0.179	0.00140
Co (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Cr (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	< 0.00008	0.00323	0.00726
Cr (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Cu (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.0012	0.0155	< 0.0002
Cu (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Fe (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.007	0.018	0.112
Fe (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
K (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	13.8	6.19	0.431
K (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---

Online LIMS

0003129367



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA13736-OCT22

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: BRGWC-33S	6: BRGWC-38S	7: BRGWC-2S
Li (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.0117	0.0202	0.0006
Li (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Mg (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	14.8	37.4	4.69
Mg (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Mn (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	2.80	1.73	0.0498
Mn (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Mo (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	< 0.00004	< 0.00004	< 0.00004
Mo (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Na (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	29.5	44.2	3.37
Na (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Ni (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.0127	0.0792	0.0023
Ni (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
P (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.004	< 0.003	0.017
P (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Pb (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.00021	0.00036	< 0.00009
Pb (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Sb (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	< 0.0009	< 0.0009	< 0.0009
Sb (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Se (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.00010	0.0275	< 0.00004
Se (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Si (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	8.55	33.0	16.9
Si (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Sn (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.00017	0.00009	0.00015
Sn (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Sr (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	2.41	0.426	0.0147
Sr (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Ti (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.00016	0.00021	0.00022
Ti (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Tl (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.000254	0.000159	< 0.000005
Tl (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
U (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.000054	0.000924	0.000002
U (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
V (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.00014	0.00008	0.00057
V (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Zn (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	0.034	0.189	0.003
Zn (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---
Zr (tot) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	< 0.002	< 0.002	< 0.002
Zr (diss) [mg/L]	28-Oct-22	18:00	03-Nov-22	10:34	---	---	---

Analysis	8: BRGWC-35C	9: BRGWC-33S (filtered)	10: BRGWC-38S (filtered)	11: BRGWC-2S (filtered)	12: BRGWC-35C (filtered)
Temp Upon Receipt [°C]	8.0	8.0	8.0	8.0	8.0
Ag (tot) [mg/L]	< 0.00005	---	---	---	---
Ag (diss) [mg/L]	---	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (tot) [mg/L]	0.004	---	---	---	---
Al (diss) [mg/L]	---	0.274	1.41	0.001	0.002
As (tot) [mg/L]	< 0.0002	---	---	---	---
As (diss) [mg/L]	---	0.0009	0.0013	< 0.0002	< 0.0002
Ba (tot) [mg/L]	0.0333	---	---	---	---
Ba (diss) [mg/L]	---	0.0403	0.0144	0.0123	0.0331
Be (tot) [mg/L]	0.000140	---	---	---	---
Be (diss) [mg/L]	---	0.00227	0.00718	< 0.000007	0.000140
B (tot) [mg/L]	1.97	---	---	---	---
B (diss) [mg/L]	---	1.07	1.43	0.003	1.87
Bi (tot) [mg/L]	0.00001	---	---	---	---
Bi (diss) [mg/L]	---	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Ca (tot) [mg/L]	68.9	---	---	---	---
Ca (diss) [mg/L]	---	121	35.5	4.82	68.4
Cd (tot) [mg/L]	0.000037	---	---	---	---
Cd (diss) [mg/L]	---	0.000498	0.000506	0.000012	0.000042
Co (tot) [mg/L]	0.000219	---	---	---	---
Co (diss) [mg/L]	---	0.0629	0.181	0.00128	0.000209
Cr (tot) [mg/L]	0.00424	---	---	---	---
Cr (diss) [mg/L]	---	< 0.00008	0.00353	0.00119	0.00435
Cu (tot) [mg/L]	< 0.0002	---	---	---	---
Cu (diss) [mg/L]	---	0.0011	0.0155	< 0.0002	< 0.0002
Fe (tot) [mg/L]	0.008	---	---	---	---
Fe (diss) [mg/L]	---	< 0.007	0.016	0.053	< 0.007
K (tot) [mg/L]	4.17	---	---	---	---
K (diss) [mg/L]	---	13.6	6.15	0.426	4.19
Li (tot) [mg/L]	0.0021	---	---	---	---
Li (diss) [mg/L]	---	0.0104	0.0188	0.0006	0.0019
Mg (tot) [mg/L]	35.1	---	---	---	---
Mg (diss) [mg/L]	---	14.9	36.9	4.73	34.8
Mn (tot) [mg/L]	0.0104	---	---	---	---
Mn (diss) [mg/L]	---	2.74	1.78	0.04742	0.0104
Mo (tot) [mg/L]	0.00004	---	---	---	---
Mo (diss) [mg/L]	---	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Na (tot) [mg/L]	19.1	---	---	---	---
Na (diss) [mg/L]	---	29.7	45.2	3.41	20.1
Ni (tot) [mg/L]	0.0098	---	---	---	---
Ni (diss) [mg/L]	---	0.0122	0.0798	0.0025	0.0097
P (tot) [mg/L]	0.119	---	---	---	---

Analysis	8: BRGWC-35C	9: BRGWC-33S (filtered)	10: BRGWC-38S (filtered)	11: BRGWC-2S (filtered)	12: BRGWC-35C (filtered)
P (diss) [mg/L]	---	< 0.003	< 0.003	0.010	0.119
Pb (tot) [mg/L]	< 0.00009	---	---	---	---
Pb (diss) [mg/L]	---	0.00018	0.00036	< 0.00009	< 0.00009
Sb (tot) [mg/L]	< 0.0009	---	---	---	---
Sb (diss) [mg/L]	---	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (tot) [mg/L]	0.00031	---	---	---	---
Se (diss) [mg/L]	---	0.00012	0.0294	< 0.00004	0.00021
Si (tot) [mg/L]	26.0	---	---	---	---
Si (diss) [mg/L]	---	7.61	30.5	15.9	25.4
Sn (tot) [mg/L]	0.00017	---	---	---	---
Sn (diss) [mg/L]	---	0.00013	0.00017	0.00014	0.00016
Sr (tot) [mg/L]	0.668	---	---	---	---
Sr (diss) [mg/L]	---	2.37	0.440	0.0147	0.664
Ti (tot) [mg/L]	0.00025	---	---	---	---
Ti (diss) [mg/L]	---	0.00007	0.00014	0.00007	0.00008
Tl (tot) [mg/L]	< 0.000005	---	---	---	---
Tl (diss) [mg/L]	---	0.000235	0.000170	< 0.000005	< 0.000005
U (tot) [mg/L]	0.000015	---	---	---	---
U (diss) [mg/L]	---	0.000046	0.000920	0.000002	0.000012
V (tot) [mg/L]	0.00334	---	---	---	---
V (diss) [mg/L]	---	0.00012	0.00007	0.00046	0.00334
Zn (tot) [mg/L]	0.005	---	---	---	---
Zn (diss) [mg/L]	---	0.035	0.197	0.003	0.005
Zr (tot) [mg/L]	< 0.002	---	---	---	---
Zr (diss) [mg/L]	---	< 0.002	< 0.002	< 0.002	< 0.002

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Project : P.O#
SIREMLABUS/02/10/8151

22-November-2022

SiREM Laboratory
Attn : Jacques Smith

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Knoxville, Tennessee
37922, USA

Phone: 865-291-4695
Fax:

Date Rec. : 21 October 2022
LR Report: CA13962-OCT22
Reference: Plant Brance

Copy: #1

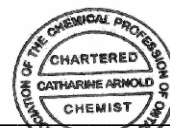
CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Temp Upon Receipt °C	DOC mg/L
1: Analysis Start Date	---	26-Oct-22
2: Analysis Start Time	---	21:34
3: Analysis Completed Date	---	27-Oct-22
4: Analysis Completed Time	---	13:33
5: BRGWC-33S	9.0	1.4
6: BRGWC-38S	9.0	< 1.0
7: BRGWC-2S	9.0	< 1.0
8: BRGWC-35C	9.0	< 1.0

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22-November-2022

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Date Rec. : 12 October 2022
LR Report: CA19107-OCT22
Reference: Plant Branch
 SIREMLABUS. 02. 10. 8151

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CERTIFICATE OF ANALYSIS

Final Report

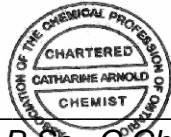
Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
Ag [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Al [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	98000	92000	91000	48000	74000	91000
As [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	1.0	0.7	1.1	1.0	0.6	0.9
Ba [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	1100	540	930	450	140	1000
Be [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	2	2	2	0.75	2	2
Bi [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.09	0.20	0.09	0.17	0.13	0.10
Ca [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	8100	25000	4300	15000	700	3900
Cd [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	0.13	0.12	0.08	0.15	0.02	0.05
Co [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	20	15	6	22	17	10
Cr [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	53	92	70	47	140	52
Cu [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	18	12	15	16	52	24
Fe [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	21000	46000	29000	49000	46000	21000
K [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	33000	19000	31000	15000	8600	31000
Li [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	13	13	13	14	17	11
Mg [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	5700	19000	5100	17000	8400	6000
Mn [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	660	790	430	840	650	460
Mo [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	0.4	0.4	3.2	0.7	0.3	0.5
Na [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	14000	13000	8700	4200	260	4100
Ni [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	16	64	21	34	29	14
P [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	150	190	200	1500	250	130
Pb [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	24	17	35	6	17	27
Sb [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	< 6	< 6	< 6	< 6	< 6	< 6
Sr [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	270	180	160	120	35	190
Ti [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	2200	2900	3900	6500	3100	2200
Tl [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	0.56	0.43	0.61	0.42	0.94	0.57

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LR Report : CA19107-OCT22

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
U [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	1.97	3.07	5.94	1.74	2.57	2.71
V [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	45	110	67	100	90	39
Y [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	23.2	25.2	18.4	31.7	21.5	23.6
Zn [µg/g]	26-Oct-22	17:22	01-Nov-22	08:24	59	78	81	98	76	48

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07-December-2022

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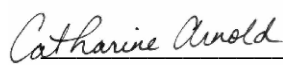
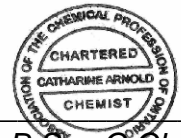
Date Rec. : 12 October 2022
LR Report: CA19108-OCT22
Reference: Plant Branch
 SIREMLABUS. 02. 10. 8151

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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	9: SB-1	10: SB-2
Sample Date & Time					06-Oct-22 08:30	06-Oct-22 08:30
S [%]	23-Nov-22	19:32	25-Nov-22	09:30	0.009	< 0.005
Sulphide [%]	24-Nov-22	07:53	25-Nov-22	09:30	< 0.04	< 0.04



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22-November-2022

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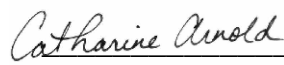

Date Rec. : 12 October 2022
LR Report: CA19110-OCT22
Reference: Plant Branch
 SIREMLABUS.02.10.8151

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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: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
SiO2 [%]	19-Oct-22	19:03	24-Oct-22	09:51	66.0	56.2	67.7	57.3	62.7	68.1
Al2O3 [%]	19-Oct-22	19:03	24-Oct-22	09:51	17.9	17.0	16.2	17.2	17.6	16.5
Fe2O3 [%]	19-Oct-22	19:03	24-Oct-22	09:51	2.75	8.01	3.57	7.65	6.32	2.32
MgO [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.92	4.06	0.70	2.84	1.38	0.76
CaO [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.99	3.91	0.51	4.78	0.23	0.34
Na2O [%]	19-Oct-22	19:03	24-Oct-22	09:51	1.96	1.47	1.19	3.25	0.37	0.52
K2O [%]	19-Oct-22	19:03	24-Oct-22	09:51	3.90	2.60	3.94	1.69	2.61	4.98
TiO2 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.34	0.54	0.53	1.14	0.76	0.26
P2O5 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.04	0.06	0.05	0.35	0.08	0.02
MnO [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.08	0.13	0.05	0.13	0.07	0.03
Cr2O3 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.02	0.07	0.03	0.03	0.04	0.03
V2O5 [%]	19-Oct-22	19:03	24-Oct-22	09:51	0.01	0.03	< 0.01	0.03	0.02	< 0.01
LOI [%]	19-Oct-22	19:03	24-Oct-22	09:51	4.48	5.17	4.74	2.96	7.14	5.12
Sum [%]	19-Oct-22	19:03	24-Oct-22	09:51	99.4	99.3	99.2	99.4	99.3	99.0



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Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services

Project Number/ LIMS No. Custom XRD/MI4533-OCT22

Sample Receipt: October 20, 2022

Sample Analysis: October 28, 2022

Reporting Date: December 21, 2022

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA; Detector: LYNXEYE
Regular Scanning: Step: 0.02°, Step time: 0.75s, 2θ range: 6-80°

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	PZ-64	PZ-65	PZ-66	PZ-68	SB-1	SB-2
	OCT4533-1 (wt %)	OCT4533-2 (wt %)	OCT4533-3 (wt %)	OCT4533-4 (wt %)	OCT4533-5 (wt %)	OCT4533-6 (wt %)
Quartz	26.4	16.4	33.4	21.9	36.7	36.0
Plagioclase	21.2	17.0	13.1	35.7	4.6	9.6
Potassium-feldspar	16.5	10.6	16.7	3.1	14.1	16.0
Mica	16.1	17.2	19.1	26.5	20.5	22.9
Kaolinite	16.9	18.4	16.4	-	23.3	15.0
Gypsum	1.7	0.3	0.5	1.3	-	-
Magnetite	0.3	0.0	0.0	0.4	0.0	0.1
Diopside	1.0	0.1	0.6	1.8	0.6	0.5
Actinolite	-	20.1	-	4.3	-	-
Chlorite	-	-	-	3.9	-	-
Grossular	-	-	-	0.5	0.1	-
Ilmenite	-	-	-	0.7	0.1	-
TOTAL	100	100	100	100	100	100

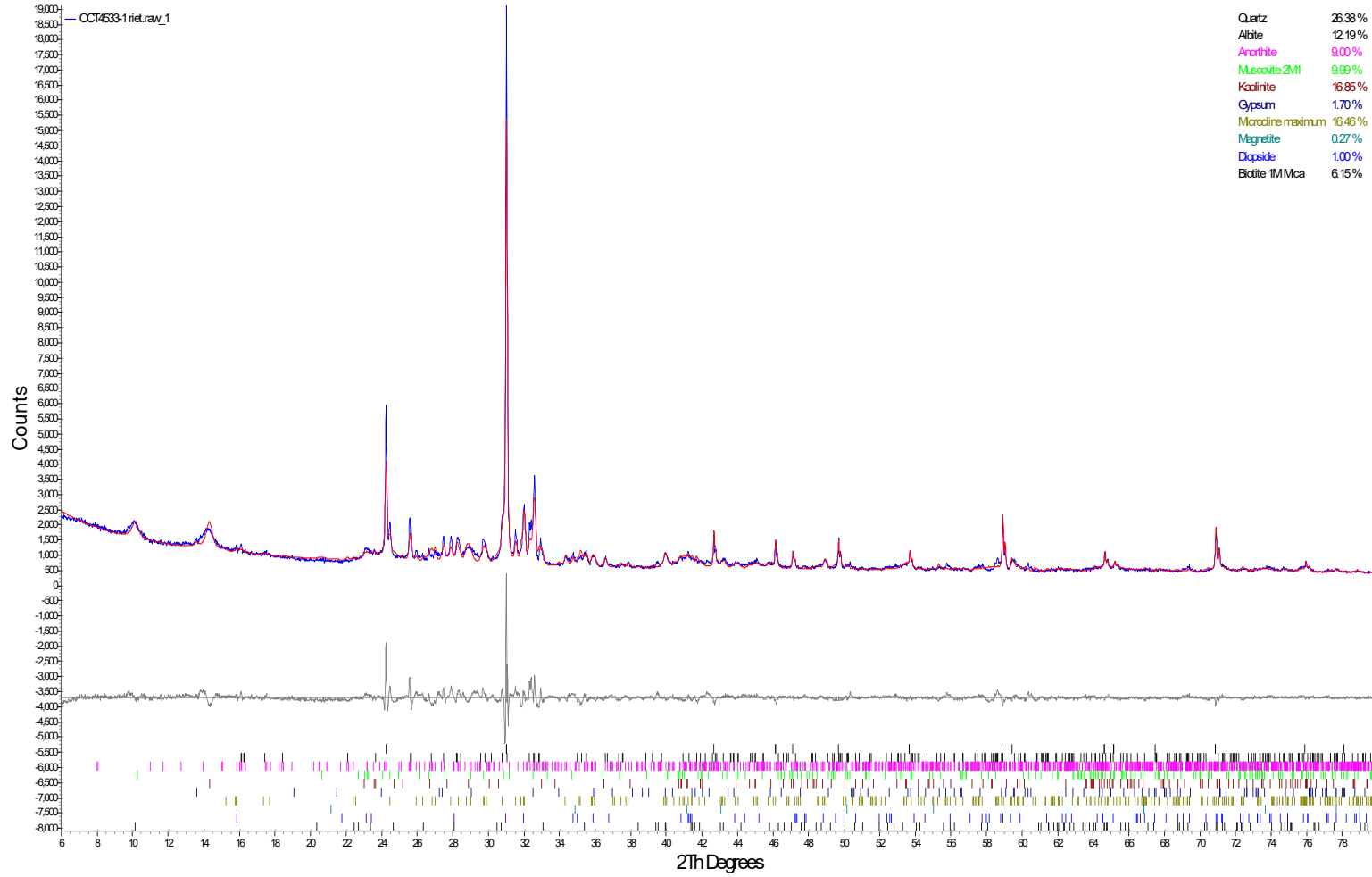
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

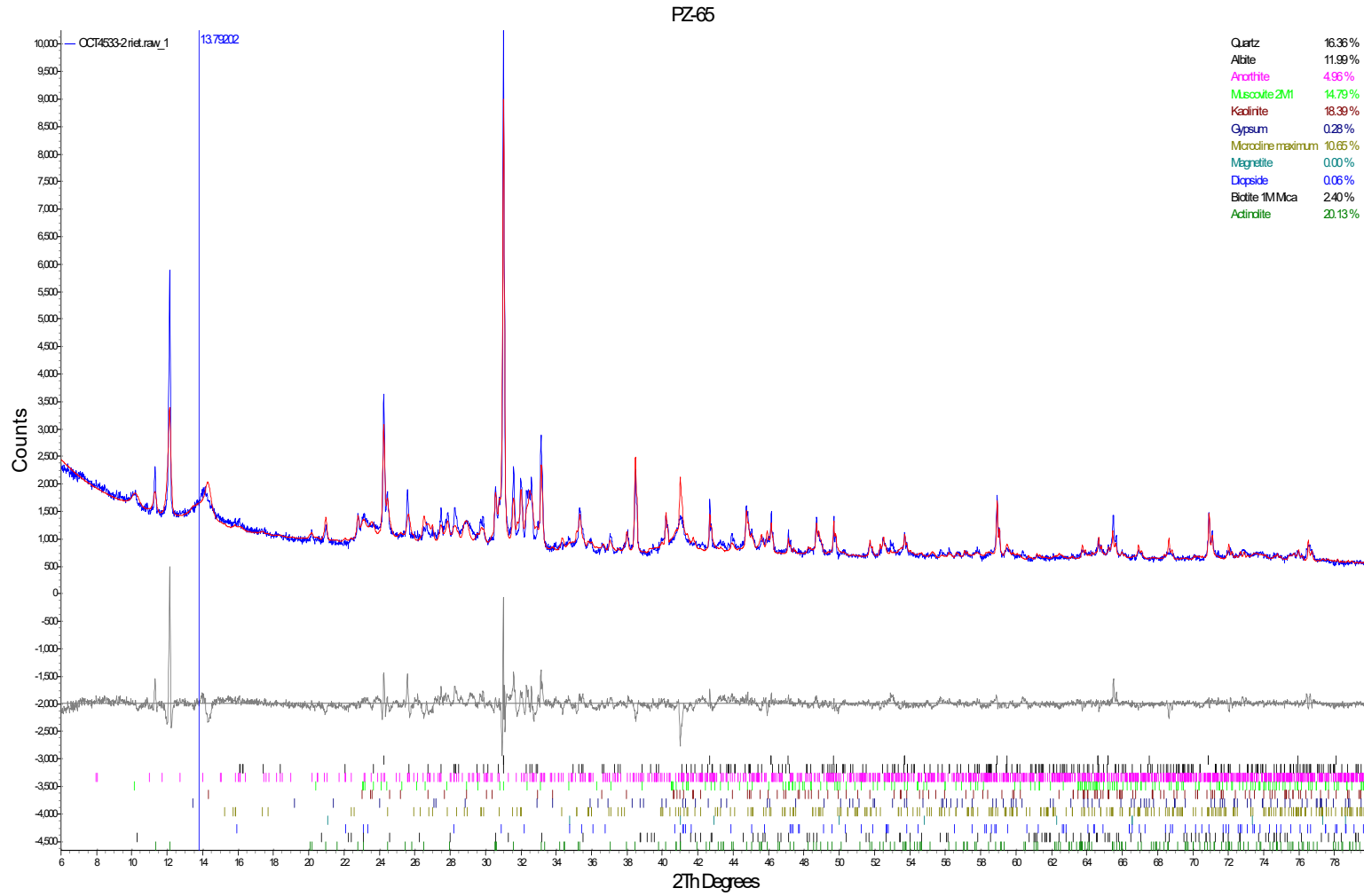
Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

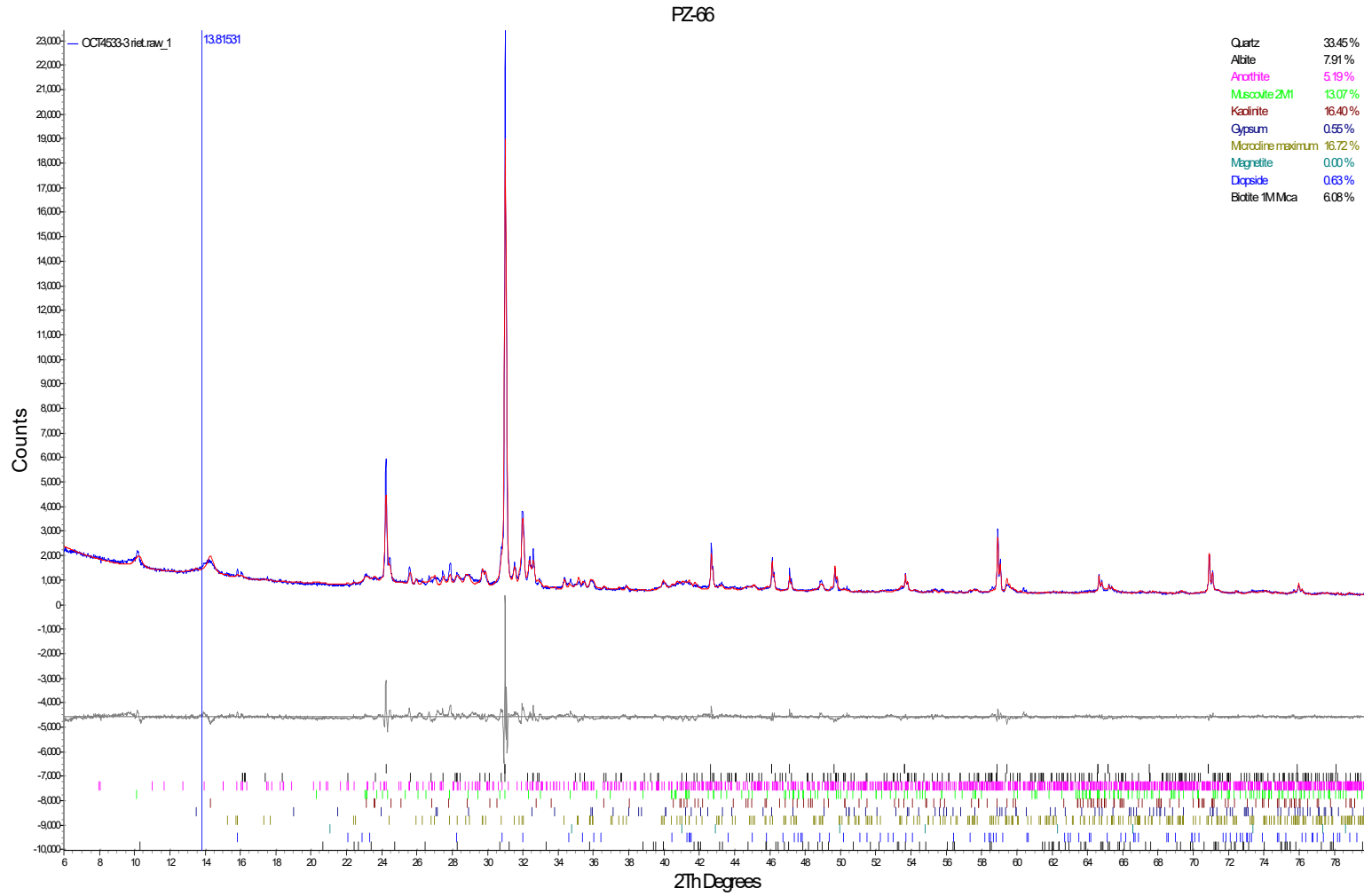
The weight percent quantities indicated have been normalized to a sum of 100%.

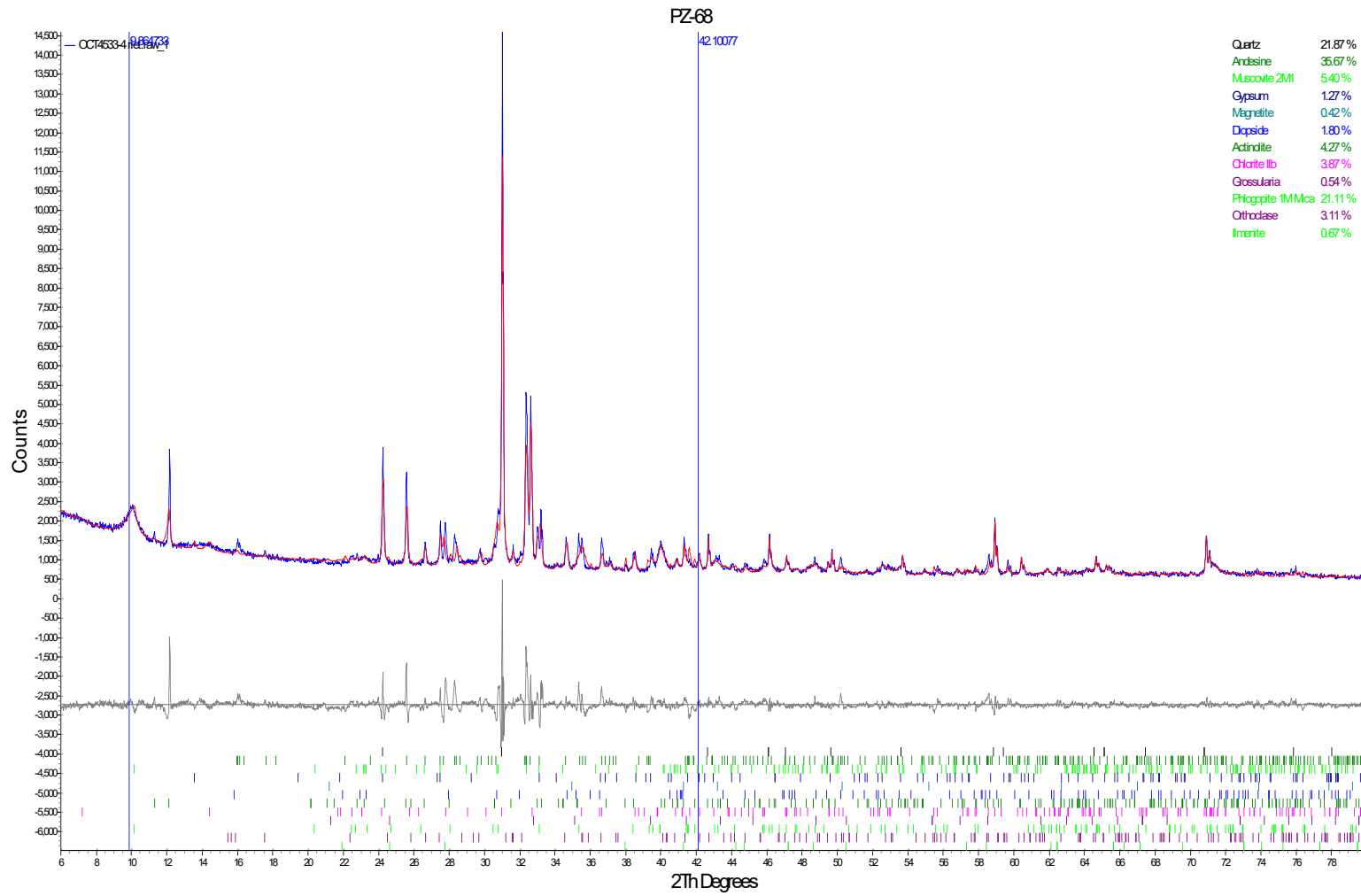
Mineral/Compound	Formula
Quartz	SiO ₂
Plagioclase	(NaSi,CaAl)AlSi ₂ O ₈
Potassium-feldspar	KAlSi ₃ O ₈
Mica	K(Mg,Fe)Al ₂ Si ₃ AlO ₁₀ (OH) ₂
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Gypsum	CaSO ₄ ·2H ₂ O
Magnetite	Fe ₃ O ₄
Diopside	CaMgSi ₂ O ₆
Actinolite	Ca ₂ (Mg,Fe) ₅ Si ₈ O ₂₂ (OH) ₂
Chlorite	(Fe,(Mg,Mn) ₅ ,Al)(Si ₃ Al)O ₁₀ (OH) ₈
Grossular	Ca ₃ Al ₂ Si ₃ O ₁₂
Ilmenite	FeTiO ₃

PZ-64

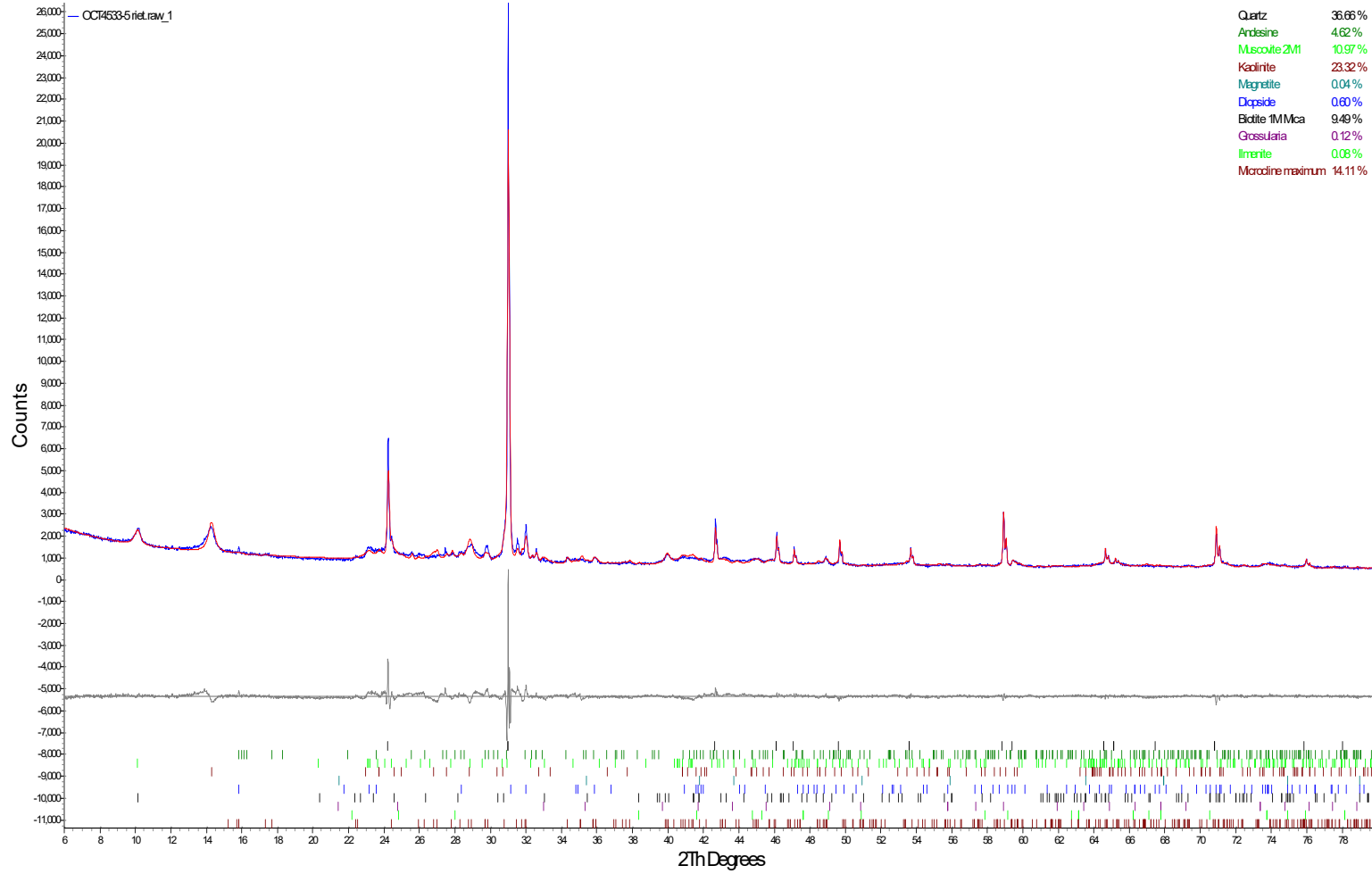




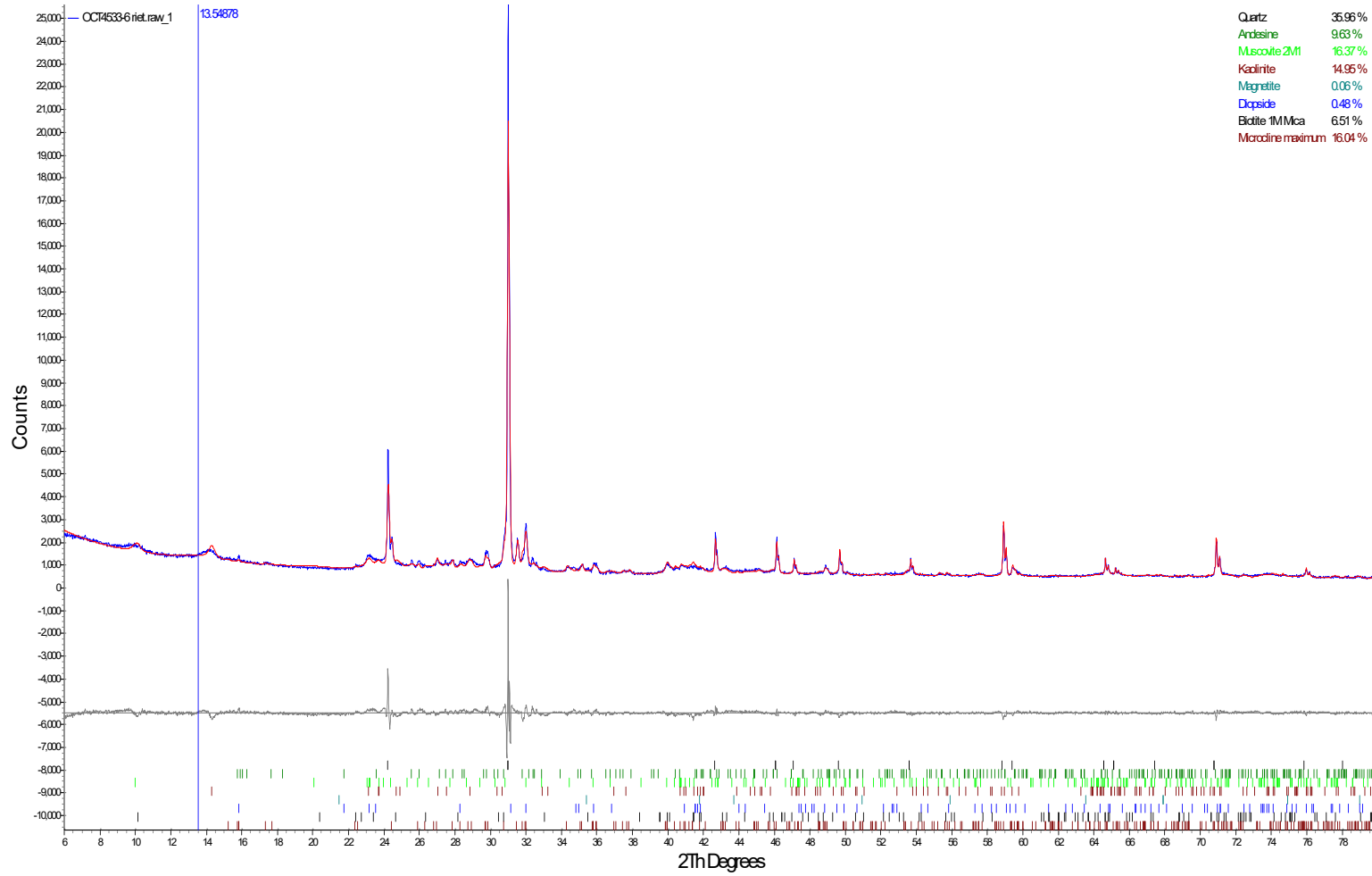




SB-1



SB-2



APPENDIX C

Slug Test Data Plots

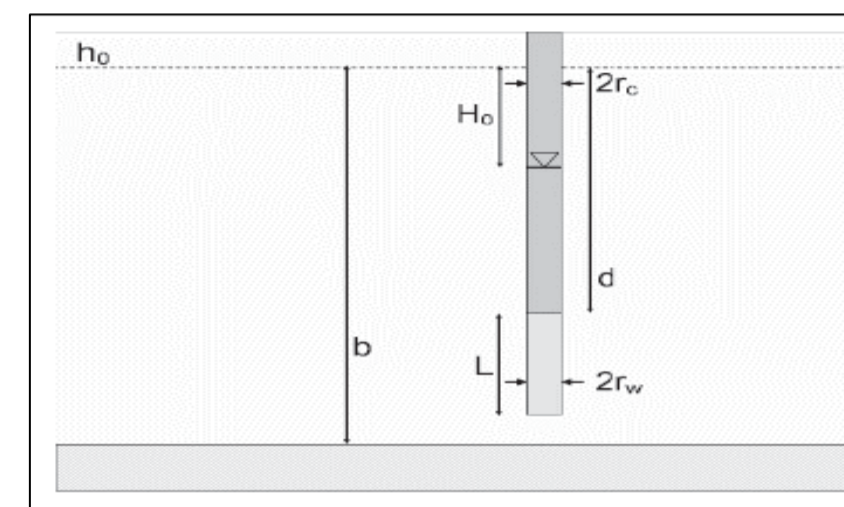
Table 3
Summary of AQTESOLV Input Parameters and Estimated Horizontal Hydraulic Conductivity Values
Plant Branch AP-BCD, Putnam County, Georgia

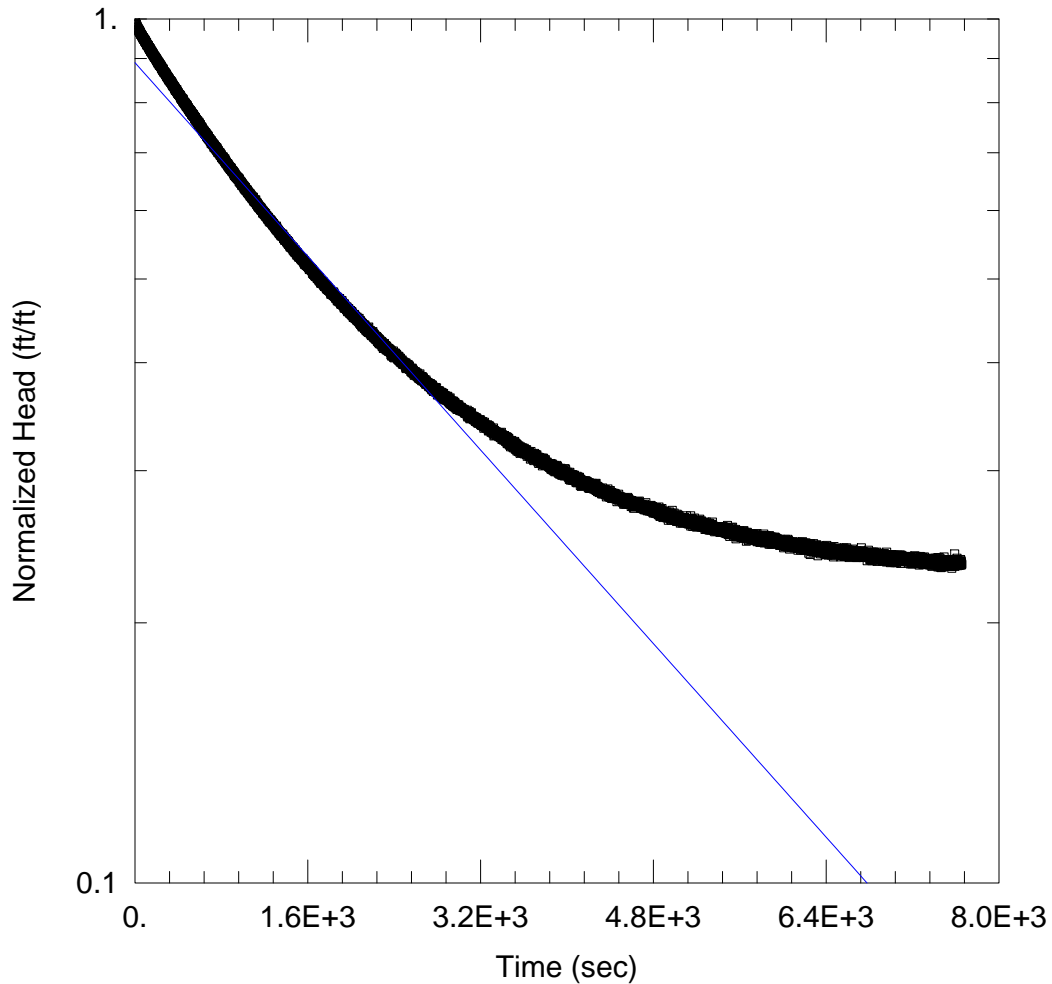
Well ID/Test No.	Screen Zone Material	Slug Test Type	Well Information						AQTESOLV Input Parameters												Horizontal Hydraulic Conductivity (Kh)							
			Depth to Sensor [ft bTOC]	Static DTW [ft bTOC]	DTW after Pressure Release [ft bTOC]	Top Screen Depth [ft TOC]	Bottom Screen Depth [ft bTOC]	Total Depth [ft bTOC]	Ho [ft]	H [ft]	b [ft]	Kv/Kh	d [ft]	L [ft]	T [ft]	r(c) [ft]	r(eq) [ft]	r(p) [ft]	r(w) [ft]	r(sk) [ft]	Bouwer-Rice Kh [ft/day]	KGS or Hvorslev Kh [ft/day]	Geomean Kh [ft/day]	Bouwer-Rice Kh [cm/sec]	KGS or Hvorslev Kh [cm/sec]	Geomean Kh [cm/sec]		
PZ-64I Test 1	Saprolite/PWR	Pneumatic	67.30	38.42	40.95	59.00	69.00	69.30	2.53	30.88	30.88	0.1	20.58	10.0	25.58	0.083	0.03	0	0.25	0.25	0.036	0.039	0.037	1.3E-05	1.4E-05	1.3E-05		
PZ-65I Test 1	Saprolite/PWR	Pneumatic	67.30	36.40	40.63	59.00	69.00	69.30	4.23	32.90	32.90	0.1	22.60	10.0	27.60	0.083	0.03	0	0.25	0.25	0.407	0.406	0.406	1.4E-04	1.4E-04	1.4E-04		
PZ-66I Test 1	Saprolite/PWR	Pneumatic	66.30	36.25	40.09	58.00	68.00	68.30	3.84	32.05	32.05	0.1	21.75	10.0	30.05	0.083	0.03	0	0.25	0.25	0.222	0.207	0.238	7.3E-05	8.4E-05	7.8E-05		
PZ-66I Test 2		Pneumatic	66.30	36.25	39.95	58.00	68.00	68.30	3.70	32.05	32.05	0.1	21.75	10.0	30.05	0.083	0.03	0	0.25	0.25				0.207	0.237		7.3E-05	8.3E-05
PZ-67 Test 1	Saprolite	Pumping	36.30	30.10	33.08	28.00	38.00	38.30	2.98	8.20	8.20	0.1	-2.10	10.0	6.20	0.083	0.03	0	0.25	0.25	0.007	0.027	0.028	9.7E-06	9.8E-06	2.4E-06		
PZ-67 Test 2		Pumping	36.30	30.60	34.26	28.00	38.00	38.30	3.66	7.70	7.70	0.1	-2.60	10.0	2.40	0.083	0.03	0	0.25	0.25				0.003	0.005		9.8E-07	1.9E-06
PZ-67 Test 3		Pumping	36.30	30.19	38.06	28.00	38.00	38.30	7.87	8.11	8.11	0.1	-2.19	10.0	2.81	0.083	0.03	0	0.25	0.25				0.002	0.004		7.9E-07	1.5E-06

Notes:

- Ho** Observed initial displacement (change in water level from static)
- H** Static water column height
- b** Saturated thickness of aquifer. If bottom of aquifer is unknown set b=bottom of well.
- Kv/Kh** Ratio of vertical to horizontal hydraulic conductivity
- d** Depth to top of well screen - this is the length from the water level (or top confining unit) to the top of the screen.
- L** Length of well screen
- T** Transducer Depth below the water table
- r(c)** Inside radius of well casing
- r(eq)** Radius of downhole equipment
- r(w)** Radius of well open or perforated interval
- r(sk)** Outside radius of well skin distributed zone enveloping filter pack
- bTOC** Below Top Of Casing
- DTW** Depth To Water

1. For tests in which pumping was performed in lieu of applying pressurized gas, depth to water after pressure release refers to the depth after pumping is stopped.





WELL TEST ANALYSIS

Data Set: N:\...\PZ-64 Test 1 BR.aqt
Date: 11/01/22

Time: 14:34:42

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Georgia Power Company
Project: GW8862
Location: Plant Branch
Test Well: PZ-64
Test Date: 10/13/2022

AQUIFER DATA

Saturated Thickness: 30.88 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-64)

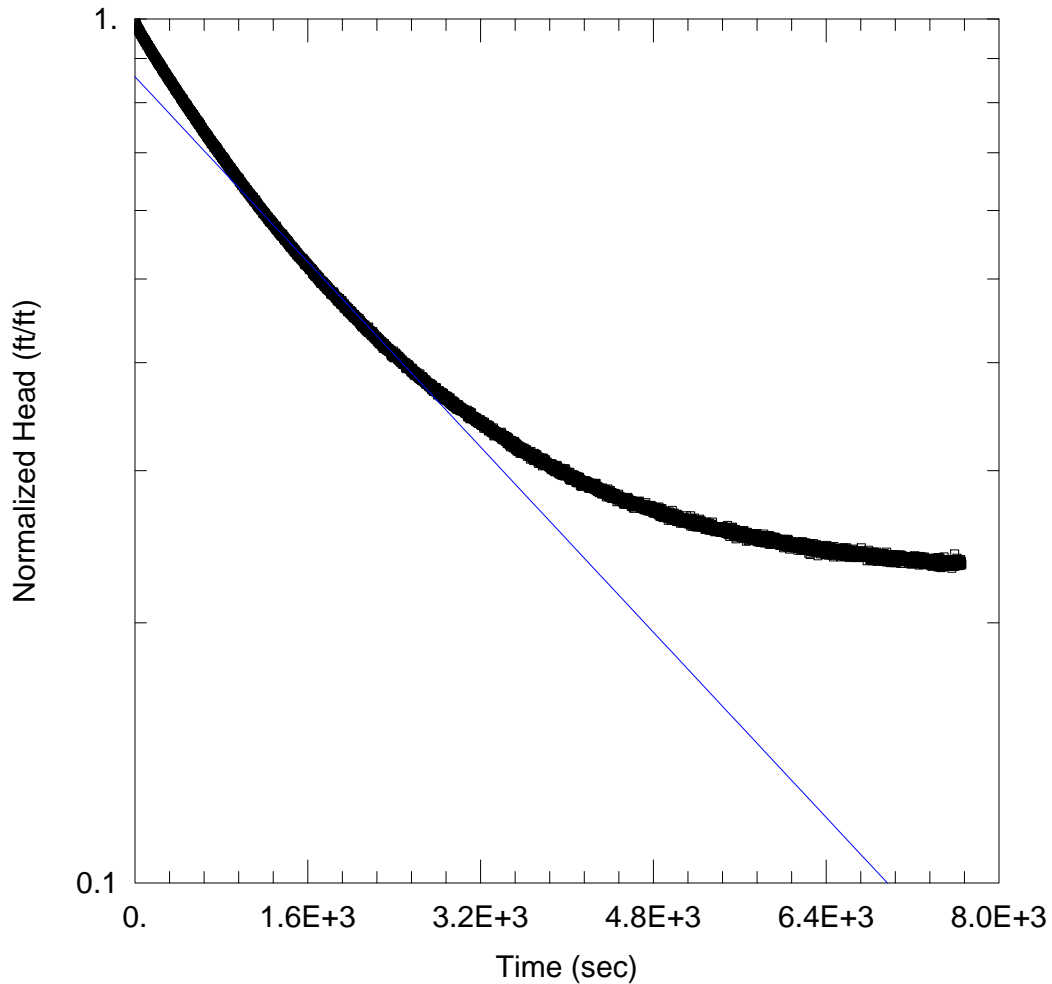
Initial Displacement: 2.534 ft
Total Well Penetration Depth: 30.58 ft
Casing Radius: 0.083 ft

Static Water Column Height: 30.88 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.03584 ft/day

Solution Method: Bower-Rice
y0 = 2.255 ft



WELL TEST ANALYSIS

Data Set: N:\...\PZ-64 Test 1 HS.aqt
 Date: 11/01/22

Time: 14:35:11

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-64
 Test Date: 10/13/2022

AQUIFER DATA

Saturated Thickness: 30.88 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-64)

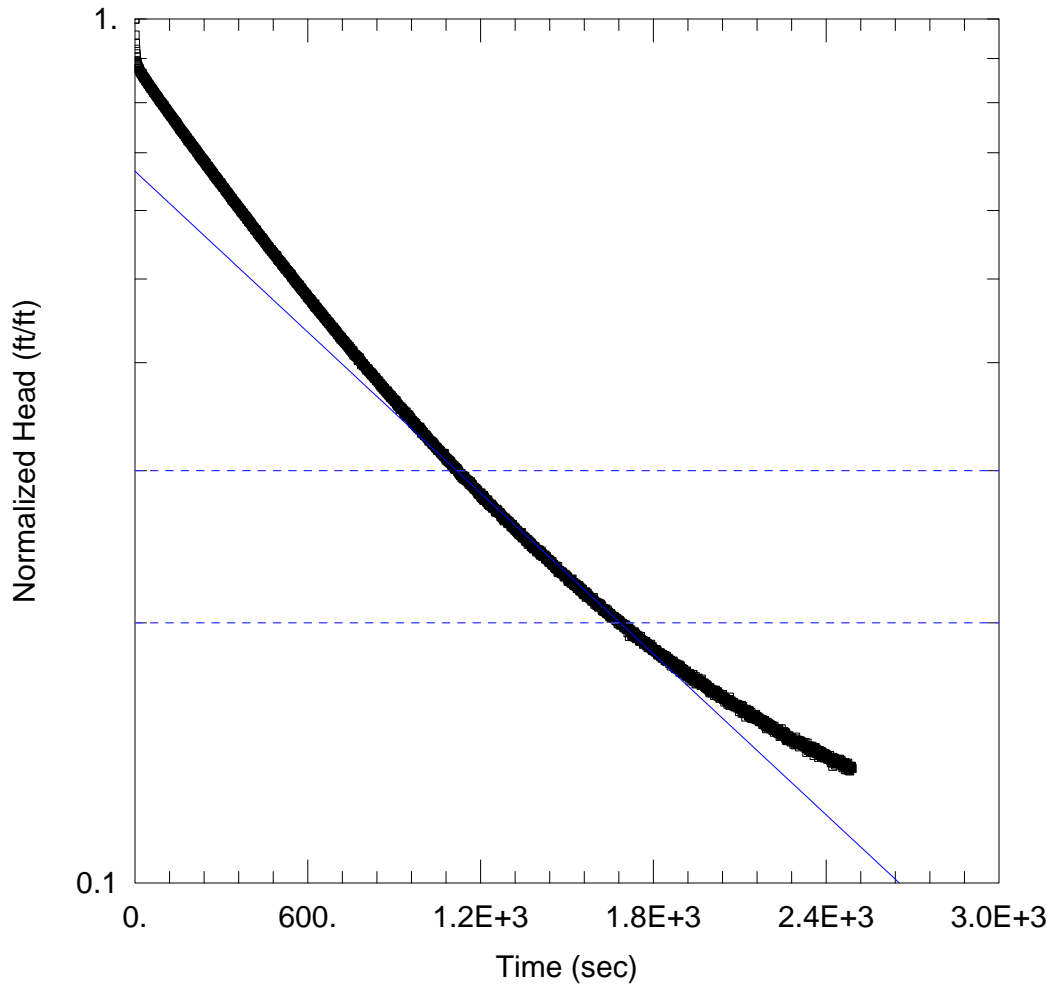
Initial Displacement: 2.534 ft
 Total Well Penetration Depth: 30.58 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 30.88 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.03863 ft/day

Solution Method: Hvorslev
 y0 = 2.172 ft



WELL TEST ANALYSIS

Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10_22\Data\Working\PZ-65 Test 1 BR.aqt
 Date: 10/12/22 Time: 20:13:12

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-65
 Test Date: 10/12/2022

AQUIFER DATA

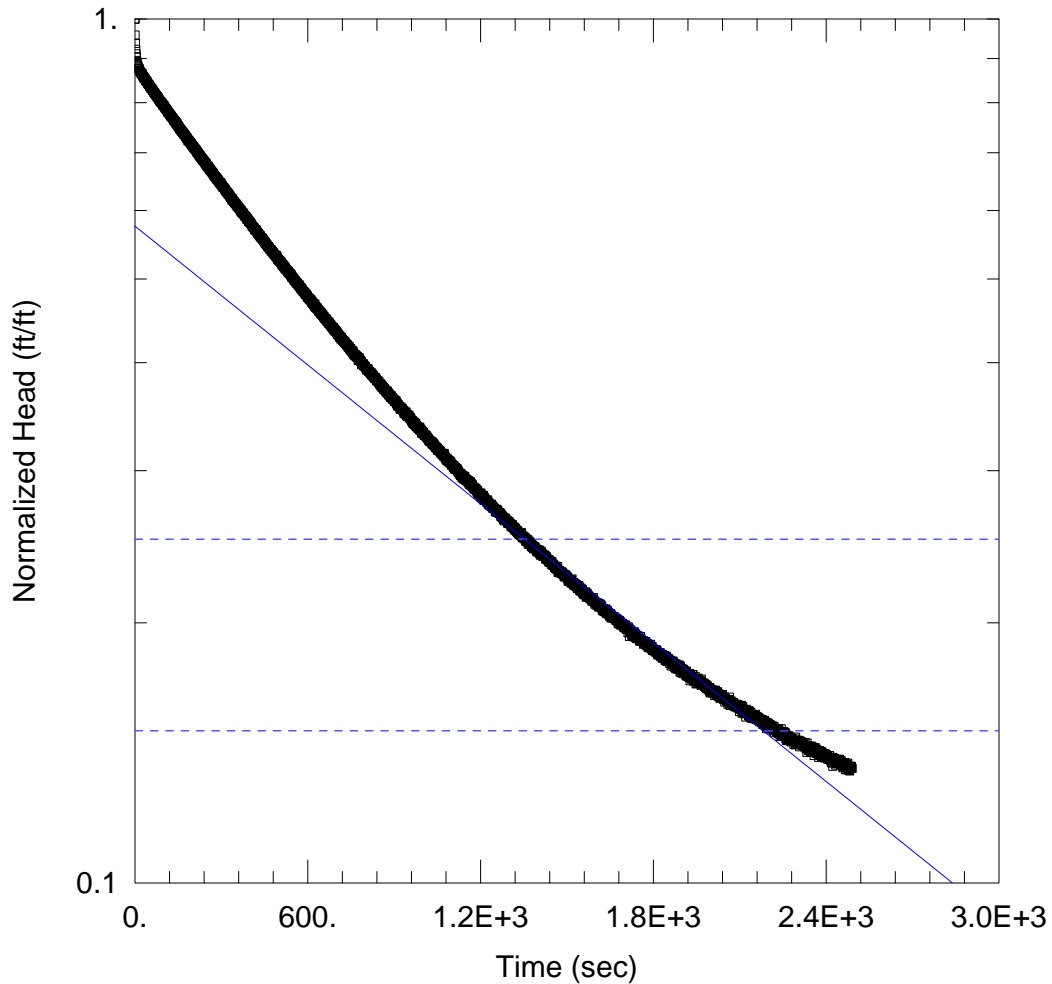
Saturated Thickness: 32.9 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-65)

Initial Displacement: 4.23 ft Static Water Column Height: 32.9 ft
 Total Well Penetration Depth: 23.6 ft Screen Length: 1. ft
 Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.4065 ft/day y0 = 2.819 ft



WELL TEST ANALYSIS

Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10_22\Data\Working\PZ-65 Test 1 BR.aqt
 Date: 10/12/22 Time: 20:14:33

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-65
 Test Date: 10/12/2022

AQUIFER DATA

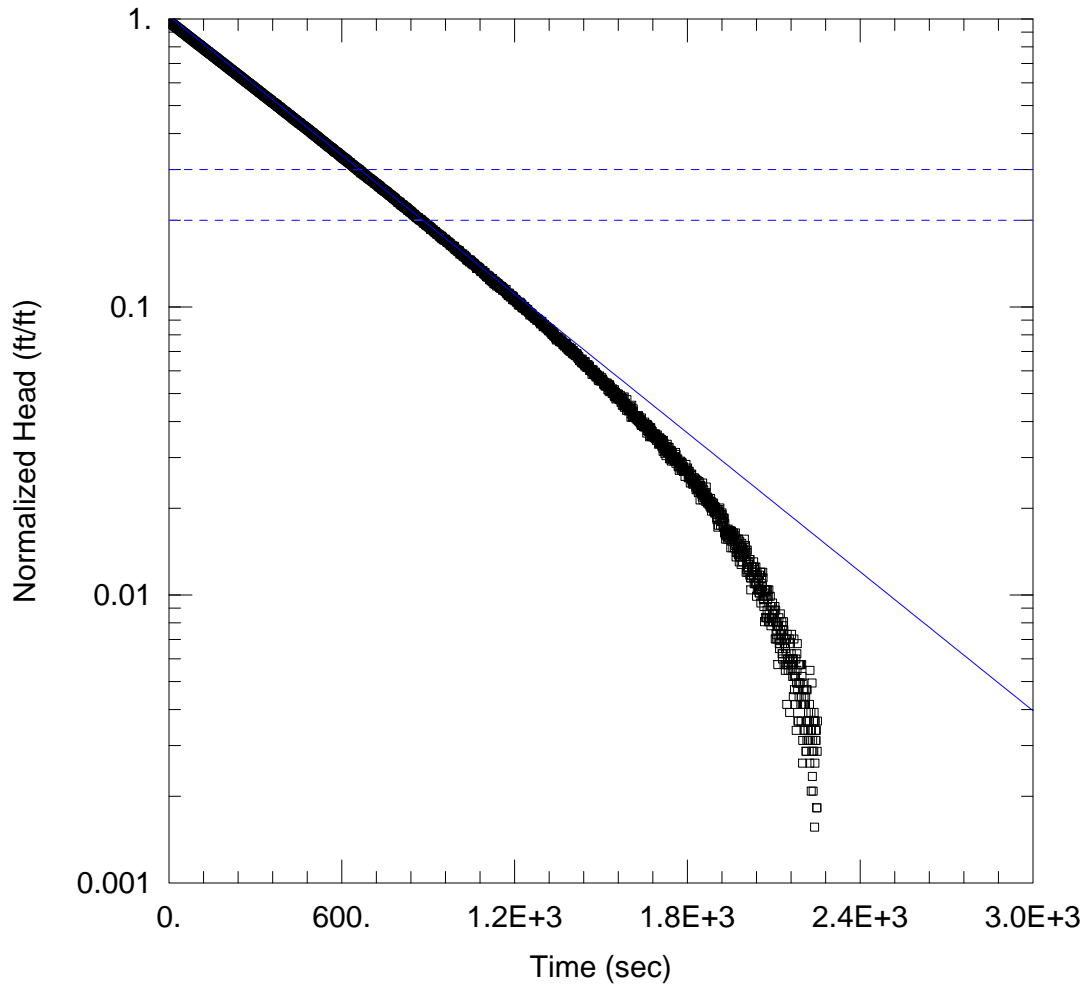
Saturated Thickness: 32.9 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-65)

Initial Displacement: 4.23 ft Static Water Column Height: 32.9 ft
 Total Well Penetration Depth: 23.6 ft Screen Length: 1. ft
 Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev
 K = 0.4059 ft/day y0 = 2.435 ft



WELL TEST ANALYSIS

Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10_22\Data\Aqtesol\VPZ--66 Test 1 BR.aqt
 Date: 10/14/22 Time: 11:17:28

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-66 Test 1
 Test Date: 10/13/2022

AQUIFER DATA

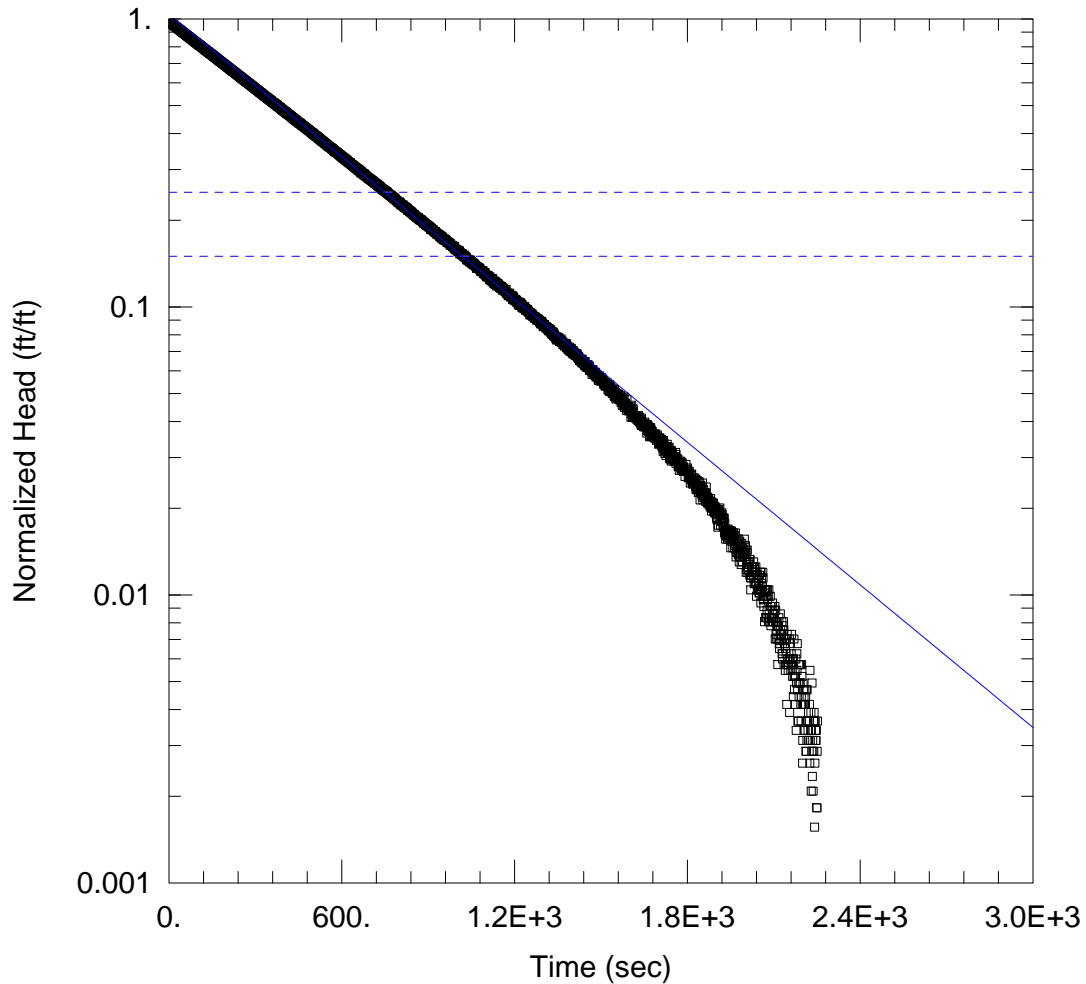
Saturated Thickness: 32.05 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-66 Test 1)

Initial Displacement: 3.84 ft Static Water Column Height: 32.05 ft
 Total Well Penetration Depth: 31.75 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.2067 ft/day y0 = 3.921 ft



WELL TEST ANALYSIS

Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10_22\Data\Aqtesol\VPZ--66 Test 1 HS.aqt
 Date: 10/14/22 Time: 11:18:30

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-66 Test 1
 Test Date: 10/13/2022

AQUIFER DATA

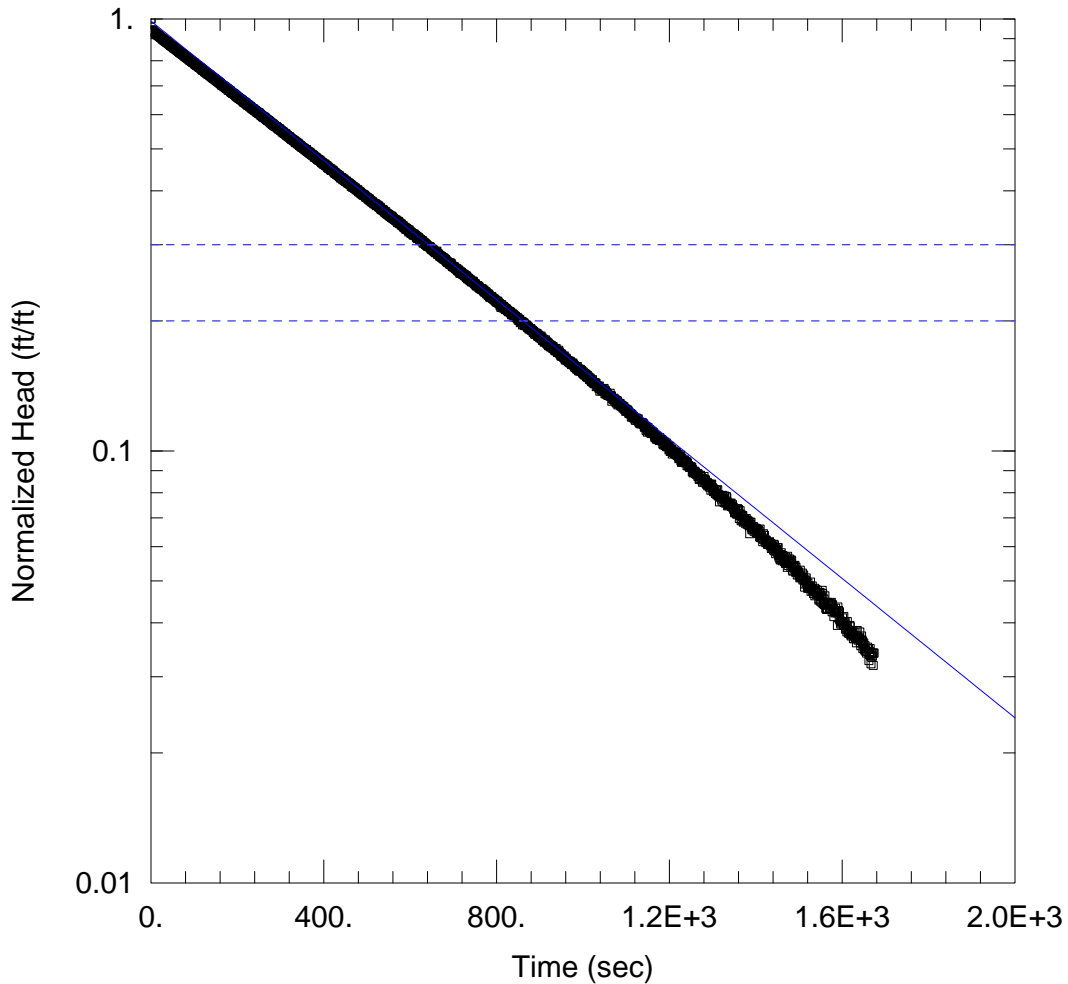
Saturated Thickness: 32.05 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-66 Test 1)

Initial Displacement: 3.84 ft Static Water Column Height: 32.05 ft
 Total Well Penetration Depth: 31.75 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev
 K = 0.238 ft/day y0 = 3.98 ft



WELL TEST ANALYSIS

Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10_22\Data\Aqtesol\VPZ--66 Test 2 BR.aqt
 Date: 10/14/22 Time: 11:23:46

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-66 Test 2
 Test Date: 10/13/2022

AQUIFER DATA

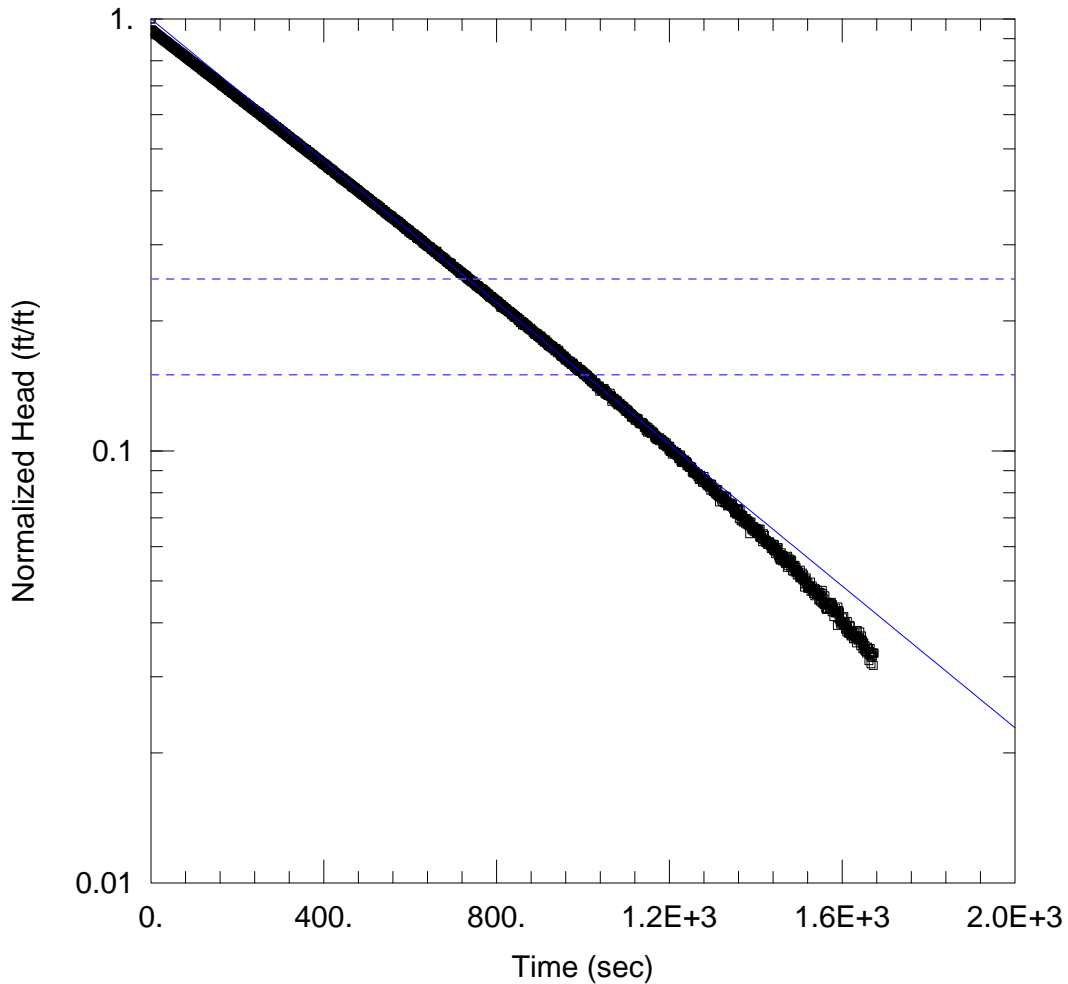
Saturated Thickness: 32.05 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-66 Test 2)

Initial Displacement: 3.7 ft Static Water Column Height: 32.05 ft
 Total Well Penetration Depth: 31.75 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.2074 ft/day y0 = 3.656 ft



WELL TEST ANALYSIS

Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10_22\Data\Aqtesolv\VPZ--66 Test 2 HS.aqt
 Date: 10/14/22 Time: 11:24:27

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-66 Test 2
 Test Date: 10/13/2022

AQUIFER DATA

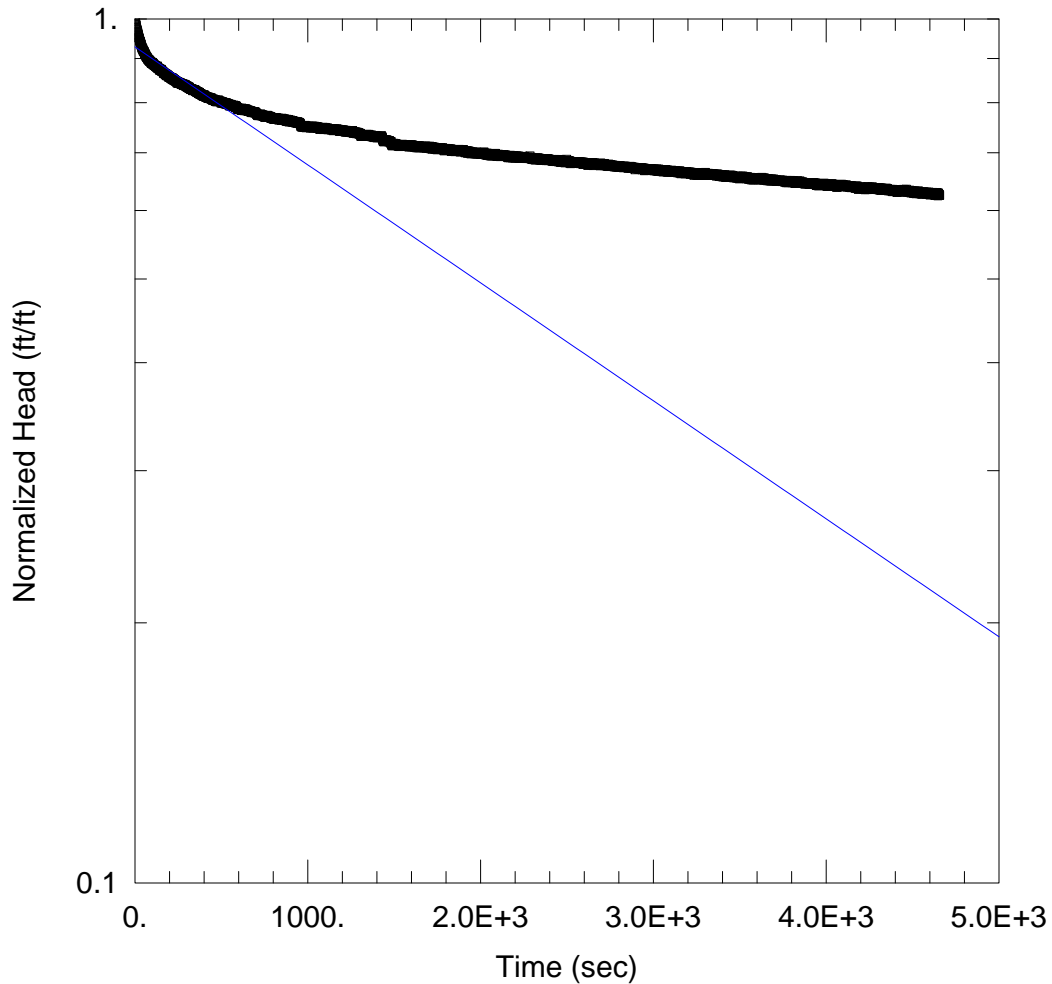
Saturated Thickness: 32.05 ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-66 Test 2)

Initial Displacement: 3.7 ft Static Water Column Height: 32.05 ft
 Total Well Penetration Depth: 31.75 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev
 K = 0.2366 ft/day y0 = 3.699 ft



WELL TEST ANALYSIS

Data Set: N:\...\PZ-67 Test 1 BR.aqt
 Date: 11/01/22

Time: 14:37:31

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-67
 Test Date: 10/12/2022

AQUIFER DATA

Saturated Thickness: 8.2 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-67 Test 1)

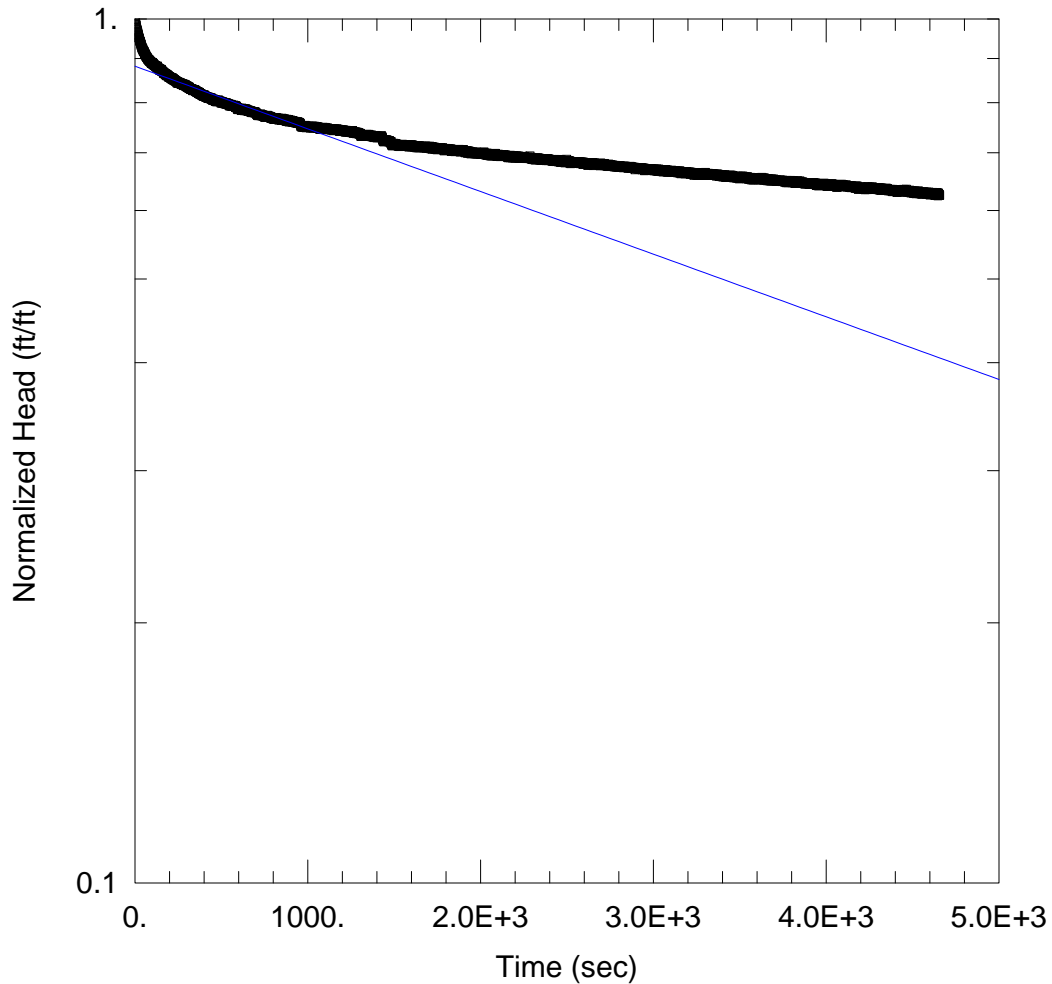
Initial Displacement: 2.98 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 8.2 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.02749 ft/day

Solution Method: Bouwer-Rice
 y0 = 2.766 ft



WELL TEST ANALYSIS

Data Set: N:\...\PZ-67 Test 1 HS.aqt
 Date: 11/01/22

Time: 14:38:03

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-67
 Test Date: 10/12/2022

AQUIFER DATA

Saturated Thickness: 8.2 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-67 Test 1)

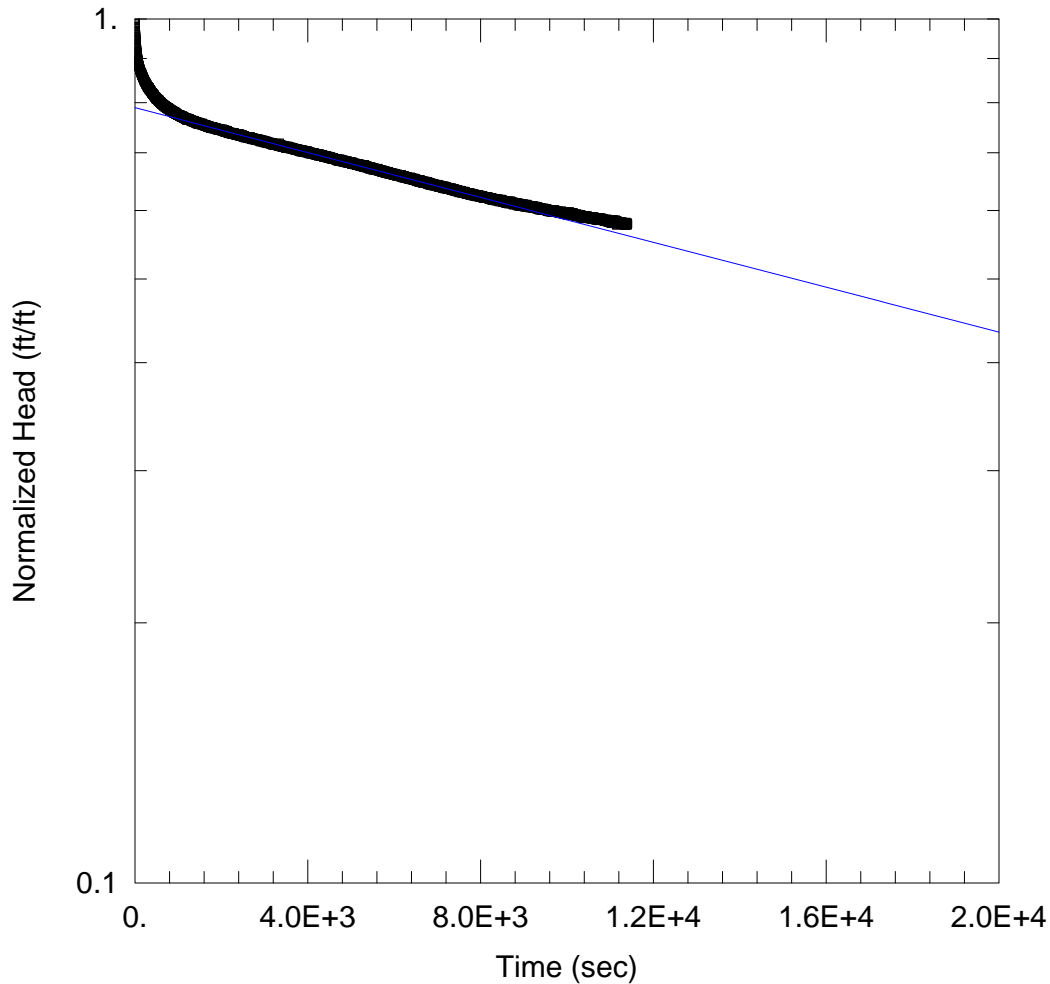
Initial Displacement: 2.98 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 8.2 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.02791 ft/day

Solution Method: Hvorslev
 y0 = 2.627 ft



WELL TEST ANALYSIS

Data Set: N:\...\PZ-67 Test 2 BR.aqt
 Date: 11/01/22

Time: 14:38:43

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-67 Test 2
 Test Date: 10/13/2022

AQUIFER DATA

Saturated Thickness: 7.7 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-67 Test 2)

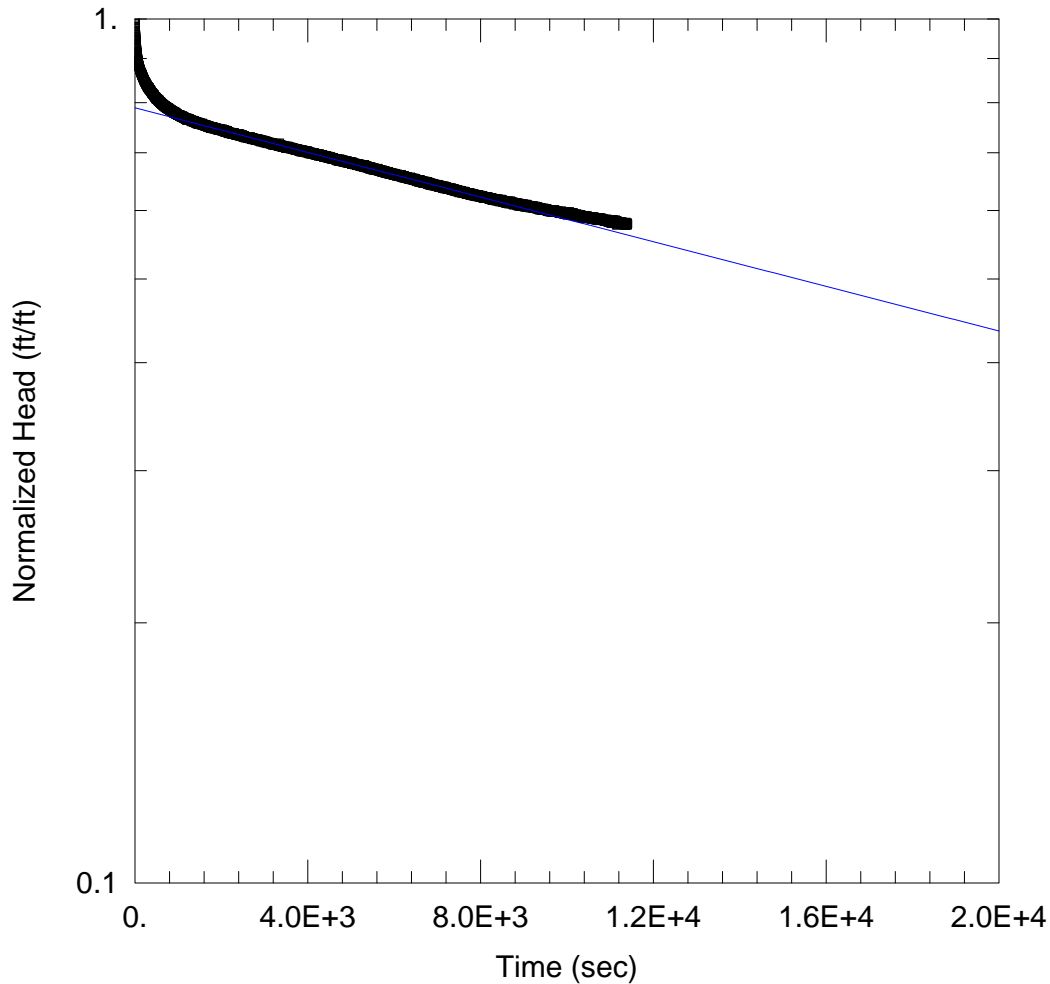
Initial Displacement: 3.66 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 7.7 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.002768 ft/day

Solution Method: Bouwer-Rice
 y0 = 2.889 ft



WELL TEST ANALYSIS

Data Set: N:\...\PZ-67 Test 2 HS.aqt
 Date: 11/01/22

Time: 14:39:30

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power Company
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-67 Test 2
 Test Date: 10/13/2022

AQUIFER DATA

Saturated Thickness: 7.7 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-67 Test 2)

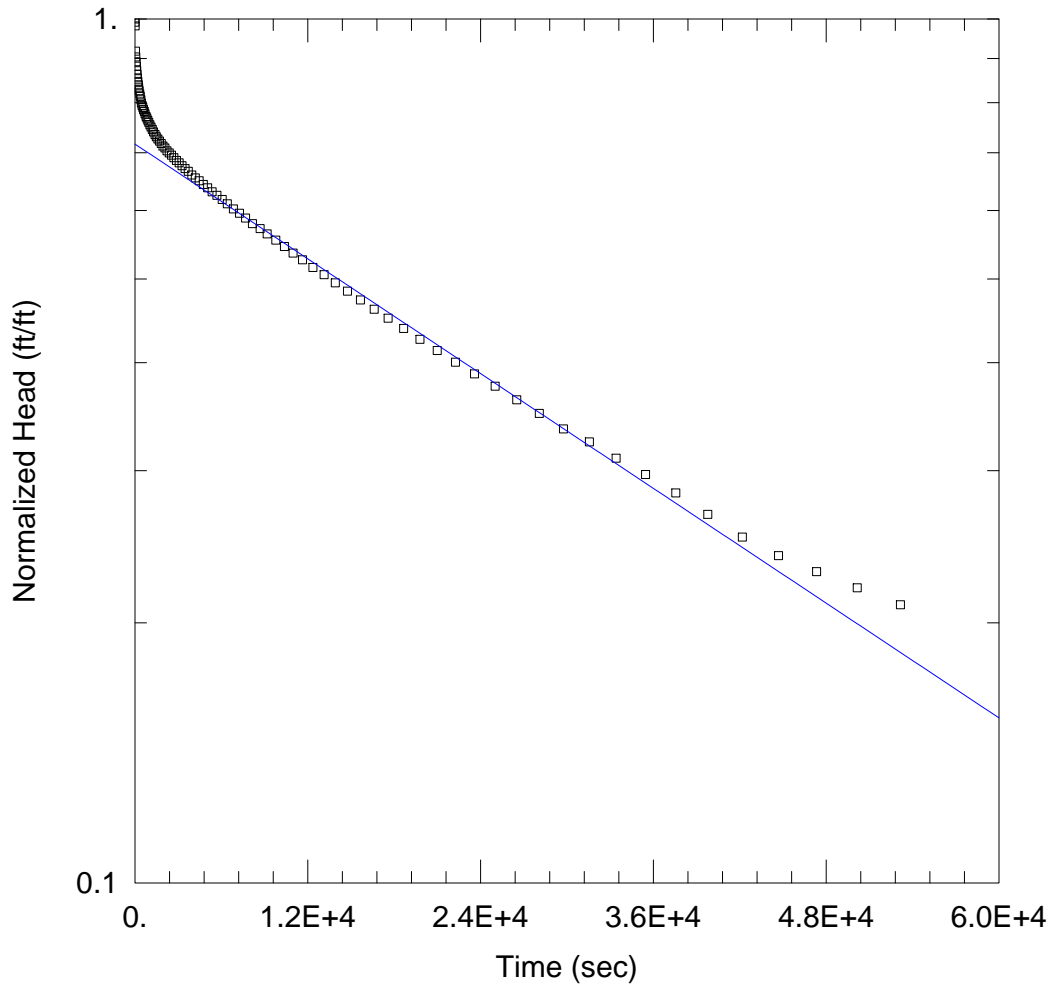
Initial Displacement: 3.66 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 7.7 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.005296 ft/day

Solution Method: Hvorslev
 y0 = 2.888 ft



PZ-67 TEST 3

Data Set: N:\...\PZ-67 Test 3 BR.aqt
Date: 11/01/22

Time: 14:40:11

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Georgia Power
Project: GW8862
Location: Plant Branch
Test Well: PZ-67
Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 8.11 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-67 Test 3)

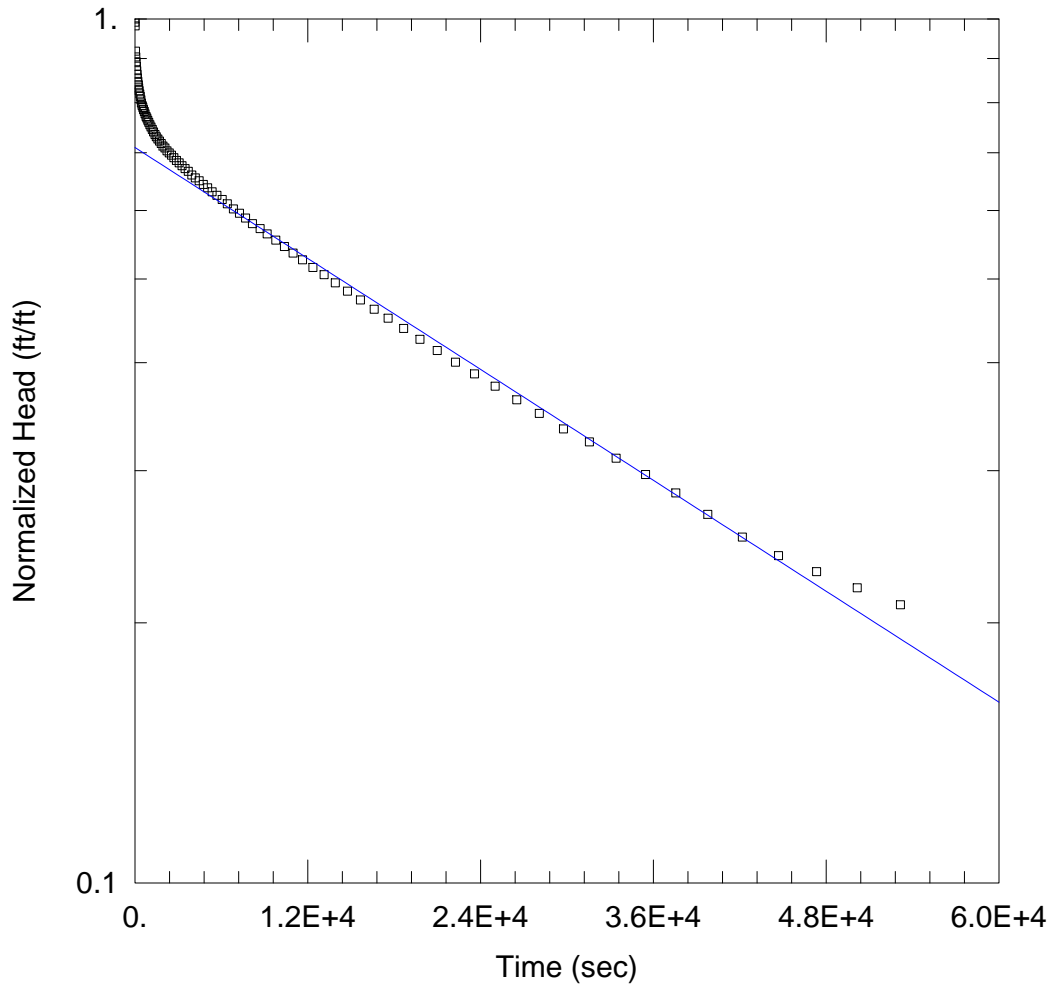
Initial Displacement: 7.87 ft
Total Well Penetration Depth: 10. ft
Casing Radius: 0.083 ft

Static Water Column Height: 8.11 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.002251 ft/day

Solution Method: Bouwer-Rice
y0 = 5.638 ft



PZ-67 TEST 3

Data Set: N:\...\PZ-67 Test 3 HS.aqt
 Date: 11/01/22

Time: 14:40:43

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-67
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 8.11 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-67 Test 3)

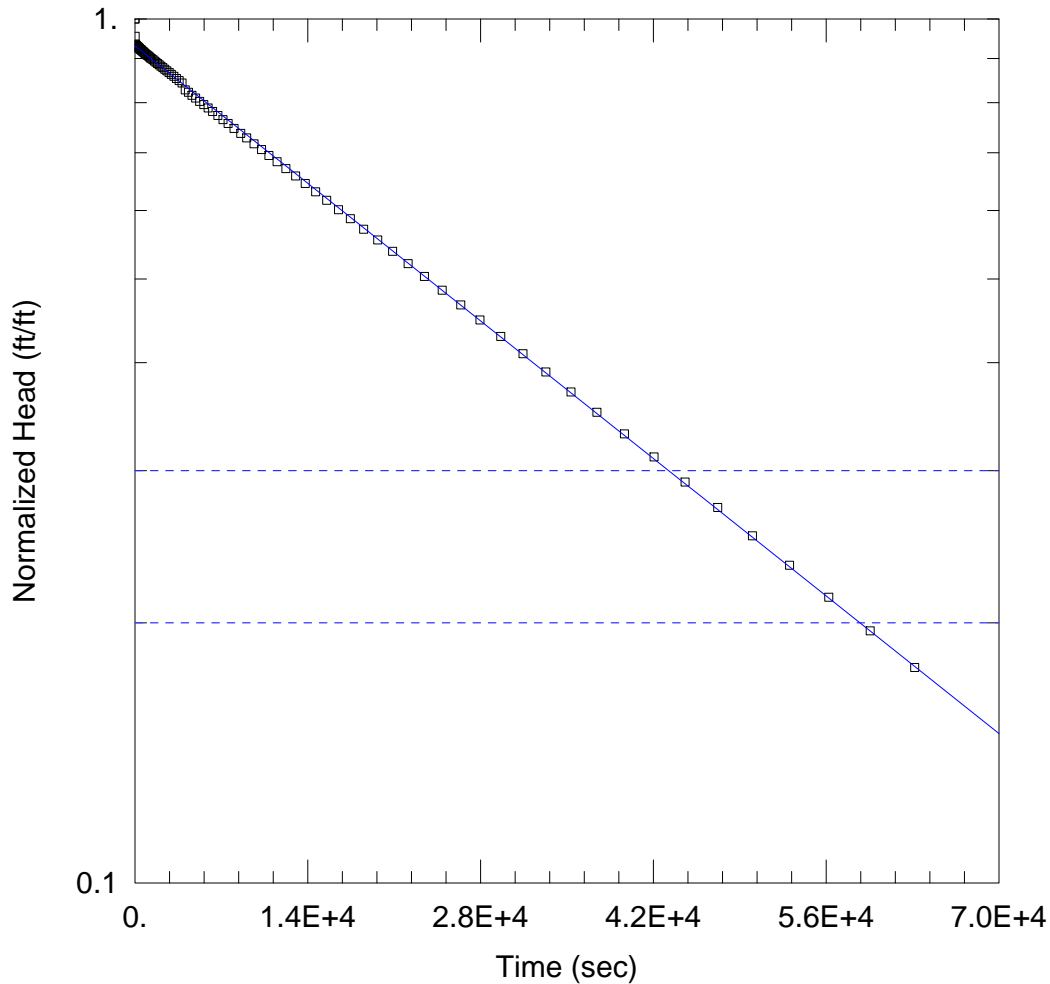
Initial Displacement: 7.87 ft
 Total Well Penetration Depth: 10. ft
 Casing Radius: 0.083 ft

Static Water Column Height: 8.11 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 0.004164 ft/day

Solution Method: Hvorslev
 y0 = 5.586 ft



PZ-68 TEST1

Data Set: N:\...\PZ-68 Test 1 BR.aqt
Date: 10/28/22

Time: 13:57:54

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Georgia Power
Project: GW8862
Location: Plant Branch
Test Well: PZ-68
Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 42.12 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-68 Test 1)

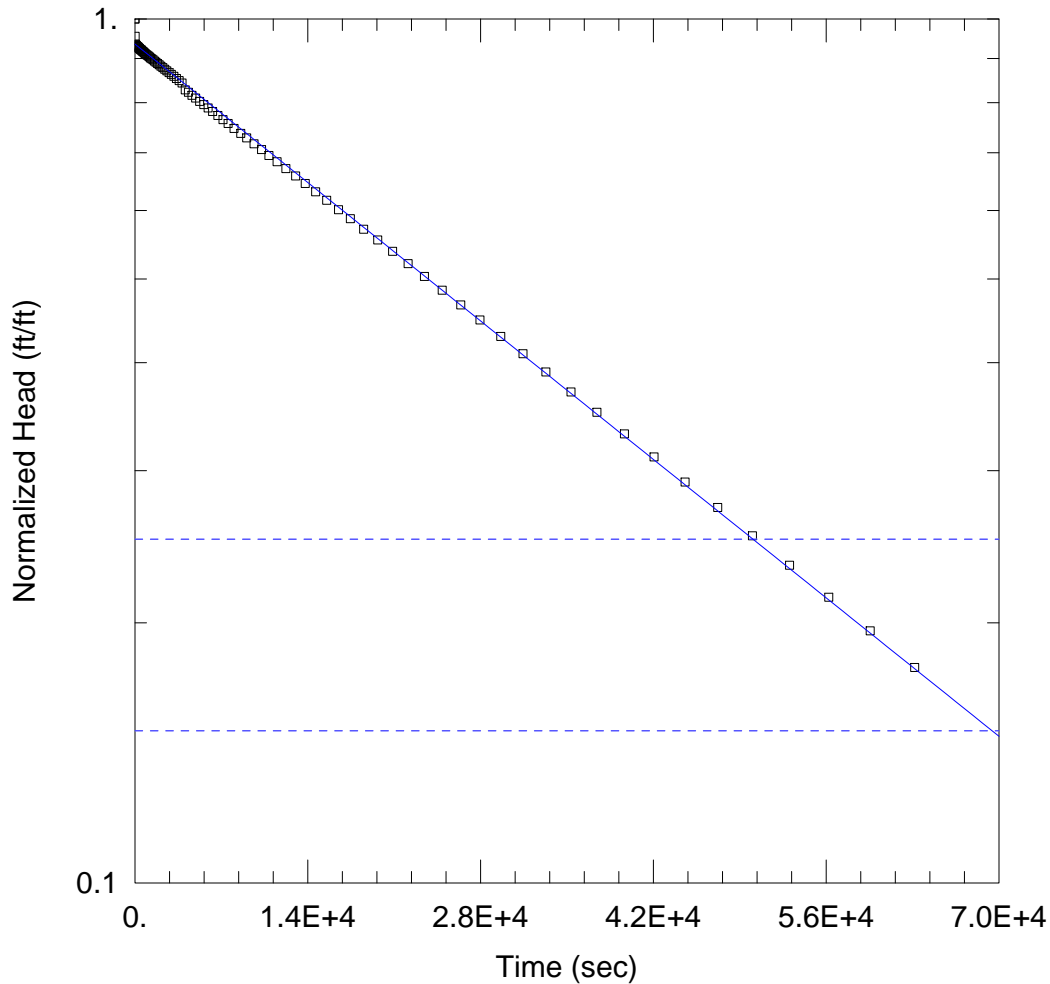
Initial Displacement: 17.88 ft
Total Well Penetration Depth: 41.82 ft
Casing Radius: 0.083 ft

Static Water Column Height: 42.12 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.00303 ft/day

Solution Method: Bower-Rice
y0 = 16.64 ft



PZ-68 TEST1

Data Set: N:\...\PZ-68 Test 1 HS.aqt
 Date: 10/28/22

Time: 13:58:44

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-68
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 42.12 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-68 Test 1)

Initial Displacement: 17.88 ft

Static Water Column Height: 42.12 ft

Total Well Penetration Depth: 41.82 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

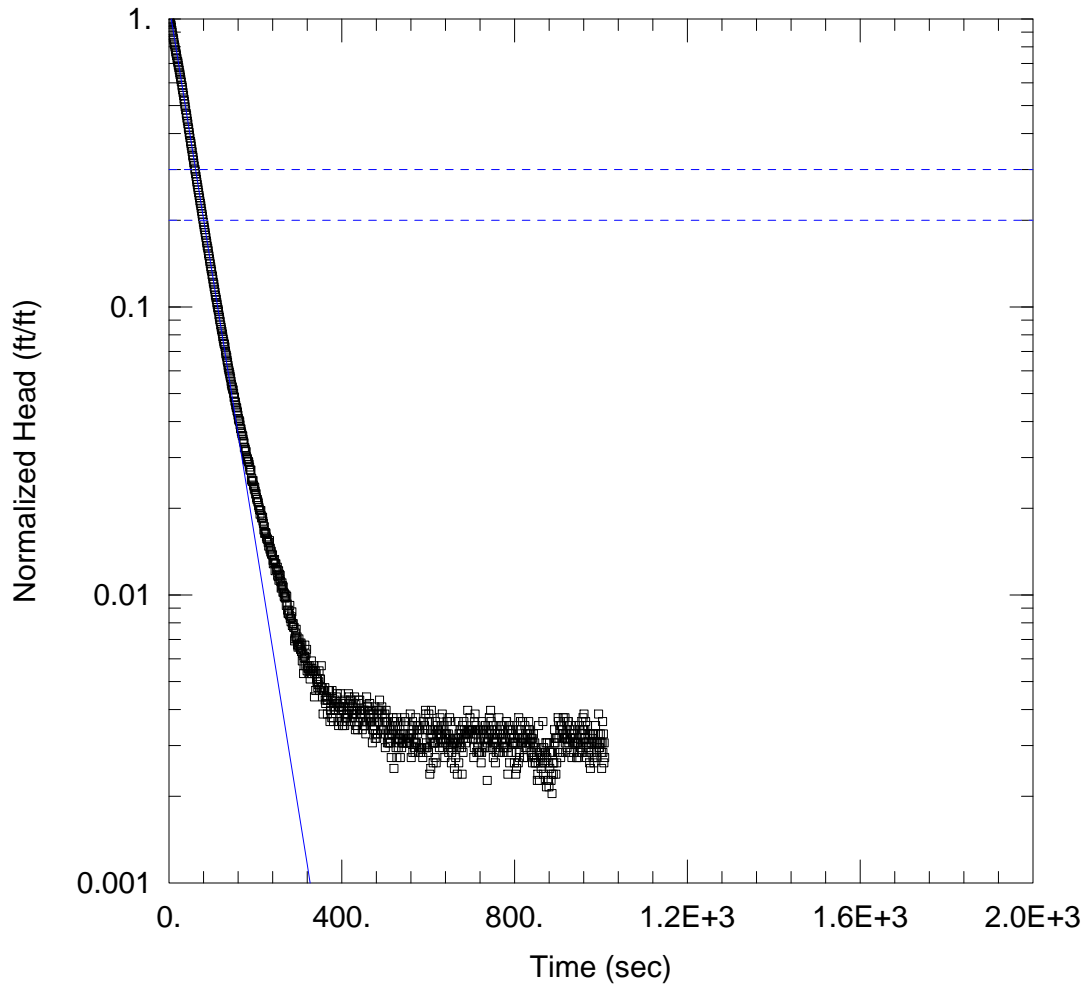
SOLUTION

Aquifer Model: Unconfined

Solution Method: Hvorslev

K = 0.0033 ft/day

y0 = 16.72 ft



PZ-69 TEST 1

Data Set: N:\...\PZ-69 Test 1 BR.aqt
 Date: 10/28/22

Time: 14:09:34

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-69
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 16.29 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-69 Test 1)

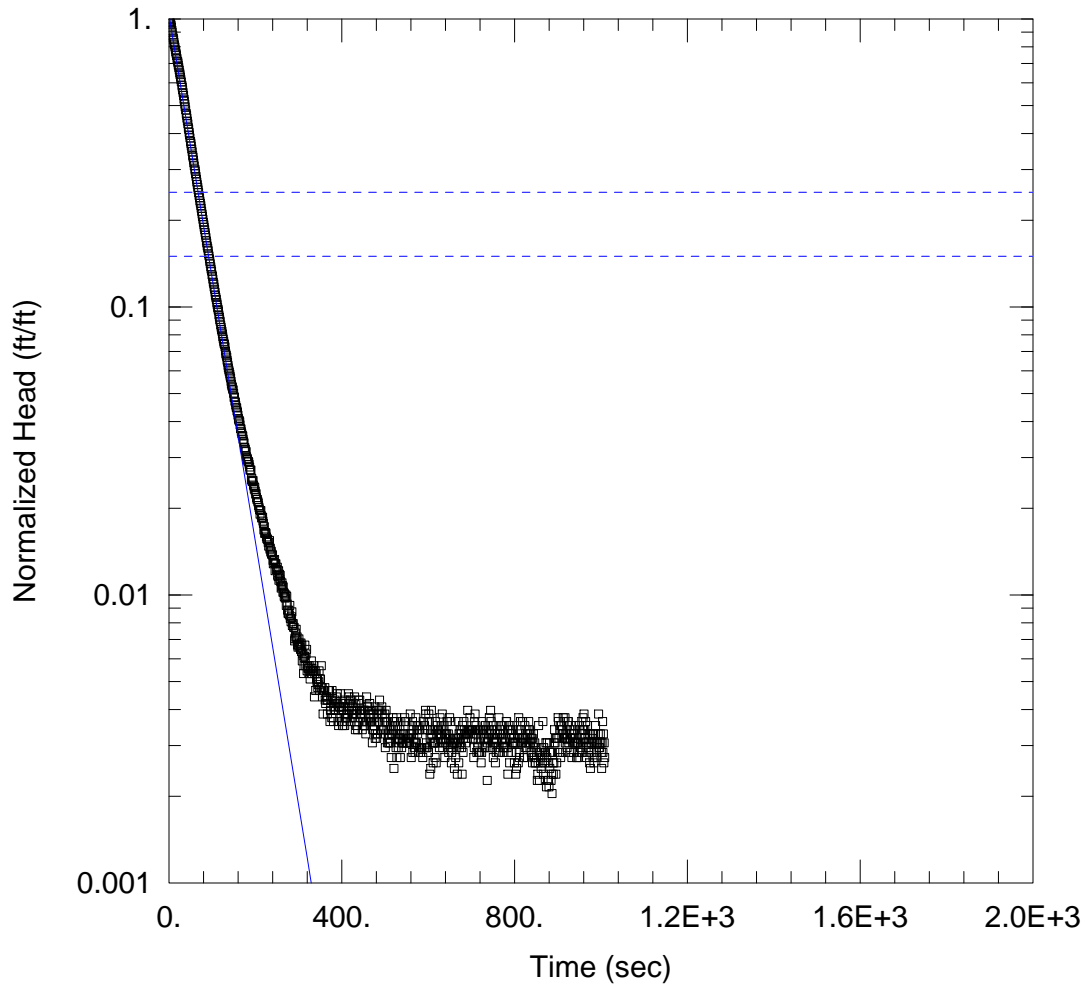
Initial Displacement: 8.81 ft
 Total Well Penetration Depth: 15.99 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 16.29 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 2.178 ft/day

Solution Method: Bower-Rice
 y0 = 9.924 ft



PZ-69 TEST 1

Data Set: N:\...\PZ-69 Test 1 HS.aqt
 Date: 10/28/22

Time: 14:10:15

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-69
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 16.29 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-69 Test 1)

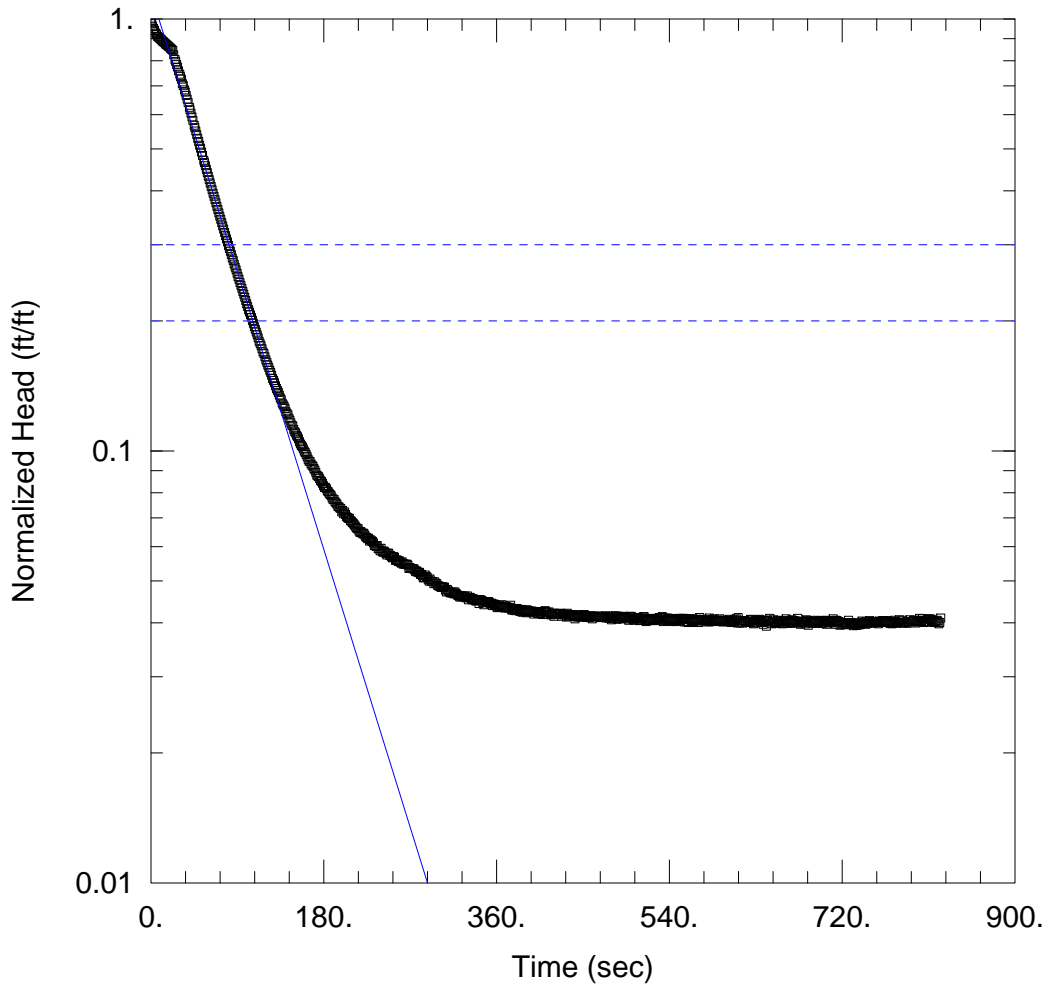
Initial Displacement: 8.81 ft
 Total Well Penetration Depth: 15.99 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 16.29 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 2.637 ft/day

Solution Method: Hvorslev
 y0 = 9.093 ft



PZ-69 TEST 2

Data Set: N:\...\PZ--69 Test 2 BR.aqt
 Date: 10/28/22

Time: 15:25:29

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-69
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 16.29 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-69 Test 2)

Initial Displacement: 10.33 ft

Static Water Column Height: 16.29 ft

Total Well Penetration Depth: 15.99 ft

Screen Length: 10 ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

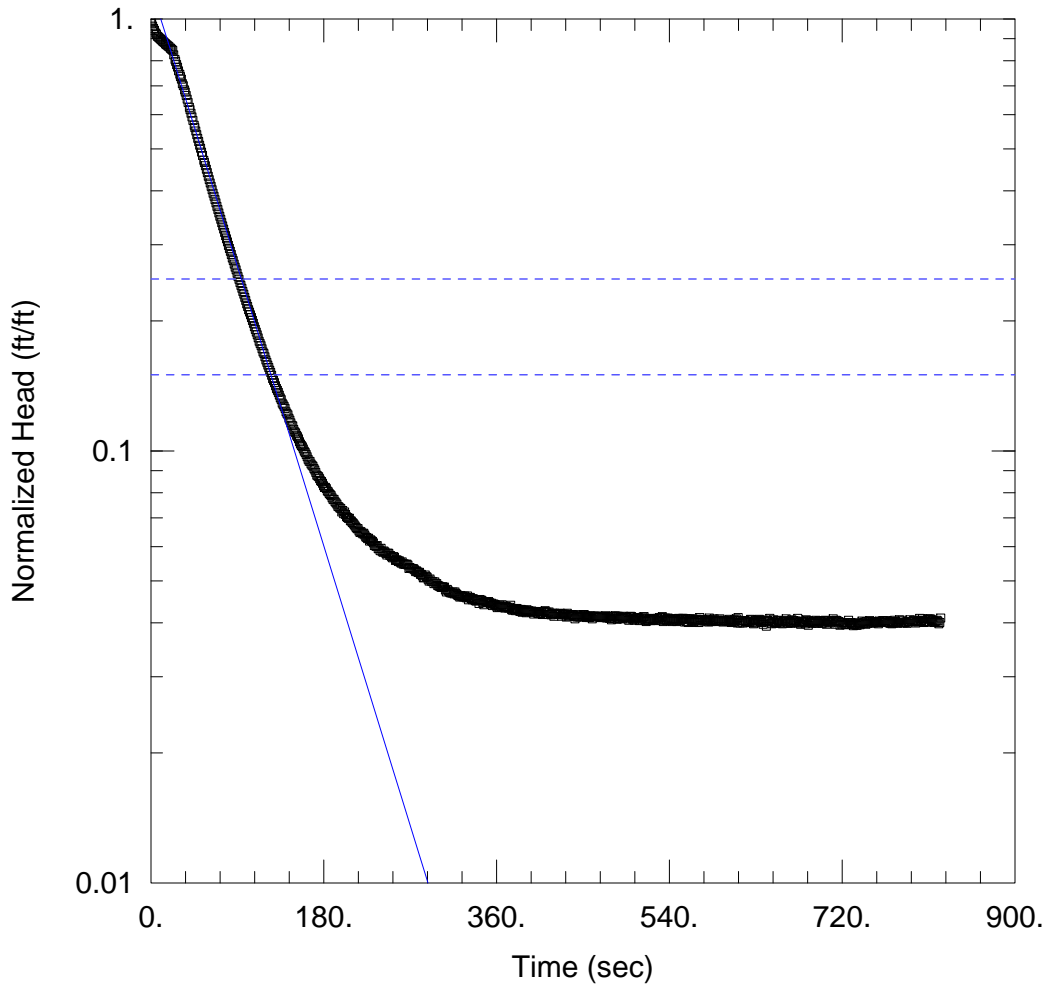
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.667 ft/day

y0 = 11.82 ft



PZ-69 TEST 2

Data Set: N:\...\PZ--69 Test 2 HS.aqt
 Date: 10/28/22

Time: 15:26:05

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-69
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 16.29 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-69 Test 2)

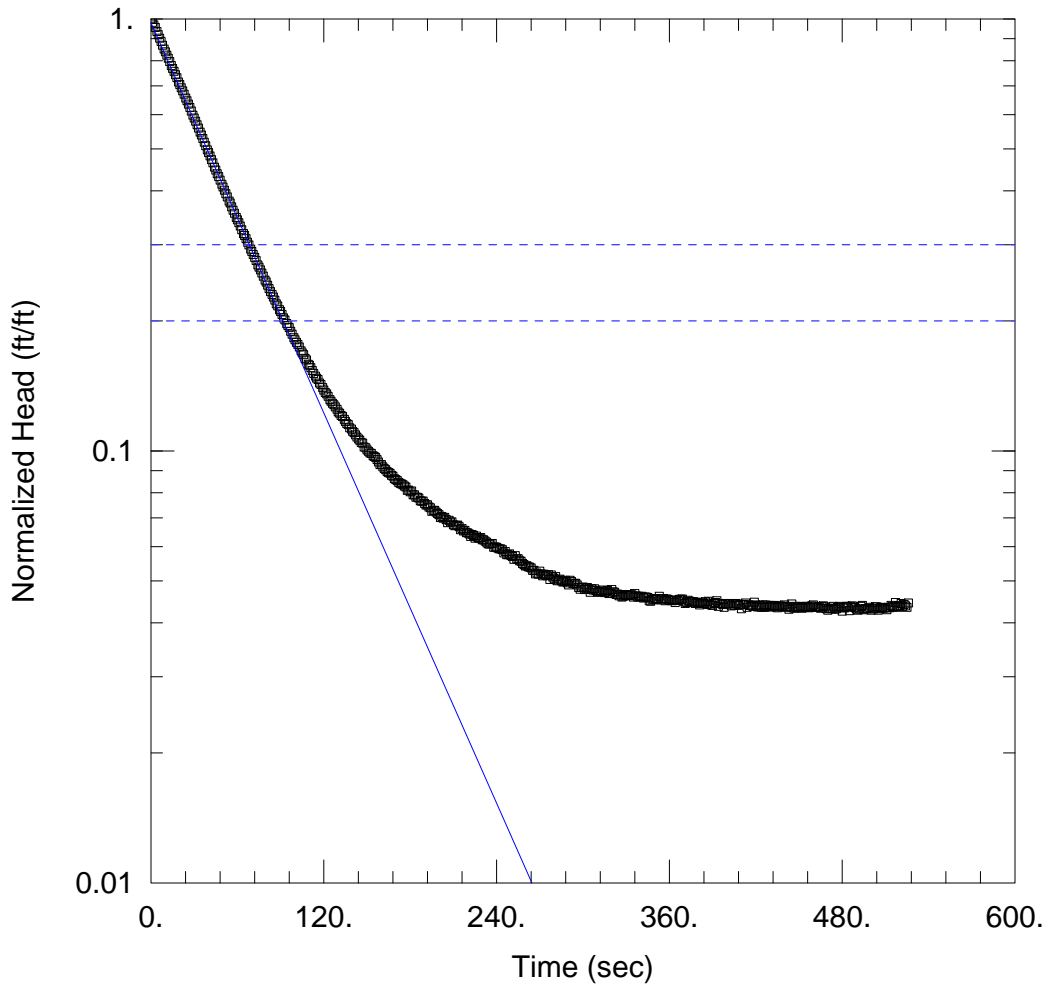
Initial Displacement: 10.33 ft
 Total Well Penetration Depth: 15.99 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 16.29 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 2.073 ft/day

Solution Method: Hvorslev
 y0 = 12.26 ft



PZ-69 TEST 3

Data Set: N:\...\PZ-69 Test 3 BR.aqt
 Date: 10/28/22

Time: 15:29:59

PROJECT INFORMATION

Company: Geosyntec Consultants
 Client: Georgia Power
 Project: GW8862
 Location: Plant Branch
 Test Well: PZ-69
 Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 16.29 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-69 Test 3)

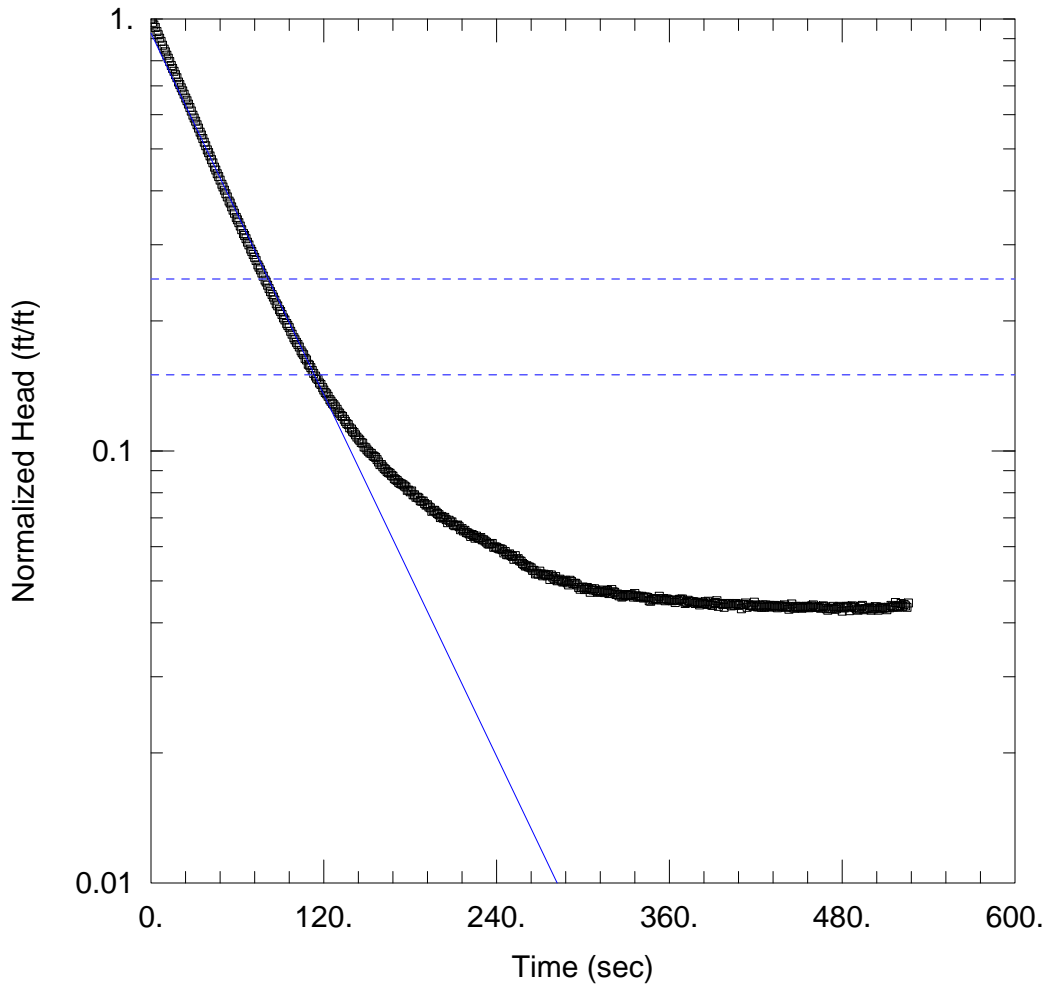
Initial Displacement: 9.09 ft
 Total Well Penetration Depth: 15.99 ft
 Casing Radius: 0.083 ft

Static Water Column Height: 16.29 ft
 Screen Length: 10. ft
 Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
 K = 1.756 ft/day

Solution Method: Bower-Rice
 y0 = 8.905 ft



PZ-69 TEST 3

Data Set: N:\...\PZ-69 Test 3 HS.aqt
Date: 10/28/22

Time: 15:30:27

PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Georgia Power
Project: GW8862
Location: Plant Branch
Test Well: PZ-69
Test Date: 10/24/2022

AQUIFER DATA

Saturated Thickness: 16.29 ft

Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (PZ-69 Test 3)

Initial Displacement: 9.09 ft
Total Well Penetration Depth: 15.99 ft
Casing Radius: 0.083 ft

Static Water Column Height: 16.29 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 2.011 ft/day

Solution Method: Hvorslev
y0 = 8.422 ft