Prepared for



## **Georgia Power Company**

241 Ralph McGill Blvd NE Atlanta, Georgia 30308

# 2023 ANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

# PLANT BRANCH ASH POND E

Prepared by



engineers | scientists | innovators

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Project Number GW8862

July 2023

### **CERTIFICATION STATEMENT**

This 2023 Annual Groundwater Monitoring and Corrective Action Report, Plant Branch Ash Pond E has been prepared in compliance with 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 391-3-4-.01.



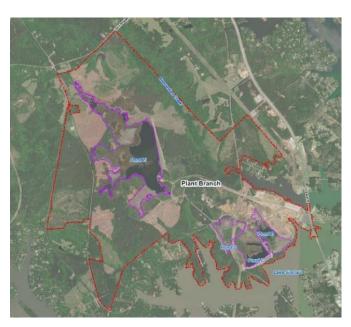
Lauren E. Fitzgerald Georgia Professional Engineer No. 048960 July 31, 2023

Date

### **SUMMARY**

This summary of the 2023 Annual 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 June 2023 (referred herein as the "annual reporting period") at the Georgia Power Company (Georgia Power) Plant Branch Ash Pond E (AP-E) (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 6<sup>1</sup> of the United States 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 coalfired electric generating facility until its decommissioning in July 2015, at which point it ceased producing electricity. CCR materials resulting power generation historically transferred and stored at five on-property ash ponds (AP-) (i.e., A, B, C, D, and E). Ash Pond A was taken out of service in the late 1960s and was closed by the removal of CCR materials in April 2016. Ash Ponds B, C, D, and E are inactive,



Plant Branch and the Site

and will be closed by removal and relocation of its stored CCR to a fully lined and permitted landfill located on the plant property. As required in the CCR Rule, this Annual 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-E. The other CCR unit (AP-BCD) at Plant Branch are reported separately.

<sup>&</sup>lt;sup>1</sup> 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. The Site entered into an assessment of corrective measures on July 21, 2022, following GA EPD's nonconcurrence letter dated April 22, 2022 with an alternate source demonstration (ASD) submitted in July 2020. During the 2023 annual 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 semiannual assessment monitoring 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.

During this annual reporting period, the semiannual assessment monitoring events for AP-E were conducted by Atlantic Coast Consulting (ACC) in August 2022 and January 2023. In order to meet the requirements of GA EPD Rule 391-3-4-.10(6) and 40 CFR 257.95 (b) and (d)(1), these semiannual events included sampling and analysis of all Appendix III and Appendix IV constituents. Samples were collected and submitted to GEL Laboratories, 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 III<sup>2</sup> and Appendix IV<sup>3</sup> constituents in wells listed in the tables below.

Appendix III Parameter	August 2022
Boron	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Boron	BRGWC-36S, BRGWC-38S
Calcium	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Calcium	BRGWC-36S, BRGWC-38S
Chloride	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Cilionae	BRGWC-36S, BRGWC-38S
Fluoride	BRGWC-17S, BRGWC-36S, BRGWC-38S
pH (lower limit)	BRGWC-33S, BRGWC-34S, BRGWC-36S, BRGWC-37S,
pri (lower lillit)	BRGWC-38S

<sup>&</sup>lt;sup>2</sup> Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

<sup>&</sup>lt;sup>3</sup> Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228

# Geosyntec<sup>></sup>

consultants

Sulfate	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S
TDS	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S
Appendix IV Parameter	August 2022
Beryllium	BRGWC-38S
Cobalt	BRGWC-33S, BRGWC-38S

Appendix III Parameter	January 2023
Boron	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Boron	BRGWC-36S, BRGWC-38S
Calcium	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Calcium	BRGWC-36S, BRGWC-38S
Chloride	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Cilionae	BRGWC-36S, BRGWC-38S
Fluoride	BRGWC-17S, BRGWC-33S, BRGWC-35S, BRGWC-38S
pH (lower limit)	BRGWC-33S, BRGWC-38S
Sulfate	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
Surrate	BRGWC-36S, BRGWC-38S
TDS	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,
103	BRGWC-36S, BRGWC-38S
Appendix IV	January 2022
Parameter	January 2023
Beryllium	BRGWC-38S
Cobalt	BRGWC-33S, BRGWC-38S

Based on review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program from July 2022 through June 2023, 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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Semiannual Remedy Selection and Design Progress Report



### LIST OF ACRONYMS

ACC Atlantic Coast Consulting, Inc.
ACM Assessment of Corrective Measures

AP ash pond

ASD Alternate Source Demonstration

CCR coal combustion residuals
CFR Code of Federal Regulations

DO dissolved oxygen ft/day feet per day ft/ft feet per foot

GA 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
Kh 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

PL prediction limit

PWR partially weathered rock

QA/QC Quality Assurance/Quality Control 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 2023 Annual Groundwater Monitoring and Corrective Action Report to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Branch (Site) Ash Pond E (AP-E) for the reporting period of July 2022 through June 2023 (referred to herein as the "annual reporting period").

Groundwater monitoring and reporting for AP-E 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, AP-E is not subject to the federal monitoring requirements, though GA EPD rule 391-3-4-.10(6)(a) promulgates the groundwater monitoring and corrective action regulations stipulated in the federal CCR Rule § 257.90 through § 257.95. 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-E on November 13, 2019. Statistically significant levels (SSLs) of Appendix IV parameters beryllium (Be) and cobalt (Co) were identified during the initial assessment monitoring event. Pursuant to § 257.95 as adopted by 391-3-4-.10, an Alternate Source Demonstration (ASD) was prepared in July 2020 in response to the SSLs identified for beryllium and cobalt in groundwater monitoring wells (Golder 2020a). GA EPD issued a letter of non-concurrence associated with the ASD submittal in April 2022 and Georgia Power subsequently initiated an assessment of corrective measures (ACM) program for AP-E on July 21, 2022. Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-E in accordance with the assessment monitoring

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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 beryllium in BRGWC-38S and cobalt in BRGWC-33S and BRGWC-38S have been identified for each assessment monitoring event subsequent to the November 2019 initiation, and documented in the associated groundwater monitoring and corrective action reports.

### 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 pond E (AP-E) is a valley-fill containment area formed by the construction of an earthen embankment dike at the eastern portion of the ash pond. AP-E is located on the northwest corner of the Site surrounded by rural land on each side (**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 each ash pond is shown on **Figure 1**. The former AP-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 AP-E. AP-BCD and AP-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 AP-E. As previously noted, groundwater monitoring activities completed at the multi-unit AP-BCD are reported separately.

### 1.2 Regional Geology and Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at AP-E as described in the *Hydrogeologic Assessment Report Revision* 01 - AP-E (HAR Rev 01) submitted to GA EPD in April 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-E borings is variable, ranging from a few feet to as much as 90 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-E 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 well 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. Construction details for the wells and piezometers associated with evaluating groundwater flow and/or quality conditions in vicinity of AP-E are listed in **Table 1**. The locations of the detection monitoring wells (formerly known as "compliance monitoring wells") and assessment monitoring wells (formerly known as "delineation wells") are shown on **Figure 2**. Pursuant to § 257.195(g)(1)(iv), assessment monitoring wells will continue to be sampled concurrently with the detection monitoring well network as part of the ongoing assessment groundwater monitoring program. An on-site network of piezometers is used to gauge water levels to define groundwater flow direction and gradients and to understand potential changes related to seasonal fluctuations or site The piezometers may be sampled as needed to support the AP-E ACM The piezometer locations are shown on the potentiometric surface maps generated for this annual reporting period (Figures 3 and 4, discussed in detail in Section 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 <u>Monitoring Well Installation and Maintenance</u>

One assessment monitoring well (PZ-70I) was installed in August 2022 to provide additional data to characterize groundwater quality and flow conditions downgradient of AP-E. The well installation report that includes detailed boring and well construction logs for the installation of PZ-70I 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 August 2022 and January 2023, the networks were inspected, necessary corrective actions were identified and subsequently completed, as documented in **Appendix B**. This documentation was prepared under the direction of a professional geologist or engineer registered in the State of Georgia.

### 2.2 <u>Assessment Monitoring</u>

Pursuant to § 257.94(e)(3), an assessment monitoring program was initiated for AP-E 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. Georgia Power submitted an Alternate Source Demonstration (ASD) to GA EPD for the observed SSLs (Golder, 2020) that was not accepted by GA EPD in April 2022. Within 90 days of receiving GA EPD's nonconcurrence letter, Georgia Power initiated the ACM program for AP-E on July 21, 2022. Georgia Power completed the Assessment of Corrective Measures Report (ACM Report) (Geosyntec, 2022) for AP-E at Plant Branch on December 16, 2022. In accordance with § 257.96(b), groundwater continues to be monitored at AP-E under the assessment monitoring program while the ACM phase is implemented.

In support of the routine assessment monitoring program, the semiannual assessment monitoring evens were conducted in August 2022 and January 2023. The wells sampled during these two events and the dates associated with the events are summarized in **Table** 



**2**. The collected groundwater samples were 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**. Details of these events and analytical results are discussed in Section 3.

### 2.3 Additional 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-E. Supplemental groundwater samples were collected from the monitoring well network during the August 2022 and January 2023 assessment monitoring events and were analyzed for major cations (calcium [Ca], magnesium [Mg], potassium [K], and sodium [Na]) and major anions (chloride [Cl], sulfate [SO<sub>4</sub>], and alkalinity [i.e., bicarbonate, carbonate, total] [HCO<sub>3</sub>]) as well as iron and manganese. 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**.

### 3.0 SAMPLING METHODOLOGY AND ANALYSES

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

### 3.1 <u>Groundwater Level Measurement</u>

Prior to each semiannual assessment monitoring event, a synoptic round of depth-to-groundwater-level measurements were recorded from all the wells and piezometers (including those associated with AP-BCD and the proposed new CCR landfill area) and used to calculate the corresponding groundwater elevations. The calculated groundwater elevations obtained in August 2022 and January 2023 at AP-BCD and AP-E are presented in **Table 3**. The surface water elevations for Lake Sinclair are obtained from Georgia Power.

The groundwater and surface water elevation data were used to prepare potentiometric surface map for the August 2022 and January 2023 events, which are presented on **Figures 3** and **4**, respectively. The general direction of groundwater flow across AP-E is to the east-southeast. This groundwater flow pattern is consistent with previous observations.

### 3.2 Groundwater Gradient and Flow Velocity

The horizontal groundwater hydraulic gradients within the uppermost aquifer beneath AP-E were calculated using the groundwater elevation data from the August 2022 and January 2023 events. Horizontal hydraulic gradients were calculated along the flow paths between BGWA-5S and BRGWC-33S along the northern extent of AP-E, and between PZ-4I and BRGWC-38S along the southern extent of AP-E. The supporting calculations are presented in **Table 4.** The calculated average hydraulic gradients associated with these well pairs for the annual reporting period are 0.005 feet per foot (ft/ft) and 0.010 ft/ft, respectively (**Table 4**). The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figures 3** and **4**.

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

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Horizontal hydraulic conductivity (K<sub>h</sub>) values used in flow calculations range from 0.43 to 18.84 feet per day (ft/day) and were based on slug test data presented in the 2020 *Hydrogeologic Assessment Report Revision 01* (Geosyntec, 2020) and collected subsequently. The highest observed K<sub>h</sub> estimate from each well pair was 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-E 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 and January 2023 events, horizontal flow velocities were calculated as below.

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

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

where:

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

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

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

 $h_1$  and  $h_2$  = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

 $n_e$  = Effective porosity

The supporting calculations for the August 2022 and January 2023 semiannual events are presented in **Table 4.** The average groundwater flow velocity at the Site for this annual reporting period is approximately 0.25 ft/day across AP-E. The observed groundwater flow velocities are generally consistent with expected velocities, are consistent with historical observations, and confirm the groundwater monitoring system as properly located to monitor the uppermost aquifer for AP-E 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 ± 5%.
- ±0.2 milligrams per liter (mg/L) or ±10%, whichever is greater for DO > 0.5 mg/L. No criterion applies if DO < 0.5 mg/L, record only.
- Turbidity measured less than 5 nephelometric turbidity units (NTU) or measured between 5 and 10 NTU following three hours of purging.

Following purging, and once stabilization was achieved, unfiltered samples were collected into appropriately preserved laboratory-supplied sample containers. Sample bottles were placed in ice-packed coolers and submitted to GEL Laboratories, LLC. (GEL Laboratories) in Charleston, South Carolina following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the August 2022 and January 2023 assessment monitoring event are provided in **Appendix C**.

During the January 2023 event, one low yielding well was encountered. PZ-52D purged dry and required sample collection over multiple days due to low recharge rates. Field data were not collected on 25 January 2023 and 2 February 2023 due to insufficient



groundwater volume. Field data that was collected on 3 February 2023 is provided on field sampling forms in **Appendix C**.

### 3.4 <u>Laboratory Analyses</u>

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

The analytical results from the August 2022 and January 2023 monitoring events are summarized in **Table 5.** 

### 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 Groundwater Protection Standards (GWPS) for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the August 2022 and January 2023 assessment monitoring events. The data were analyzed by Groundwater Stats Consulting (GSC); the reports generated from the analyses are provided in **Appendix D**.

### 4.1 <u>Statistical Methods</u>

The selected statistical method for AP-E 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<sup>TM</sup> groundwater statistical software was used to perform the statistical analyses. Sanitas<sup>TM</sup> is a decision-support software package, which 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 6**. 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 6** 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 . 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 PL, 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

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

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

USEPA revised the 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 defined by the below criteria. These criteria were adopted into the GA EPD Rules for Solid Waste Management 391-3-4-.10 on February 22, 2022.

- (1) The 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 6**.

### 4.2 Statistical Analyses Results

Based on review of the Appendix III statistical analysis of August 2022 and January 2023 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 assessment monitoring events:

### **4.2.1** August 2022 Data

• Beryllium: BRGWC-38S

• Cobalt: BRGWC-33S and BRGWC-38S

Wells with SSLs were further evaluated using the Sen's Slope/Mann Kendall trend test (**Appendix D**). A statistically significant decreasing trend of beryllium and cobalt was identified during this reporting period in BRGWC-38S. A statistically significant decreasing trend of cobalt was identified during this reporting period in BRGWC-33S.

### 4.2.2 January 2023 Data

• Beryllium: BRGWC-38S

• Cobalt: BRGWC-33S and BRGWC-38S

Wells with SSLs were further evaluated using the Sen's Slope/Mann Kendall trend test (**Appendix D**). A statistically significant decreasing trend of beryllium and cobalt was identified during this reporting period in BRGWC-38S. A statistically significant decreasing trend of cobalt was identified during this reporting period in BRGWC-33S.



### 4.2.3 Summary of Statistical Analyses

The SSLs identified for the annual reporting period are consistent with the previous annual reporting period with no new SSLs or statistically significant trends identified. The statistically decreasing concentration trends for beryllium and cobalt (**Appendix D**) have been consistent with the previous reporting events and reflects ongoing natural attenuation of these constituents in the aquifer media at AP-E.



### 5.0 NATURE AND EXTENT

Based on the groundwater data presented herein, the SSLs for wells and constituents identified in Section 4.2 have been horizontally and vertically delineated to below the established GWPS and are contained within the property boundary. Delineation is determined by confidence intervals (statistical analysis) prepared for the assessment wells discussed below. Results of the statistical analyses are provided in **Appendix D**.

The identified SSLs of beryllium and cobalt in BRGWC-38S are horizontally and vertically delineated to below the GWPS by PZ-70I and PZ-53D, respectively. Similarly, the SSL of cobalt in BRGWC-33S is horizontally and vertically delineated by PZ-13S and PZ-52D, respectively. Additional details regarding the delineation status and data are discussed in the *Semiannual Remedy Selection and Design Progress Report* (**Appendix E**).

### 6.0 MONITORING PROGRAM STATUS

### 6.1 Assessment Monitoring Status

Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at APE in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts are implemented to address SSL concentrations of beryllium and cobalt in monitoring well BRGWC-38S and cobalt in monitoring well BRGWC-33S. 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

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

- i) The current conceptual site model (CSM) applicable to evaluating groundwater corrective measures proposed in the ACM Report (Geosyntec, 2022).
- 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.
- iv) The planned activities and anticipated schedule for the following semiannual reporting period.

In accordance with § 257.97(a), Georgia Power will include future semiannual progress reports with each groundwater monitoring and corrective action report to document results associated with additional data collection, and present progress toward selection and design of a groundwater remedy.



### 7.0 CONCLUSIONS AND FUTURE ACTIONS

This 2023 Annual Groundwater Monitoring and Corrective Action Report for Plant Branch AP-E was prepared to fulfill the requirements of the CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. The groundwater flow direction and rates interpreted during the August 2022 and January 2023 monitoring events are generally consistent with historical evaluations. Statistical analysis of the groundwater monitoring data for the AP-E well network confirmed the continued presence of SSLs of beryllium and cobalt in well BRGWC-38S and cobalt in well BRGWC-33S above corresponding GWPS. Based on the most current data from this reporting period, as described in Section 5, the SSLs of beryllium and cobalt are vertically and horizontally delineated downgradient to below the GWPS. 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-E groundwater under the assessment monitoring program and evaluate the remedies presented in the ACM Report (Geosyntec, 2022). The next routine semiannual assessment monitoring event for AP-E is scheduled for August 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.
- Geosyntec Consultants, 2022. Assessment of Corrective Measures Report, Georgia Power – Plant Branch, Putnam County, Georgia. December 2022.
- Geosyntec Consultants, 2023. Risk Evaluation Report, Georgia Power Plant Branch, Putnam County, Georgia. March 2023.
- Golder Associates, 2019. 2019 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Plant Branch, Milledgeville, Georgia, August 2019.
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- USEPA, 2011. *Region IV Data Validation Standard Operating Procedures*. Science and Ecosystem Support Division. Region IV. Athens, GA. September 2011.
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# **TABLES**

**Table 1**Monitoring Well Network Summary
Plant Branch AP-E, Putnam County, Georgia

Well ID	Hydraulic Location	Installation Date	Easting (1)	Northing (1)	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation <sup>(2)</sup> (ft)	Well Depth (ft BGS)	Screen Interval Length (ft)
AP-BCD Detection M	onitoring Well Network									
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
AP-E Detection Moni	toring Well Network									
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
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

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Plant Branch AP-E, Putnam County, Georgia

Well ID	Hydraulic Location	Installation Date	Easting (1)	Northing (1)	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation <sup>(2)</sup> (ft)	Well Depth (ft BGS)	Screen Interval Length (ft)
PZ-66I	Downgradient B	9/08/2022	2562134.65	1161747.91	380.9	383.52	323.1	313.1	68.3	10
PZ-68D	Downgradient D	9/06/2022	2558512.90	1160690.48	402.5	405.25	328.8	318.8	84.3	10
PZ-74I	Downgradient D	5/24/2023	2557970.94	1160189.30	368.3	371.13	330.5	320.5	48.0	10
PZ-75I	Downgradient D	6/27/2023	2558343.03	1160009.37	354.9	357.86	337.9	327.9	27.4	10
AP-E Assessment Mont	itoring 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
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	1159493.23	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	1160392.43	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 A  Downgradient	7/26/2016	2561626.45	1162400.93	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	347.5	338.5	24.0	10
PZ-281 PZ-31S		7/24/2016	2557971.75	1160936.81	362.5	376.77	348.5	334.8	39.5	10
PZ-318 PZ-39*	Downgradient Downgradient	7/30/2016	2557460.52		432.0	434.78	397.3	387.3	39.5 44.7	10
P719"	Downgradient	//30/2010	Z33/40U.3Z	1163675.53	432.0	434./8	397.3	38/.3	44./	10

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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-69I	Downgradient D	8/31/2022	2558447.46	1160311.39	377.0	379.36	348.2	338.2	39.3	10
PZ-71I	Downgradient D	5/2/2023	2558230.83	1160295.35	382.6	385.34	352.8	342.8	40.0	10
PZ-72I	Downgradient D	5/9/2023	2558394.65	1160133.29	365.9	368.57	342.0	332.0	34.2	10
PZ-73I	Downgradient D	5/10/2023	2558559.30	1160226.37	349.9	352.63	334.9	324.9	25.3	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

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Notes:

ft = feet

ft BGS = feet below ground surface

<sup>\* =</sup> piezometers that were abandoned between May and June 2023

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

<sup>(2)</sup> Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).

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

Well ID	Hydraulic Location	Aug. 23, - Sept. 1, 2022	Jan. 24, - Feb. 2, 2023	Status of Monitoring Well	
Purpose of	Sampling Event:	Assessment	Assessment		
<b>Detection Monitoring Well</b>	Network				
BRGWA-2S	Upgradient	X	X	Assessment	
BRGWA-2I	Upgradient	X	X	Assessment	
BRGWA-5S	Upgradient	X	X	Assessment	
BRGWA-5I	Upgradient	X	X	Assessment	
BRGWA-6S	Upgradient	X	X	Assessment	
BRGWC-17S	Downgradient	X	X	Assessment	
BRGWC-33S	Downgradient	X	X	Assessment	
BRGWC-34S	Downgradient	X	X	Assessment	
BRGWC-35S	Downgradient	X	X	Assessment	
BRGWC-36S	Downgradient	X	X	Assessment	
BRGWC-37S	Downgradient	X	X	Assessment	
BRGWC-38S	Downgradient	X	X	Assessment	
Assessment Monitoring We	ell				
PZ-13S	Downgradient	X	X	Assessment	
PZ-52D	Downgradient	X	X	Assessment	
PZ-53D	Downgradient	X	X	Assessment	
PZ-70I	Downgradient	X	X	Assessment	

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

	Top of Casing	August	22, 2022	January	23, 2023
Well ID	Elevation (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)
AP-BCD Detection Monitori	ing Well Network	•		•	
BRGWA-2S	443.20	12.71	430.49	10.42	432.78
BRGWA-2I	443.14	12.56	430.58	10.45	432.69
BRGWA-5S	443.86	12.17	431.69	12.53	431.33
BRGWA-5I	443.79	12.08	431.71	12.38	431.41
BRGWA-6S	458.96	26.92	432.04	25.73	433.23
BRGWA-12S*	434.64	49.04	385.60	49.96	384.68
BRGWA-12I*	434.39	48.72	385.67	49.65	384.74
BRGWA-23S	428.24	39.10	389.14	40.78	387.46
BRGWC-25I	357.37	11.12	346.25	10.18	347.19
BRGWC-27I	366.86	10.52	356.34	10.49	356.37
BRGWC-29I	353.23	10.65	342.58	9.91	343.32
BRGWC-30I	352.61	4.78	347.83	4.87	347.74
BRGWC-32S	406.39	40.76	365.63	42.28	364.11
BRGWC-45	384.58	15.13	369.45	10.93	373.65
BRGWC-47	411.20	27.78	383.42	28.83	382.37
BRGWC-50	381.35	38.22	343.13	38.21	343.14
BRGWC-52I	383.87	39.00	344.87	39.67	344.20
AP-E Detection Monitoring	Well Network				
BRGWA-2S	443.20	12.71	430.49	10.42	432.78
BRGWA-2I	443.14	12.56	430.58	10.45	432.69
BRGWA-5S	443.86	12.17	431.69	12.53	431.33
BRGWA-5I	443.79	12.08	431.71	12.38	431.41
BRGWA-6S	458.96	26.92	432.04	25.73	433.23
BRGWC-17S	365.32	5.92	359.40	5.55	359.77
BRGWC-33S	416.68	8.96	407.72	10.27	406.41
BRGWC-34S	391.96	2.68	389.28	2.68	389.28
BRGWC-35S	366.31	2.03	364.28	1.75	364.56
BRGWC-36S	389.84	3.95	385.89	4.16	385.68
BRGWC-37S	447.05	52.64	394.41	54.02	393.03
BRGWC-38S	432.24	22.95	409.29	22.56	409.68
AP-BCD Assessment Monito	8				
PZ-44	383.04	28.06	354.98	27.78	355.26
PZ-50D	380.86	38.46	342.40	38.67	342.19
PZ-51S	380.27	38.35	341.92	38.77	341.50
PZ-51I	380.52	38.40	342.12	38.15	342.37
PZ-51D	380.75	38.08	342.67	38.19	342.56
PZ-57I	382.50	36.38	346.12	36.68	345.82
PZ-58I	382.27	38.41	343.86	38.66	343.61
PZ-59I	383.49	39.78	343.71	40.08	343.41
PZ-60I	382.61	38.41	344.20	38.40	344.21
PZ-61I	380.64	47.91	332.73	47.27	333.37

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

	Top of Casing	August	22, 2022	January 23, 2023		
Well ID	Elevation (1) (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	
PZ-62I	380.95	39.18	341.77	38.82	342.13	
PZ-63I	381.31	39.48	341.83	39.01	342.30	
PZ-64I	381.94	N/A	N/A	38.64	343.30	
PZ-65I	382.06	N/A	N/A	36.51	345.55	
PZ-66I	383.52	N/A	N/A	36.33	347.19	
PZ-68D	405.25	N/A	N/A	42.61	362.64	
PZ-74I	371.13	N/A	N/A	N/A	N/A	
PZ-75I	357.86	N/A	N/A	N/A	N/A	
AP-E Assessment Monitor	ing Well Network					
PZ-13S	409.97	28.20	381.77	28.41	381.56	
PZ-52D	417.03	10.28	406.75	35.43	381.60	
PZ-53D	434.68	23.39	411.29	22.90	411.78	
PZ-70I	425.70	28.55	397.15	28.61	397.09	
Piezometers	•	•		•		
PZ-1D	463.41	38.82	424.59	40.02	423.39	
PZ-1I	464.71	39.70	425.01	41.38	423.33	
PZ-1S	465.07	38.65	426.42	40.09	424.98	
PZ-3D	487.50	49.37	438.13	49.60	437.90	
PZ-3I	489.49	51.09	438.40	51.83	437.66	
PZ-3S	490.53	Dry		Dry		
PZ-4I	482.98	31.03	451.95	35.43	447.55	
PZ-4S	482.87	Dry		Dry		
PZ-7S	451.57	27.75	423.82	29.37	422.20	
PZ-8S	453.08	25.26	427.82	25.52	427.56	
PZ-9S	469.28	38.08	431.20	38.71	430.57	
PZ-10S	433.85	27.52	406.33	27.56	406.29	
PZ-11S*	393.99	19.92	374.07	20.28	373.71	
PZ-12D*	434.09	78.19	355.90	66.68	367.41	
PZ-14I	422.71	19.55	403.16	19.90	402.81	
PZ-14S	423.31	21.58	401.73	21.90	401.41	
PZ-15I	403.06	9.91	393.15	9.70	393.36	
PZ-15S	402.90	10.22	392.68	9.96	392.94	
PZ-16I	382.45	12.15	370.30	10.95	371.50	
PZ-16S	382.52	12.30	370.22	11.13	371.39	
PZ-17I	365.33	3.07	362.26	2.62	362.71	
PZ-18I	362.55	21.70	340.85	21.08	341.47	
PZ-18S	362.82	21.88	340.94	21.30	341.52	
PZ-19I	371.74	19.25	352.49	18.79	352.95	
PZ-19S	371.42	18.71	352.71	18.25	353.17	
PZ-20I	365.34	17.04	348.30	15.98	349.36	
PZ-20S	365.41	17.17	348.24	16.16	349.25	
PZ-21I	358.92	12.65	346.27	11.63	347.29	
PZ-21S	358.52	12.14	346.38	11.22	347.30	
PZ-23I	427.74	38.54	389.20	39.81	387.93	

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

	T	August 2	22, 2022	January 23, 2023		
Well ID	Top of Casing Elevation <sup>(1)</sup> (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	Depth to Water (ft BTOC)	Groundwater Elevation <sup>(1)</sup> (ft)	
BRGWC-24S	354.10	14.37	339.73	13.24	340.86	
PZ-26I	370.63	23.45	347.18	24.40	346.23	
PZ-28I	364.81	16.52	348.29	15.50	349.31	
PZ-31S	376.77	28.96	347.81	29.44	347.33	
PZ-39*	434.78	48.95	385.83	49.00	385.78	
PZ-40S	355.96	16.00	339.96	14.73	341.23	
PZ-41S	357.17	17.19	339.98	16.09	341.08	
PZ-42S	361.66	20.72	340.94	20.74	340.92	
PZ-43	383.71	29.62	354.09	31.00	352.71	
PZ-46	384.64	10.73	373.91	8.91	375.73	
PZ-48	420.90	32.87	388.03	33.72	387.18	
PZ-49	384.99	11.84	373.15	8.90	376.09	
PZ-54	443.86	49.14	394.72	49.90	393.96	
PZ-55	453.07	45.37	407.70	47.59	405.48	
PZ-56	418.84	7.45	411.39	4.57	414.27	
PZ-67	381.48	N/A	N/A	N/A	N/A	
PZ-69I	379.36	N/A	N/A	N/A	N/A	
PZ-71I	385.34	N/A	N/A	23.18	356.18	
PZ-72I	368.57	N/A	N/A	N/A	N/A	
PZ-73I	352.63	N/A	N/A	N/A	N/A	
PB-1S*	403.16	N/A	N/A	16.85	386.31	
PB-2D*	416.71	37.56	379.15	38.31	378.40	
PB-4S*	411.15	24.43	386.72	26.01	385.14	
PB-4D*	412.12	25.74	386.38	26.24	385.88	
PB-7S*	402.88	27.43	375.45	22.29	380.59	
PB-8S*	401.82	19.62	382.20	20.41	381.41	
PB-8D*	401.74	20.45	381.29	21.04	380.70	
PB-10S*	400.91	15.60	385.31	15.40	385.51	
PB-10D*	400.31	15.08	385.23	14.93	385.38	
PB-13S*	373.31	9.15	364.16	8.53	364.78	
PB-13D	373.77	9.88	363.89	9.46	364.31	

### Notes:

 $\operatorname{---}$  = Ground water depth was not measured due to low groundwater levels

N/A = Not applicable

ft = feet

ft BTOC = feet below top of casing

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

<sup>\* =</sup> piezometers that were abandoned between May and June 2023

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

		August	22, 2022		January 23, 2023						
Flow Path Direction (1)	h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	L (ft)	i (ft/ft)	h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	L (ft)	i (ft/ft)			
BRGWA-5S/BRGWC-33S	431.69	407.72	5108	0.005	431.33	406.41	5108	0.005			
PZ-4I/BRGWC-38S	451.95	409.29	3904	0.011	447.55	409.68	3904	0.010			

	Average						
Flow Path Direction (1)	K <sub>h</sub> (ft/day)	n <sub>e</sub>	i (ft/ft)	V (ft/day) <sup>(2)</sup>	V (ft/day) <sup>(3)</sup>		
BRGWA-5S/BRGWC-33S	18.84	0.20	0.005	0.45	0.25		
PZ-4I/BRGWC-38S	0.85	0.20	0.010	0.04	0.23		

Notes:

ft = feet

ft/day = feet per day

ft/ft = feet per foot

 $h_1$  and  $h_2$  = groundwater elevation at location 1 and 2

 $i = h_1 - h_2/L = horizontal hydraulic gradient$ 

 $K_h$  = 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-E 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-E, Putnam County, Georgia

	Well ID:	BRGWA-2S	BRGWA-2S	BRGWA-2I	BRGWA-2I	BRGWA-5S	BRGWA-5S	BRGWA-5I	BRGWA-5I	BRGWA-6S	BRGWA-6S	BRGWC-17S	BRGWC-17S	BRGWC-33S	DDCWC 225	DDCWC 249	BRGWC-34S	BRGWC-35S	DDCWC 250	BRGWC-36S
	Sample Date:	8/23/2022	1/24/2023	8/23/2022	1/24/2023	8/23/2022	1/24/2023	8/23/2022	1/24/2023	8/23/2022	1/24/2023	8/24/2022	1/24/2023	8/23/2022	1/24/2023	8/24/2022	1/24/2023	8/24/2022	1/24/2023	8/24/2022
	Parameter (1,2,3)	8/23/2022	1/24/2023	6/23/2022	1/24/2023	6/23/2022	1/24/2023	6/23/2022	1/24/2023	6/23/2022	1/24/2023	0/24/2022	1/24/2023	6/23/2022	1/24/2023	0/24/2022	1/24/2023	0/24/2022	1/24/2023	8/2 <del>4</del> /2022
APPENDIX III		0.00532 J	< 0.0052	0.00592 J	< 0.0052	0.00538 J	< 0.0052	< 0.0052	< 0.0052	< 0.0052	< 0.0052	0.0273	0.0326	0.975	1.19	2.45	2.21	2.23	2.23	1.10
	Boron	4.65	4.86	13.9	14.2	18.2	19.4	14.3	15.8	3.97	3.9	43.6	41.3	119	116	75.0	2.21 80.0	68.5	67.5	48.1
	Calcium Chloride	2.18	2.16	2.02	2.09	3.59	3.56	3.64	3.93	2.39	2.3	5.0	6.31	30.3	29.0	6.17	7.50	6.53	6.46	7.96
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.158	< 0.033	0.149	< 0.033	0.12	0.274	0.216	0.187	0.193	0.17	0.122	< 0.033	0.239	0.194
	pH	5.95	5.26	6.67	6.70	6.36	6.47	6.24	6.42	6.51	6.54	6.62	6.37	4.67	4.79	5.75	5.93	6.05	6.08	5.59
	Sulfate	0.452	0.465	5.66	3.58	0.521	0.47	2.21	3.34	0.479	0.484	157	153	385	375	268	267	279	334	224
7	TDS	45.0	63.0	117	93.0	101	104	107	124	52.0	64.0	370	344	614	615	452	433	507	507	418
	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	< 0.001	< 0.001	< 0.001	< 0.001
	Artimony	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0021 J	< 0.001	< 0.001	0.00262 J	0.00201 J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	Barium	0.0120	0.0118	0.002	0.00453	0.0379	0.0394	0.0241	0.0303	0.0140	0.00213	0.0512	0.0422	0.002023	0.002013	0.0249	0.0232	0.0339	0.0291	0.0296
	Bervllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.00241	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	0.00241	0.00235	< 0.0002	< 0.0002	0.000210 J	< 0.00291	< 0.0002
APPENDIX IV	Cadmium	< 0.0002	< 0.0002	< 0.0002	< 0.0003	< 0.0002	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0002	< 0.0002	0.000509 J	0.000482 J	0.000517 J	< 0.0003	< 0.0003	< 0.0003	< 0.0002
	Chromium	0.00908 J	0.0095 J	< 0.003	< 0.003	0.00435 J	0.00572 J	0.00647 J	0.00513 J	0.0143	0.0139	0.0127	0.00886 J	< 0.003	< 0.003	< 0.003	< 0.003	0.00752 J	0.00524 J	0.00713 J
	Cobalt	0.000844 J	0.000829 J	0.000767 J	0.00154	< 0.0003	< 0.0003	0.000553 J	0.000677 J	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.0639	0.0582	0.00438	0.00351	< 0.0003	< 0.0003	< 0.0003
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.158	< 0.033	0.149	< 0.033	0.12	0.274	0.216	0.187	0.193	0.140	0.122	< 0.033	0.239	0.194
	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	< 0.0005
	Lithium	< 0.003	< 0.003	0.0262	0.00919 J	< 0.003	< 0.003	< 0.003	< 0.003	0.00314 J	0.00341 J	< 0.003	< 0.003	0.0109	0.0115	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
	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	< 0.000067
	Molybdenum	< 0.0002	< 0.0002	0.00240	0.000601 J	< 0.0002	< 0.0002	0.00151	0.00192	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
	Comb. Radium 226/228	0.531 U	1.35 U	1.70 U	2.05 U	0.735 U	0.402 U	2.30	0.811 U	0.203 U	1.55 U	0.152 U	0.728 U	1.94	3.31 U	1.86	2.14 U	3.10	3.34	1.38 U
	Selenium	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.00208 J	0.00178 J	0.00610	0.0049 J	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.00246 J
	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	< 0.0006
	Alkalinity (Bicarbonate as CaCO3)	32.6	35.0	62.4	65.2	73.8	78.4	72.8	79.4	58.2	25.6	74.0	81.4	3.40	3.80 J	28.6	30.0	50.6	51.6	20.6
	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	< 1.45	< 1.45
_	Alkalinity (total) as CaCO3	32.6	35.0	62.4	65.2	73.8	78.4	72.8	79.4	58.2	25.6	74.0	81.4	3.4	3.8 J	28.6	30.0	50.6	51.6	20.6
EW	Iron	0.0763 J	0.0824 J	0.183	0.134	0.151	0.071 J	< 0.033	< 0.033	0.0701 J	0.0593 J	< 0.033	< 0.033	0.0381 J	< 0.033	< 0.033	< 0.033	0.162	< 0.033	< 0.033
CH	Magnesium	4.86	5.34	8.82	8.28	8.51	9.02	10.4	10.9	4.06	4.14	25.7	26.1	14.7	15.0	18.6	18.6	36.9	36.5	20.5
GEOCHEM	Manganese	0.0391	0.0348	0.0134	0.028	0.014	0.00658	< 0.001	0.00165 J	0.00329 J	0.00159 J	< 0.001	< 0.001	2.75	2.68	2.97	3.29	0.017	0.0113	0.00295 J
	Nitrate		0.327		1.41		0.173		0.371		0.638		0.119 J		0.0607 J		< 0.033		0.149	
	Potassium	0.439	0.432	5.88	2.85	0.635	0.522	0.909	1.35	0.685	0.706	1.29	1.08	13.0	14.5	3.79	3.54	4.24	4.05	3.78
	Sodium	3.36	3.63	5.73	5.29	4.03	4.78	4.93	5.22	2.44	2.54	24.6	25.5	24.0	37.2	22.8	21.7	19.8	20.1	40.6
	Sulfide		< 0.033		< 0.033		< 0.033		< 0.033		< 0.033		< 0.033	-	< 0.033		< 0.033	-	0.0354 J	
				1								I.								

<sup>--- =</sup> Parameter was not analyzed
<= Indicates the parameter was not detected above the analytical method detection limit (MDL).

 $<sup>\</sup>label{eq:Jacobs} J = \text{Indicates the parameter was estimated and detected between the MDL and the reporting limit (RL).} \\ TDS = total dissolved solids$ 

U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228)
(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6010D, 6020B, and 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540-2011, and combined radium 226/228 by EPA Methods 9315/9320.
(3) The pH value presented was recorded at the time of sample collection in the field.

Table 5 Summary of Groundwater Analytical Data Plant Branch AP-E, Putnam County, Georgia

	Well ID:	BRGWC-36S	BRGWC-37S	BRGWC-37S	BRGWC-38S	BRGWC-38S	PZ-13S	PZ-13S	PZ-52D	PZ-52D	PZ-52D	PZ-52D	PZ-53D	PZ-53D	PZ-70I	PZ-70I
	Sample Date:	1/25/2023	8/23/2022	1/25/2023	8/23/2022	1/25/2023	8/23/2022	1/26/2023	9/1/2022	1/25/2023	1/26/2023	2/2/2023	8/23/2022	1/25/2023	9/1/2022	1/26/2023
	Parameter (1,2,3)		<u>.                                    </u>							,			<u>'</u>			
	Boron	1.18	< 0.0052	< 0.0052	1.67	1.63	< 0.0052	0.0104 J	0.0403	0.0362			1.04	1.11	1.20	1.04
H	Calcium	48.2	3.70	3.65	37.1	32.8	9.69	16.8	69.0	46.3			76.4	78.5	42.6	33.4
$\leq$	Chloride	7.93	1.97	1.92	6.42	6.53	4.20	3.36	6.24		12.3		4.94	4.66	10.8	5.37
<u>N</u>	Fluoride	0.183	0.105	0.114	0.609	0.708	0.128	< 0.033	0.140		1.93		0.164	0.282	1.43	< 0.066
APPENDIX	рН	5.64	5.82	5.84	3.97	4.75	5.46	5.56	7.70	7.14	7.14		7.18	7.1	6.13	5.60
A	Sulfate	237	0.307 J	0.325 J	389	291	51.0	75.3	340		142	-	348	285	172	147
	TDS	418	40.0	28.0	568	484	130	148	754	443		-	543	517	321	272
	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
	Arsenic	< 0.002	< 0.002	0.003 J	0.00337 J	0.00486 J	< 0.002	0.00388 J	-	0.00368 J		1	< 0.002	< 0.002	< 0.002	0.00366 J
	Barium	0.0278	0.0260	0.0247	0.0141	0.018	0.0562	0.0525		0.0171		-	0.0547	0.0536	0.0444	0.025
	Beryllium	< 0.0002	< 0.0002	< 0.0002	0.00854	0.0078	0.000331 J	0.000422 J		< 0.0002			< 0.0002	< 0.0002	< 0.0002	0.000217 J
	Cadmium	< 0.0003	< 0.0003	< 0.0003	0.000459 J	0.00043 J	< 0.0003	< 0.0003		< 0.0003			< 0.0003	< 0.0003	< 0.0003	< 0.0003
2	Chromium	0.00682 J	< 0.003	< 0.003	0.00398 J	0.00362 J	0.0128	0.0153		< 0.003			< 0.003	< 0.003	< 0.003	< 0.003
	Cobalt	< 0.0003	< 0.0003	< 0.0003	0.173	0.158	< 0.0003	< 0.0003	0.00150	0.00249			< 0.0003	< 0.0003	0.00560	0.000682 J
	Fluoride	0.183	0.105	0.114	0.609	0.708	0.128	< 0.033	0.140		1.93		0.164	0.282	1.43	< 0.066
APPENDIX	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
₹	Lithium	< 0.003	< 0.003	< 0.003	0.0214	0.0256	< 0.003	< 0.003		0.0165			0.0171	0.0207	0.00615 J	0.00381 J
	Mercury	< 0.000067	< 0.000067	< 0.000067	0.000117 J	< 0.000067	< 0.000067	< 0.000067		< 0.000067			< 0.000067	< 0.000067	< 0.000067	< 0.000067
	Molybdenum	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002		0.0222			0.00265	0.00234	0.00142	< 0.0002
	Comb. Radium 226/228	4.86	2.37 U	1.67 U	3.12	3.79	1.83 U	4.77				5.39	3.04	2.10 U	1.57 U	1.81 U
	Selenium	0.00237 J	< 0.0015	< 0.0015	0.0296	0.0279	0.00157 J	0.00215 J		< 0.0015			< 0.0015	< 0.0015	0.00625	0.00921
	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
	Alkalinity (Bicarbonate as CaCO3)	22.0	21.2	21.2	< 1.45	3.0 J	21.4	20.6			179		82.8	49	37.8	14.4
	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
7	Alkalinity (total) as CaCO3	22.0	21.2	21.2	< 1.45	3.0 J	21.4	20.6			179		82.8	49	37.8	14.4
HE	Iron	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033		0.22			0.294	0.204	1.48	0.0364 J
DC	Magnesium	20.1	1.29	1.35	41.3	36.9	5.94	9.68		9.93			19.3	19.4	15.5	11.9
GEOCHEM	Manganese	0.00205 J	< 0.001	< 0.001	1.80	1.65	0.00137 J	0.00207 J		0.0315			0.641	0.628	1.06	0.271
	Nitrate	0.131		0.318		0.145 J		0.0655 J			< 0.033			< 0.066		0.275
	Potassium	3.84	1.84	1.94	5.75	6.12	3.59	4.41		8.93			6.44	6.66	5.62	4.27
	Sodium	40.4	4.51	4.85	44.1	42.3	12.5	11.7		94.4			52.0	48.6	25.8	23.0
	Sulfide	< 0.033		< 0.033		< 0.033		< 0.033			< 0.033	-		< 0.033		< 0.033

2 of 2 July 2023

Notes:
--- Parameter was not analyzed
--- Indicates the parameter was not detected above the analytical method detection limit (MDL).

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

TDS = total dissolved solids

U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228)
(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6010D, 6020B, and 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540-2011, and combined radium 226/228 by EPA Methods 9315/9320.
(3) The pH value presented was recorded at the time of sample collection in the field.

Table 6
Summary of Background Concentrations and Groundwater Protection Standards
Plant Branch AP-E, Putnam County, Georgia

Analyte	Units	MCL	CCR-Rule	Backg	GWPS <sup>(2)(3)</sup>	
Analyte	Units	WICL	Specified	August 2022	January 2023	GWPS
Antimony	mg/L	0.006		0.003	0.003	0.006
Arsenic	mg/L	0.01		0.005	0.005	0.01
Barium	mg/L	2		0.063	0.063	2
Beryllium	mg/L	0.004		0.0005	0.0005	0.004
Cadmium	mg/L	0.005		0.001	0.001	0.005
Chromium	mg/L	0.1		0.016	0.016	0.1
Cobalt	mg/L	n/a	0.006	0.0034	0.0034	0.006
Fluoride	mg/L	4		0.19	0.19	4
Lead	mg/L	n/a	0.015	0.002	0.002	0.015
Lithium	mg/L	n/a	0.040	0.089	0.089	0.089
Mercury	mg/L	0.002		0.00021	0.00021	0.002
Molybdenum	mg/L	n/a	0.10	0.008	0.008	0.1
Selenium	mg/L	0.05		0.005	0.005	0.05
Thallium	mg/L	0.002		0.002	0.002	0.002
Combined Radium-226/228	pCi/L	5		1.65	1.74	5

#### Notes:

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

MCL = Maximum Contaminant Level

mg/L = milligrams per liter

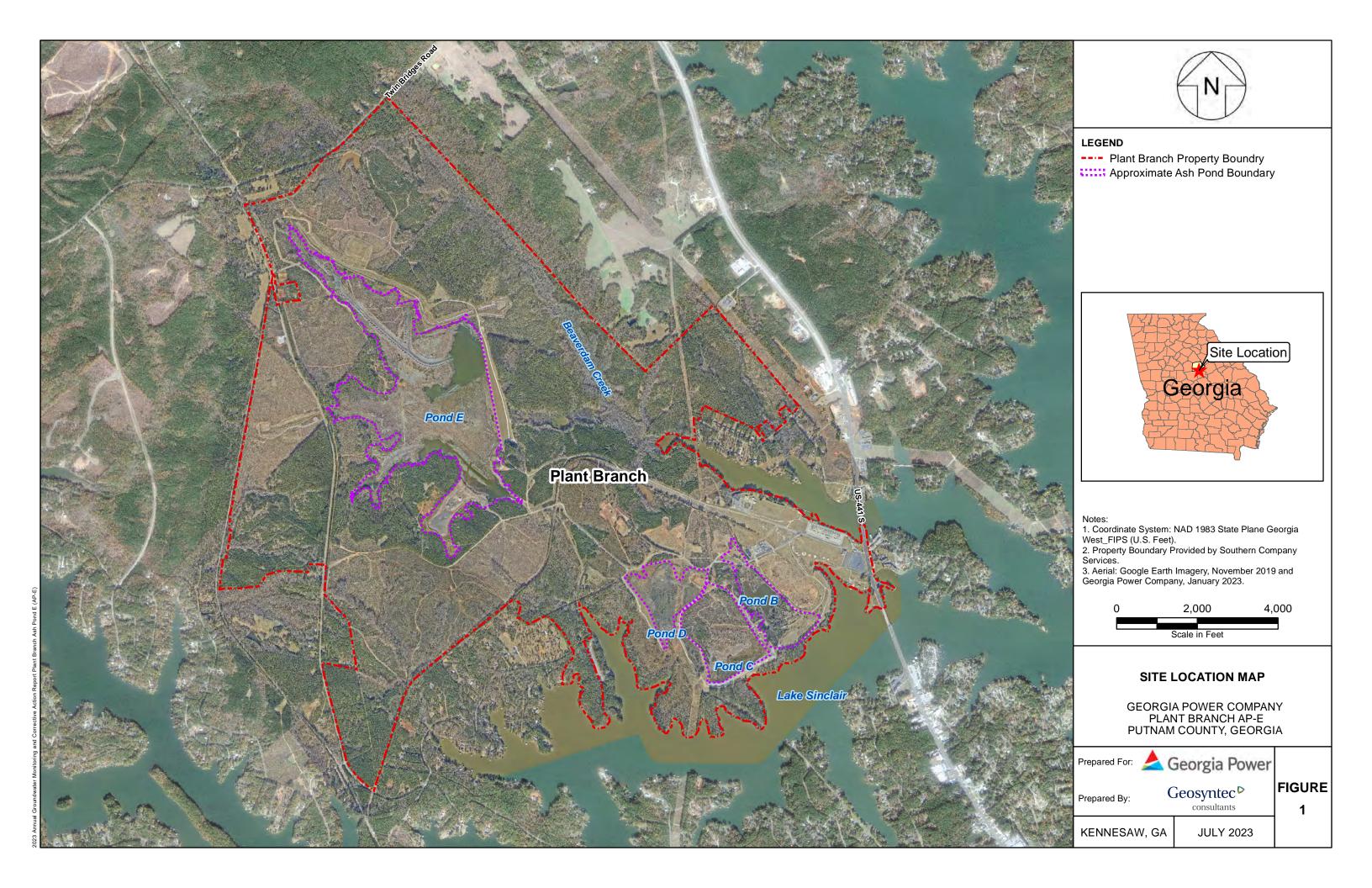
n/a = not applicable

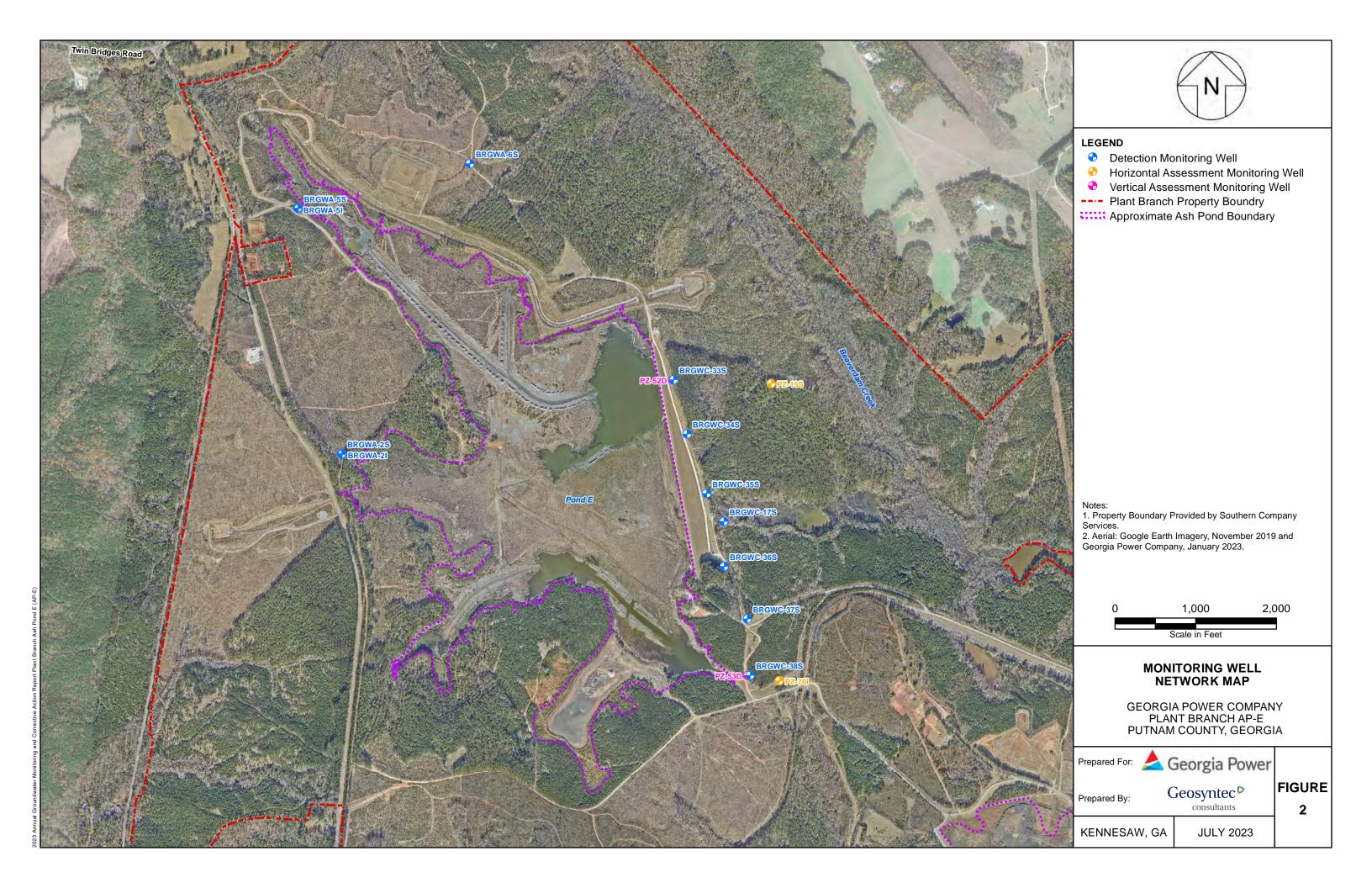
pCi/L = picocuries per liter

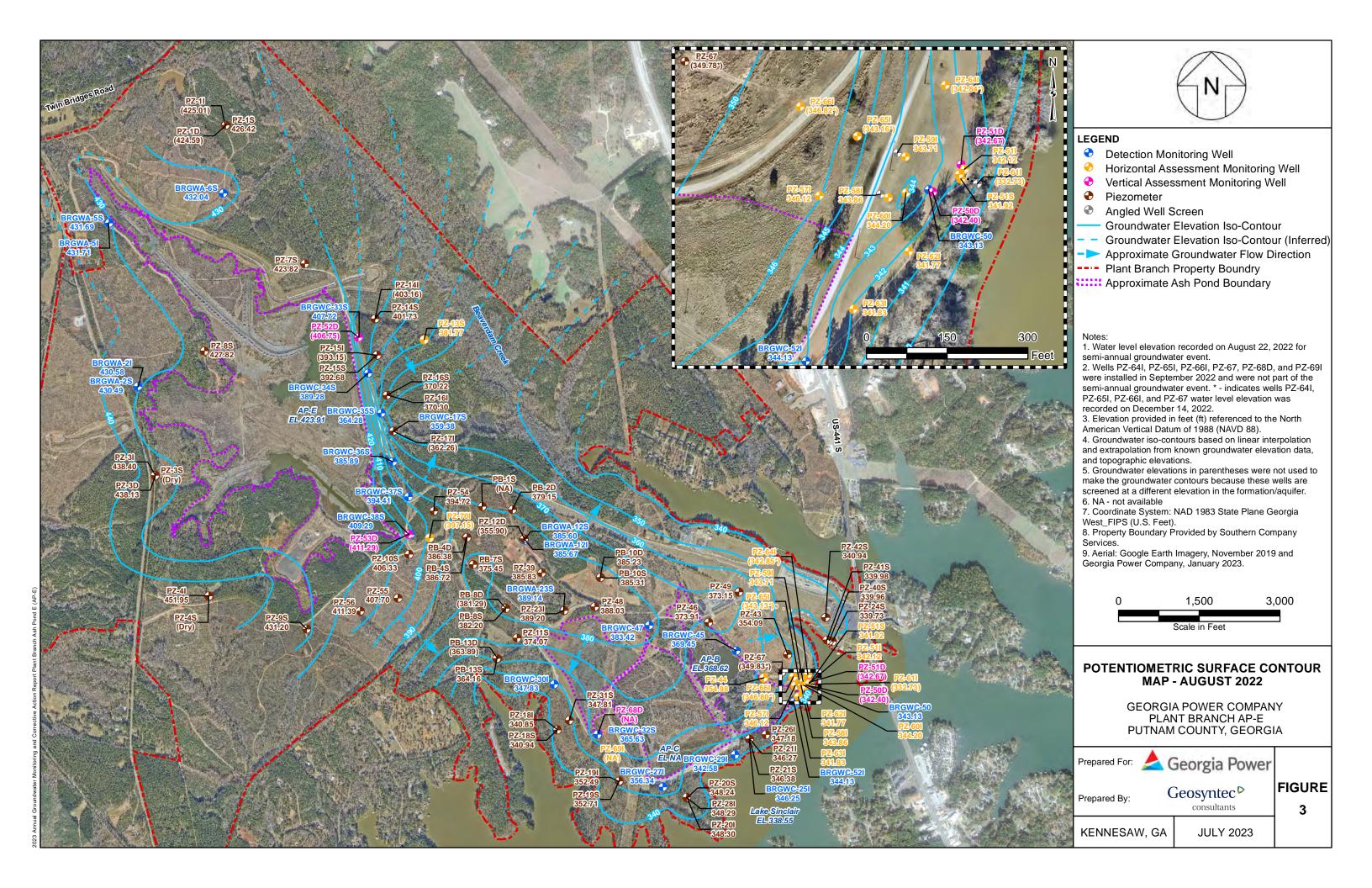
Statistical analyses were performed per semiannual assessment monitoring event conducted during the reporting period. Background limits and groundwater protection standards (GWPS) are applicable to the Fall 2022 amd January 2023 events.

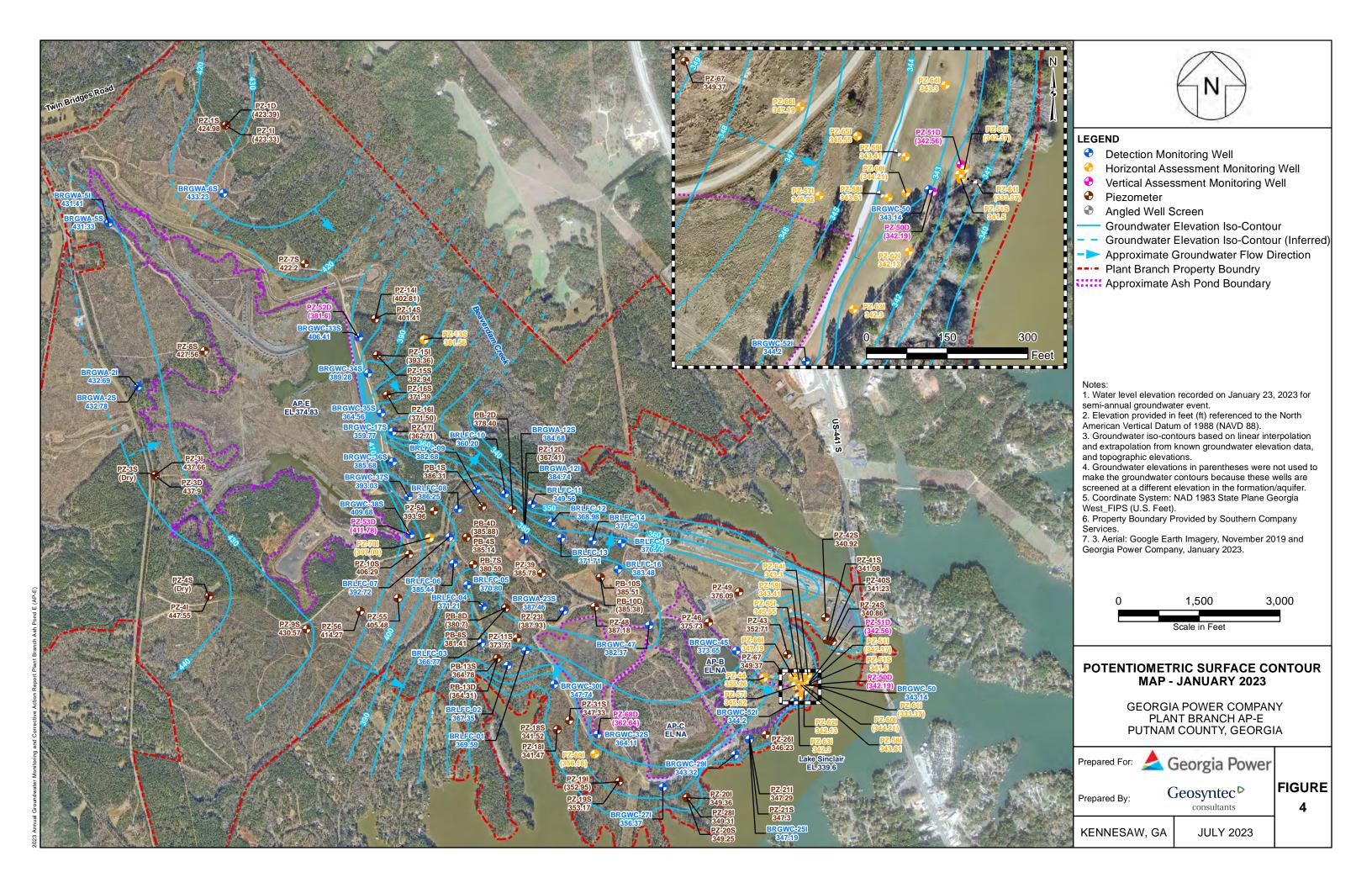
- (1) The background limits were used when determining the GWPS under 40 CFR 257.95(h) and Georgia Environmental Protection Division (GA EPD) Rule 391-3-4-.10(6)(a).
- (2) Under 40 CFR 257.95(h)(1-3) the Federal GWPS is: (i) the maximum contaminant level (MCL) established under 141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS is used; or (iii) background concentrations for constituents were the background level is higher than the MCL or rule-specified GWPS.
- (3) 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**









### APPENDIX A

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

Prepared for



#### **Southern Company Services**

3535 Colonnade Parkway Birmingham, Alabama 35243

# WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT PLANT BRANCH ASH POND E (AP-E)



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-E* 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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#### 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 Company NAD Sorth America Datum

NAVD North American Vertical Datum NSF National Sanitation Foundation ORP oxygen reduction potential

PVC polyvinyl chloride

SCS Southern Company Services

TOC top of casing

US EPA United States Environmental Protection Agency

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#### 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, D, and E are currently inactive and will be closed by removal, specifically, by relocation of the CCR stored in those ponds to a proposed fully lined CCR Landfill located on the Plant property. This report provides details regarding the design, installation, and development of one (1) assessment monitoring well (PZ-70I) to supplement the current groundwater monitoring well network at Ash Pond E (AP-E). The location of the new well, as well as existing monitoring wells and piezometers, are shown on **Figure 1**.

The well installation was completed to meet the requirements promulgated in the United States Environmental Protection Agency (US EPA) coal combustion residuals (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 activities were performed in accordance with accepted industry standards and following guidelines provided in the *Manual for Groundwater Monitoring* (GA EPD, 1991). Well drilling, installation, and surface completion activities were performed by Cascade Drilling, Inc. of Aiken, South Carolina and 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 insurance 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-70I was completed in August 2022. The location of this well is shown on **Figure 1**. The well construction details are provided in **Table 1**. The boring and well construction log is provided in **Appendix B**.

#### 2.1 **Drilling Method**

The borehole was advanced using rotasonic drilling techniques with continuous core collection. A track mounted Terra Sonic T-150 drill rig was used to install the well, 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**. The well is screened in the uppermost water bearing unit of the Site. PZ-70I is screened from approximately 373 to 363 feet [referenced to the North American Vertical Datum of 1988 (NAVD 88)]. The well was constructed with a 10-foot well screen segment.

#### 2.3 Well Casings and Screens

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

U-Pack® dual-wall well screen with 0.010-inch slots. The casing and screen arrived precleaned 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 well. 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.

#### 2.4 Well Intake Design

The well was 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® screen and in the annular space between the outside of the U-Pack® screen and 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 well was 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 depth of top of filter pack was measured and recorded on the well construction log 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 concrete apron 4-feet by 4-feet by 4-inches was poured around the well. The pad was mounded slightly outward to direct surface drainage away from the well.

#### 2.7 Cap and Protective Casing

The well riser was fitted with a locking cap and a lockable cover. A 1/4-inch vent hole was drilled into the PVC riser pipe to provide an avenue for the escape of gas. The protective cap guards the casing from damage and the locking cap serves as a security device to prevent well tampering. Bollards were installed around the four corners of the concrete pad to protect the well.

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



#### 3. WELL DEVELOPMENT

The well was 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 well was alternately surged and purged until visually clear of particulates. Turbidity, pH, temperature, specific conductivity measurements were recorded to ensure that the well was fully developed, and field parameters were stabilized. The well development field form completed by ACC is included in **Appendix C**.



#### 4. SURVEY

Upon completion of the well installation, select horizontal locations and vertical elevations were surveyed by GEL Solutions, a Georgia-licensed surveyor, and certified on October 03, 2022. The top of the PVC well casing [top of casing (TOC) elevation] and the survey pin installed at the well pad were surveyed to within 0.5-foot horizontal accuracy and to 0.01-foot vertical accuracy. The horizontal location (i.e., northing and easting) was recorded in feet relative to the North America Datum of 1983 (NAD 83) with the vertical elevation recorded in feet relative to the NAVD 88. Certified survey data are provided in the well construction table (**Table 1**). A copy of the certified well survey data for the well 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.

Golder, November 2018. Groundwater Monitoring Plan – Plant Branch Ash Pond E.

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-E

#### Putnam County, Georgia

Well ID	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) <sup>(3)</sup>
PZ-70I	8/16/2022	1164326.66	2555374.08	422.88	425.70	363.38	373.38	50.0

Notes:

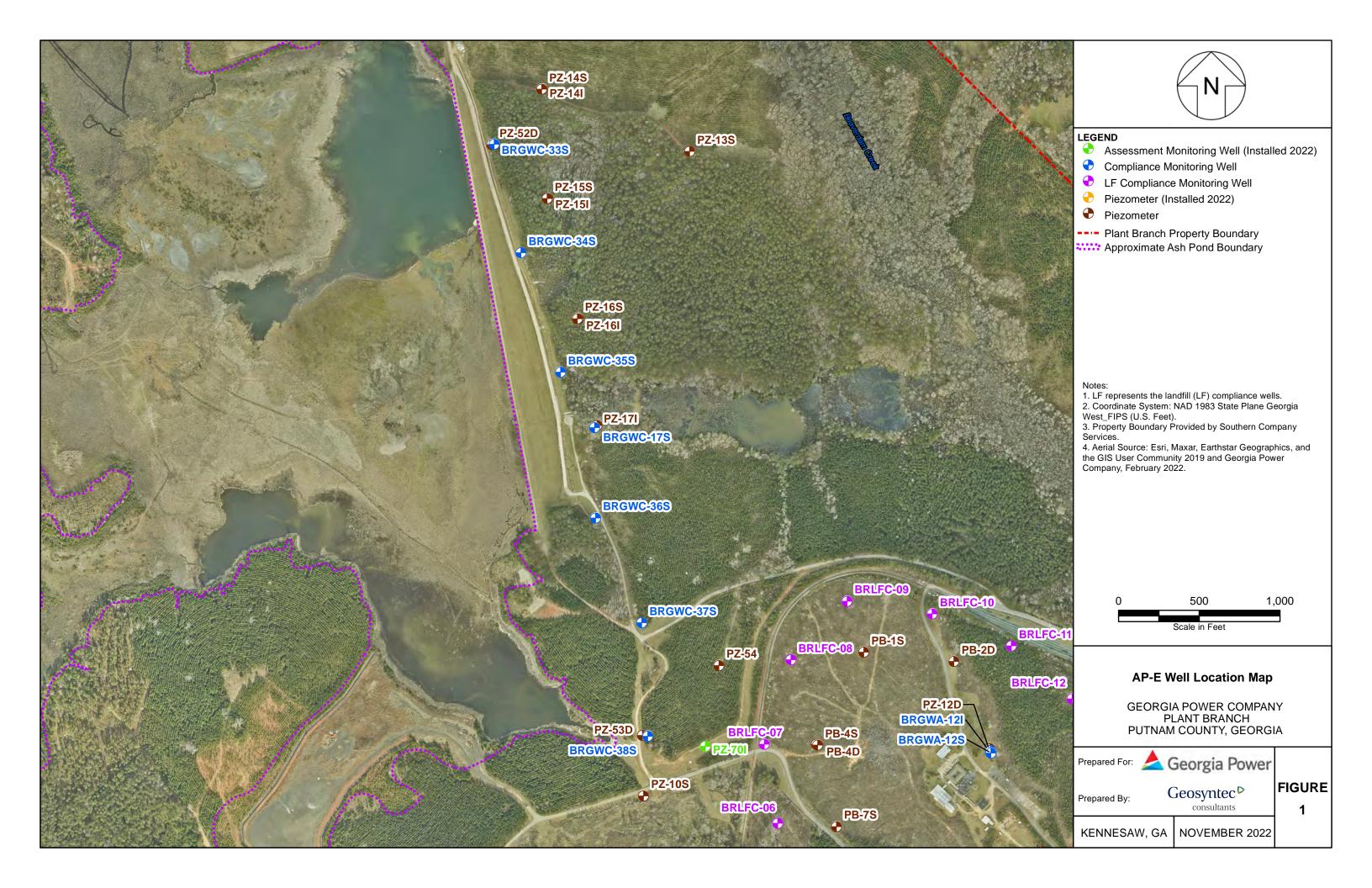
ID = identification

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. Survey was completed by GEL Solutions and certified October 03, 2022.
- (3) Total well depth accounts for 6-inch sump.

## **FIGURE**



## 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: <b>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:

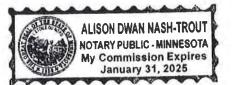
Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing 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.

STATE OF MINNESOTA HENNEPIN COUNTY Ву

Paul J. Brehm, Senior Vice President

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.



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



Kand Harr

Kara Barrow, Secretary

#### 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

Atterney-in-Fact Andrew P. Larser

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



NOTES:

#### **BORING AND WELL LOG LEGEND**

	يرا	Ωz		COL	LEC1			MEA	SURE
LITHOLOGY	WATER LEVEL	WELL/BORING COMPLETION	Sample Type	Date & Time	Blow Counts	Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	PID (ppm)	Lab Sample
VOLKOS MICVIEROS.							ASPHALT		
XXXX							CONCRETE	-	
× × × × × × × × × × × × × × × × × × ×							TOPSOIL	1	
	4						COBBLES	1	
	\$						IGNEOUS Rock		
ططم							METAMORPHIC Rock	1	
							SEDIMENTARY Rock	-	
300	<u> </u>						Well-graded GRAVEL (GW) Poorly graded GRAVEL (GP)	-	
OP C	Ś						Silty GRAVEL (GM)	1	
69XX	3						Clayey GRAVEL (GC)	]	
							Well-graded GRAVEL with silt (GW-GM)		
							Poorly graded GRAVEL with silt (GP-GM) Well-graded GRAVEL with clay (GW-GC)	-	
	<u> </u>						Poorly graded GRAVEL with clay (GP-GC)	1	
******							Well-graded SAND (SW)	1	
							Poorly graded SAND (SP)	]	
7777							Silty SAND (SM)	1	
							Clayey SAND (SC) Well-graded SAND with silt (SW-SM)	-	
• • • •	<u>.</u>						Poorly graded SAND with silt (SP-SM)	1	
:							Well-graded SAND with clay (SW-SC)		
//							Poorly graded SAND with clay (SP-SC)	]	
///////							SILT (ML) Lean CLAY (CL)	4	
<u> </u>	4						Organic SOIL (OL)	1	
Ш	i						Elastic SILT (MH)	1	
							Fat CLAY (CH)	]	
							Organic SOIL (OH)	-	
<u> </u>							PEAT (PT) Volume Descriptors:	1	
							Trace = <5%		
							Few = 5-10% Little = 15-25%		
							Some = 30-45%		
							Mostly = >= 50%		
	$ \nabla$						Water Level During Drilling	1	
		_					Water Level at End of Drilling/in Completed Well		
							Сар		
							Riser Screen		
		X//XX					Cement		
		^^^^					Bentonite Grout		
							Bentonite Seal		
							Filter Pack		
		2000C	GR				Backfill Grab	1	
			EN	ł			Encore		
			SS	1			Split Spoon		
			ST				Shelby Tube		
			CO				Core Barrel		
			DP	-			Direct Push Lab Sample and ID	0.0	ID
			<u> </u>				Lab Campic and iD		שו



Client: Southern Company Services
Project: Plant Branch Well Install

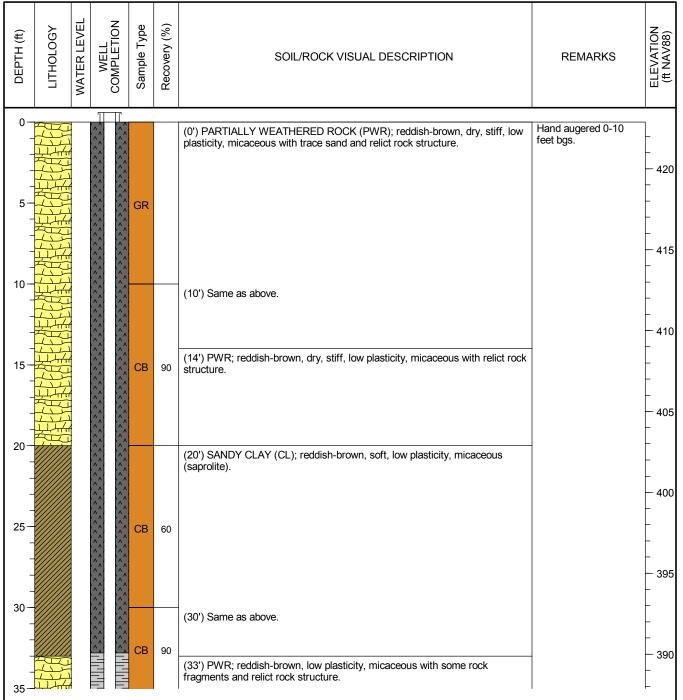
Address: 1100 Milledgeville Rd, Milledgeville, GA

WELL LOG Well No. PZ-70I

1 of 2

Page:

Drilling Start Date: 08/16/2022 Boring Depth (ft): 55 Well Depth (ft TOC): 52.98 Drilling End Date: 08/16/2022 Boring Diameter (in): Well Diameter (in): 2 Screen Slot (in): 0.010 Drilling Company: **Cascade Drilling** Sampling Method(s): Core Barrel Drilling Method: DTW Post-Installation (ft): --Riser Material: Sch 40 PVC Sonic 4x6 Drilling Equipment: TSI-150 Ground Surface Elevation: 422.88 NAV88 Screen Material: Sch 40 PVC Slotted C. Franklin Driller: Top of Casing Elevation: 425.70 NAV88 Seal Material(s): Grout, Bentonite Logged By: D. Kegley North, East (Y,X): 1164326.66, 2555374.08 Filter Pack: 20/40 Sand



NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.82 feet stickup) completed with aboveground protective casing set in concrete. Well depth measured from the top of casing (TOC).

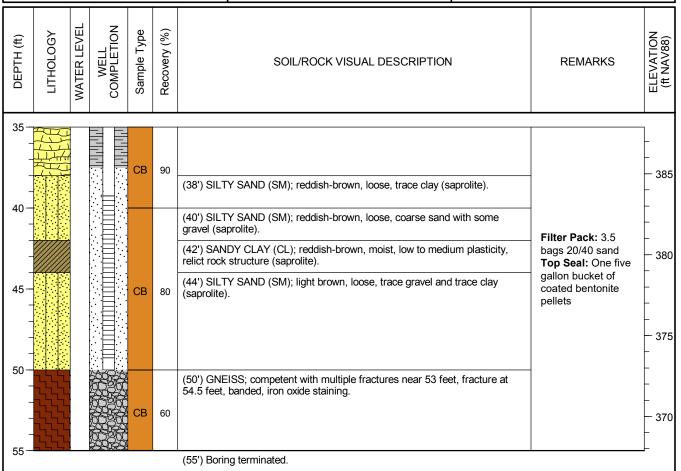


Client: Southern Company Services
Project: Plant Branch Well Install

Address: 1100 Milledgeville Rd, Milledgeville, GA

WELL LOG Well No. PZ-70I Page: 2 of 2

Drilling Start Date: 08/16/2022 Boring Depth (ft): 55 Well Depth (ft TOC): 52.98 Drilling End Date: 08/16/2022 Boring Diameter (in): Well Diameter (in): 2 Screen Slot (in): 0.010 Drilling Company: **Cascade Drilling** Sampling Method(s): **Core Barrel** Drilling Method: DTW Post-Installation (ft): --Riser Material: Sch 40 PVC Sonic 4x6 Drilling Equipment: TSI-150 Ground Surface Elevation: 422.88 NAV88 Screen Material: Sch 40 PVC Slotted C. Franklin Driller: Top of Casing Elevation: 425.70 NAV88 Seal Material(s): Grout, Bentonite Logged By: D. Kegley North, East (Y,X): 1164326.66, 2555374.08 Filter Pack: 20/40 Sand



## APPENDIX C

Well Development Form

#### Atlantic Coast Consulting, Inc. Well Development Field Record

Job Name:				Job No.		Well No. P 7 - 70
Developed By:	A	nna Schnittker /	1 Autol		stallation:	
Started Dev.	4-19-7	2/1225	· Model	Complete	Dev.	8-29-22/1510
					-	Date / Time
W.L. Before Dev.	28.6	Date / Time 3/8-29-71 GS / Date / Time	/1220	W.L. After	Dev. 3	84.30 /8-29-27 / 1510 BQS / Date / Time
	В	GS Date / Tin	ne			BQS / Date / Time
Well Depth Before Dev		52.98	BGS	Well Dept	h After Dev.:	52.98 BGS
Water Column (H):	24.35 Ft.		Z In.		ne: 3	
Screen Length:	Ft.	the state of the s			41 purge	
-			Field Paramet		17.192	
	Volume Removed	Specific Cond.	Temperature	На	Turbidity	
Date / Time	(Gal.)	(umhos/cm)	(°C)	(S.U.)	(NTU)	Remarks
8-29-22/13/5	20	4109	24.2	10.36	389	Well pre-developed with a bailer
1332	24	387	24.8	6.23		
1340	28	371	24.9	6,18	75	
1349	32	358	74.3	6.17	477	Surged well w/ pump
1355	36	363	24.7	6,14	42	Selection of the select
1400	40	363	24.5	6.20	18.7	
1411	48	367	24.7	6.23	18.6	
1420	56	365	23.5	6.12	8.3	
1439	do 64	379	23.2	10.03	397	Surged well w/ pump
_ 1450	72	373	21.9	6.02	11-6	/ / /
(AN) 1600 (500	80	368	21.4	6.00	3.6	
1506	84	368	21.3	6.01	3,2	
						*
		To	tal Volume Remo	oved (gal):	-	
Development Method:	DRantack				. ( /	first reading)
Development Method.	1) barreca	- purged	5 well	Voum	100	thist reading)
	2) Whale	Jump - Di	urged unt	11 Und	er 5	743

Notes: H = well depth (BTOC) - W.L. (BTOC)

Well volume in pipe:

2" diameter well: 0.16 X H = volume in gallons

4" diameter well: 0.66 X H = voume in gallons

1 wed volume = 3,90 gallons

## APPENDIX D

Certified Well Survey Data

#### **GEL ENGINEERING OF NC INC**

#### **Plant Branch Monitoring Wells**

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

	Casing	Casing	Top of	Nail or Pad	Nail or Pad	Nail or Pad		
Well ID	Northing	Easting	Casing	Northing	Easting	Elevation	Description	
BRLFC-01	1162222 420		Elevation	1162234.588	2557160.953	378.49	NAIL	
BRLFC-01	1162232.420	2557158.878	381.35	1162234.388				
	1161957.831	2556825.523 2556336.547	384.13		2556824.248 2556337.910	381.63	NAIL	
BRLFC-03	1162377.227		369.42	1162377.112		366.38	NAIL	
BRLFC-04	1163049.095	2556365.006		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		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		N/A	N/A	N/A	BORING	
SB-38S	1164375.049	2554988.232	430.68	N/A	N/A	N/A	BORING	
32 333				,	,,,,	,,,,	30	
Benchmark	Northing	Easting	Elevation					
GEL1	1162581.977	2556743.623	391.46					
GEL2	1161860.379	2562295.003	380.25					
GLLZ	1101000.575	2502255.005	300.23					
							<u> </u>	

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

Dute Bake

10/3/2022





COA - LS003119 Exp. 12/31/2022

## APPENDIX B

## Well Maintenance and Repair Documentation Memoranda



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

#### Memorandum

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.

\*\*\*\*\*



1 · <u>L</u>	ocati	ion/Identification	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
	а	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ī	b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	r	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 - <u>Pro</u>	tective Outer Casing	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
а	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
С	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
е	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

8 - <u>Su</u>	ırface Pad		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
		vell pad in good condition? (Not d or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		ne well pad provide adequate e seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		vell pad in complete contact e protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	with the d underm	vell pad in complete contact e ground surface? (Not nined by erosion, animal s, and does not move when d on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		oad surface clean? (Not covered or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4 - <u>Ir</u>	ntern	nal Well Casing	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
		Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		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
	_	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	а	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	0	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
а	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	If dedicated sampling equipment is installed, is it in good condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes
С	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	No	No	No	No

 $\ \, 6 \cdot \underline{Based\ on\ your\ professional\ judgment,\ is\ the\ \underline{well\ construction\ /\ location\ appropriate\ to:}} \,$ 

	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
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

<sup>7 -</sup> 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



												CONSU
l - Lor	ation/Identification	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-47
. <u>сос</u>		Yes	Yes	Yes								
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes								
С	Does the well require protection from traffic?	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								
- <u>Pro</u>	tective Outer Casing	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-4
а	Is the protective casing free from apparent damage?	Yes	Yes	Yes								
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes								
С	Does the casing have a functioning weep hole?	Yes	Yes	Yes								
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes								
е	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes								
- <u>Sur</u>	face Pad	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-4
а	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes								
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes								
С	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes								
d	Is the well pad in complete contact with the ground surface? (Not	Yes	Yes	Yes								
е	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes								
- <u>Inte</u>	ernal Well Casing	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-4
а	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes								
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?	Yes	Yes	Yes								
С	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes								
d	Is the survey point clearly marked on	Yes	Yes	Yes								
е	Is the depth of the well consistent with	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								
San	npling (Groundwater Monitoring Wells Only	)		•			•			•		
Jal	nymny toroundwater wormtoning wells Only	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	BRGWC-45	BRGWC-4
а	Does the well recharge adequately when purged?	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
С	Does the well require redevelopment	No	No	Yes	No	No	No	No	No	No	No	No
Bas	sed on your professional judgment, is the w											
	. ,	Ī										

BRGWC-37S BRGWC-38S

Yes

Yes

BRGWC-45

Yes

BRGWC-47

Yes

BRGWC-35S BRGWC-36S

Yes

Yes

regulatory requirements?

7 - Corrective actions completed and date(s):

NOTES: N/A - Not Applicable; Form Derived from

 achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable

PB-1S: unable to locate well

Staff: J. Berisford/T. Goble/A. Schnittker/H. Au

Date: 8/22/2022

BRGWC-30I

Yes

Yes

BRGWC-32S BRGWC-33S BRGWC-34S

Yes

Yes

BRGWC-29I

Yes



			BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
1 - J		ion/Identification 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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
-	С	correct well ID?  Does the well require protection from	No	No	No	No	No	No	No	No	No	No	No
=	d	traffic? 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 - 1	Protec	ctive Outer Casing	BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
	а	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
-	С	Does the casing have a functioning	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	d	weep hole?  Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	е	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3 -	Surfac	ce Pad	BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
	а	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
	С	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ē	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
	е	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4 -			Yes BRGWC-50	Yes BRGWC-52I	Yes PZ-1D	Yes PZ-1I	Yes PZ-1S	Yes PZ-3S	Yes PZ-3I	Yes PZ-3D	Yes PZ-4S	Yes PZ-4I	Yes PZ-7S
4 - 1		by soil or debris)											
4 - 1	Intern a	by soil or debris)  al Well Casing  Does the well cap prevent entry of	BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
4 - ]	Intern a	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near	BRGWC-50 Yes	BRGWC-52I Yes	PZ-1D Yes	PZ-11 Yes	PZ-1S Yes	PZ-3S Yes	PZ-3I Yes	PZ-3D Yes	PZ-4S Yes	PZ-4I Yes	PZ-7S Yes
4 - 1	Intern a b	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on	BRGWC-50 Yes Yes	BRGWC-52I Yes Yes	PZ-1D Yes Yes	PZ-11 Yes Yes	PZ-1S Yes Yes	PZ-3S Yes Yes	PZ-3I Yes Yes	PZ-3D Yes Yes	PZ-4S Yes Yes	PZ-4I Yes Yes	PZ-7S Yes Yes
4 - 1	a b c	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with	BRGWC-50 Yes Yes Yes	BRGWC-52I Yes Yes Yes	PZ-1D Yes Yes Yes	PZ-1I Yes Yes Yes	PZ-1S Yes Yes Yes	PZ-3S Yes Yes Yes	PZ-3I Yes Yes Yes	PZ-3D Yes Yes Yes	PZ-4S Yes Yes Yes	PZ-4I Yes Yes Yes	PZ-7S  Yes  Yes  Yes
4	a b c d e	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?	BRGWC-50 Yes Yes Yes Yes	PRGWC-521 Yes Yes Yes Yes Yes	PZ-1D Yes Yes Yes Yes	PZ-1I Yes Yes Yes Yes	PZ-1S Yes Yes Yes Yes	PZ-3S Yes Yes Yes Yes	PZ-3I Yes Yes Yes Yes Yes	PZ-3D Yes Yes Yes Yes Yes	PZ-4S Yes Yes Yes Yes	PZ-4I Yes Yes Yes Yes	PZ-7S Yes Yes Yes Yes
	a b c d e	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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	Yes Yes Yes Yes No	Yes Yes Yes Yes Yes	PZ-1D Yes Yes Yes Yes Yes	PZ-11 Yes Yes Yes Yes Yes	PZ-1S Yes Yes Yes Yes Yes	PZ-3S Yes Yes Yes Yes Yes	PZ-3I Yes Yes Yes Yes Yes	PZ-3D Yes Yes Yes Yes Yes	PZ-4S Yes Yes Yes Yes Yes	PZ-4I Yes Yes Yes Yes Yes	PZ-7S Yes Yes Yes Yes Yes
	a b c d e	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?	Yes Yes Yes Yes No	Yes Yes Yes Yes Yes	PZ-1D Yes Yes Yes Yes Yes	PZ-11 Yes Yes Yes Yes Yes	PZ-1S Yes Yes Yes Yes Yes	PZ-3S Yes Yes Yes Yes Yes	PZ-3I Yes Yes Yes Yes Yes	PZ-3D Yes Yes Yes Yes Yes	PZ-4S Yes Yes Yes Yes Yes	PZ-4I Yes Yes Yes Yes Yes	PZ-7S Yes Yes Yes Yes Yes
	a b c d e	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Ling (Groundwater Monitoring Wells Only)  Does the well recharge adequately when purged?	Yes Yes Yes Yes Your No	Yes Yes Yes Yes No	PZ-1D Yes Yes Yes Yes Yes No	PZ-11 Yes Yes Yes Yes Yes No	PZ-1S Yes Yes Yes Yes Yes No	PZ-3S Yes Yes Yes Yes Yes No	PZ-3I Yes Yes Yes Yes Yes No	PZ-3D Yes Yes Yes Yes Yes No	PZ-4S Yes Yes Yes Yes Yes No	PZ-4I Yes Yes Yes Yes Yes No	PZ-7S  Yes  Yes  Yes  Yes  No
	a b c d e f	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Ing (Groundwater Monitoring Wells Only)  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?	PRGWC-50 Yes Yes Yes Yes Yes No BRGWC-50	PRGWC-52I Yes Yes Yes Yes No BRGWC-52I	PZ-1D Yes Yes Yes Yes Yes PZ-1D	PZ-11 Yes Yes Yes Yes No	PZ-1S  Yes  Yes  Yes  Yes  Yes  PZ-1S	PZ-3S  Yes  Yes  Yes  Yes  Yes  PZ-3S	PZ-3I Yes Yes Yes Yes No	PZ-3D Yes Yes Yes Yes No	PZ-4S  Yes  Yes  Yes  Yes  Yes  PZ-4S	PZ-4I Yes Yes Yes Yes No	PZ-7S  Yes  Yes  Yes  Yes  Yes  PZ-7S
	lIntern a b c d e f Samp	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  ling (Groundwater Monitoring Wells Only)  Does the well recharge adequately when purged?  If dedicated sampling equipment is	PRGWC-50 Yes Yes Yes Yes No No PRGWC-50 Yes	Yes Yes Yes Yes No BRGWC-52I	PZ-1D Yes Yes Yes Yes No PZ-1D N/A	PZ-11 Yes Yes Yes Yes No PZ-11 N/A	PZ-1S Yes Yes Yes Yes No PZ-1S N/A	PZ-3S Yes Yes Yes Yes No PZ-3S N/A	PZ-3I Yes Yes Yes Yes Yes No PZ-3I N/A	PZ-3D Yes Yes Yes Yes No PZ-3D N/A	PZ-4S Yes Yes Yes Yes No PZ-4S N/A	PZ-4I Yes Yes Yes Yes No PZ-4I N/A	PZ-7S Yes Yes Yes Yes No PZ-7S N/A
5	a b c d e Samp a b c	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  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?  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10	PRGWC-50 Yes Yes Yes Yes No Pres No Pres Yes No No No	Yes Yes Yes Yes No  BRGWC-52I Yes Yes	PZ-1D Yes Yes Yes Yes No PZ-1D N/A N/A	PZ-11 Yes Yes Yes Yes Yes No PZ-11 N/A N/A	PZ-1S Yes Yes Yes Yes No PZ-1S N/A N/A	PZ-3S Yes Yes Yes Yes No PZ-3S N/A N/A	PZ-3I Yes Yes Yes Yes No PZ-3I N/A N/A	PZ-3D Yes Yes Yes Yes No PZ-3D N/A N/A	PZ-4S Yes Yes Yes Yes No PZ-4S N/A N/A	PZ-4I Yes Yes Yes Yes Yes No PZ-4I N/A N/A	PZ-7S Yes Yes Yes Yes No PZ-7S N/A N/A
5	a b c d e Samp a b c	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Ing (Groundwater Monitoring Wells Only)  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	PRGWC-50 Yes Yes Yes Yes No Pres No Pres Yes No No No	Yes Yes Yes Yes No  BRGWC-52I Yes Yes	PZ-1D Yes Yes Yes Yes No PZ-1D N/A N/A	PZ-11 Yes Yes Yes Yes Yes No PZ-11 N/A N/A	PZ-1S Yes Yes Yes Yes No PZ-1S N/A N/A	PZ-3S Yes Yes Yes Yes No PZ-3S N/A N/A	PZ-3I Yes Yes Yes Yes No PZ-3I N/A N/A	PZ-3D Yes Yes Yes Yes No PZ-3D N/A N/A	PZ-4S Yes Yes Yes Yes No PZ-4S N/A N/A	PZ-4I Yes Yes Yes Yes Yes No PZ-4I N/A N/A	PZ-7S Yes Yes Yes Yes No PZ-7S N/A N/A
5-:	a b c d e Samp a b c	by soil or debris)  al Well Casing  Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Ing (Groundwater Monitoring Wells Only)  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	PRGWC-50 Yes Yes Yes Yes Yes Yes Yes No No No No No	PRGWC-52I Yes Yes Yes Yes Yes Yes No No  PRGWC-52I Yes No No	PZ-1D Yes Yes Yes Yes Yes No PZ-1D N/A N/A	PZ-11 Yes Yes Yes Yes Yes No PZ-11 N/A N/A N/A	PZ-1S Yes Yes Yes Yes Yes No PZ-1S N/A N/A	PZ-3S Yes Yes Yes Yes Yes No PZ-3S N/A N/A N/A	PZ-3I Yes Yes Yes Yes Yes No PZ-3I N/A N/A	PZ-3D Yes Yes Yes Yes Yes No PZ-3D N/A N/A	PZ-4S Yes Yes Yes Yes Yes No PZ-4S N/A N/A N/A	PZ-4I Yes Yes Yes Yes Yes No PZ-4I N/A N/A N/A	PZ-7S Yes Yes Yes Yes Yes No PZ-7S N/A N/A N/A

7 - Corrective actions completed and date(s):



			PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
1.		on/Identification 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
	С	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 -	Protec	ctive Outer Casing	PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
	а	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
-	С	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
•	е	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3 -	Surfa	ce Pad	PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
	а	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
•	С	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
	е	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4 -	Intern	al Well Casing	PZ-8S	PZ-9S	PZ-10S	PZ-11S	PZ-12D	PZ-13S	PZ-14S	PZ-14I	PZ-15S	PZ-15I	PZ-16S
	а	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
	С	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
	е	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 -	Samp	ling (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
Ī	а	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
•	С	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 -	Basec	on your professional judgment, is the w											
		. ,	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	C	tive actions completed and date(s)											

7 - Corrective actions completed and date(s):



			PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
1.		ion/Identification Is the well visible and accessible?	Yes										
	b	Is the well properly identified with the correct well ID?	Yes										
ĺ	С	Does the well require protection from traffic?	No										
	d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes										
2 -	Protec	ctive Outer Casing	PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
	а	Is the protective casing free from apparent damage?	Yes										
	b	Is the casing free of degradation or deterioration?	Yes										
	С	Does the casing have a functioning weep hole?	Yes										
•	d	Is the annular space between casings filled with pea gravel or sand?	Yes										
	е	Is the well locked, and is the lock in good working condition?	Yes										
3 -	Surfac	ce Pad	PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
	а	Is the well pad in good condition? (Not cracked or broken)	Yes										
	b	Does the well pad provide adequate surface seal and stability to the well?	Yes										
	С	Is the well pad in complete contact with the protective casing?	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										
İ	е	Is the pad surface clean? (Not covered by soil or debris)	Yes										
4 -	Intern	ial Well Casing	PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
	а	Does the well cap prevent entry of foreign material into the well?	Yes										
•	b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes										
	С	Does the well have a venting hole near the top of casing?	Yes										
	d	Is the survey point clearly marked on the inner casing?	Yes										
	е	Is the depth of the well consistent with the original well log?	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										
5 -	Samp	ling (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
	а	Does the well recharge adequately when purged?	N/A										
ŀ	b	If dedicated sampling equipment is installed, is it in good condition?	N/A										
•	С	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	N/A										
6 -	Base	d on your professional judgment, is the w		•	•	-				•		-	
	-		PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
		achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes										
7	C	ctive actions completed and date(s):											

7 - Corrective actions completed and date(s):



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
-	Does the well require protection from	No	No	No	No	No	No	No	No	No	No	No
=	Is the drainage around the well acceptable? (No standing water nor is											
	d 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 - 5	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
	is the well pad in complete contact with the ground surface? (Not d 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 - 1	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
4 - 1	Internal Well Casing  Does the well cap prevent entry of foreign material into the well?	PZ-24S Yes	PZ-26I Yes	PZ-28I Yes	PZ-31S Yes	PZ-39 Yes	PZ-40S Yes	PZ-41S Yes	PZ-42S Yes	PZ-43 Yes	PZ-44 Yes	PZ-46 Yes
4 - ]	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects											
4 - 1	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near	Yes Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4 - 1	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well bave a vention hole pear	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes
4 - !	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  C Does the well have a venting hole near the top of casing?	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes
4 - 1	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?	Yes Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes
-	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  C Does the well have a venting hole near the top of casing?  d Is the survey point clearly marked on the inner casing?  e Is the depth of the well consistent with the original well log?  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?	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes Yes                Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes				
-	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  C Does the well have a venting hole near the top of casing?  d Is the survey point clearly marked on the inner casing?  e Is the depth of the well consistent with the original well log?  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	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes Yes                Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes				
-	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Sampling (Groundwater Monitoring Wells Only and Does the well recharge adequately	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No
-	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Sampling (Groundwater Monitoring Wells Only	Yes Yes Yes Yes Yes No PZ-24S	Yes Yes Yes Yes Yes No                 Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No				
-	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  C Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Sampling (Groundwater Monitoring Wells Only when purged?  If dedicated sampling equipment is	Yes Yes Yes Yes Yes No PZ-24S N/A	Yes Yes Yes Yes Yes No PZ-26I N/A	Yes Yes Yes Yes Yes No PZ-281 N/A	Yes Yes Yes Yes Yes No PZ-31S	Yes Yes Yes Yes Yes No PZ-39 N/A	Yes Yes Yes Yes Yes Yes Pz-40S N/A	Yes Yes Yes Yes Yes No PZ-41S	Yes Yes Yes Yes Yes No PZ-42S N/A	Yes Yes Yes Yes Yes No PZ-43	Yes Yes Yes Yes Yes Yes Pz-44 Yes	Yes Yes Yes Yes Yes Pz-46 N/A
5-:	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Sampling (Groundwater Monitoring Wells Only when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	Yes Yes Yes Yes Yes No PZ-24S N/A N/A	Yes Yes Yes Yes Yes No PZ-26I N/A N/A	Yes Yes Yes Yes Yes No PZ-28I N/A N/A	Yes Yes Yes Yes Yes No PZ-31S N/A N/A	Yes Yes Yes Yes Yes No PZ-39 N/A N/A	Yes Yes Yes Yes Yes No PZ-40S N/A N/A	Yes Yes Yes Yes Yes Yes No PZ-41S N/A N/A	Yes Yes Yes Yes Yes No PZ-42S N/A N/A	Yes Yes Yes Yes Yes No PZ-43 N/A N/A	Yes Yes Yes Yes Yes No PZ-44 Yes N/A	Yes Yes Yes Yes Yes No PZ-46 N/A N/A
5-:	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  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?  Sampling (Groundwater Monitoring Wells Only when purged?  If dedicated sampling equipment is in stalled, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10	Yes Yes Yes Yes Yes No PZ-24S N/A N/A	Yes Yes Yes Yes Yes No PZ-26I N/A N/A	Yes Yes Yes Yes Yes No PZ-28I N/A N/A	Yes Yes Yes Yes Yes No PZ-31S N/A N/A	Yes Yes Yes Yes Yes No PZ-39 N/A N/A	Yes Yes Yes Yes Yes No PZ-40S N/A N/A	Yes Yes Yes Yes Yes No PZ-41S N/A N/A	Yes Yes Yes Yes Yes No PZ-42S N/A N/A	Yes Yes Yes Yes Yes No PZ-43 N/A N/A	Yes Yes Yes Yes Yes No PZ-44 Yes N/A	Yes Yes Yes Yes Yes No PZ-46 N/A N/A
5 - :	a Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Sampling (Groundwater Monitoring Wells Only when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10 NTUS?	Yes Yes Yes Yes Yes No No PZ-24S N/A N/A N/A	Yes Yes Yes Yes Yes No PZ-26I N/A N/A	Yes Yes Yes Yes Yes No PZ-28I N/A N/A	Yes Yes Yes Yes Yes No PZ-31S N/A N/A	Yes Yes Yes Yes Yes No PZ-39 N/A N/A	Yes Yes Yes Yes Yes No PZ-40S N/A N/A N/A	Yes Yes Yes Yes Yes No PZ-41S N/A N/A	Yes Yes Yes Yes Yes No PZ-42S N/A N/A	Yes Yes Yes Yes Yes No PZ-43 N/A N/A	Yes Yes Yes Yes Yes No PZ-44 Yes N/A	Yes Yes Yes Yes Yes No PZ-46 N/A N/A N/A

7 - Corrective actions completed and date(s):



			PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
1.		on/Identification 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
	С	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 -	Protec	ctive Outer Casing	PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
	а	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
•	С	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
	е	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3 -	Surfac	ce Pad	PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
	а	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
•	С	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
	е	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4 -	Intern	al Well Casing	PZ-48	PZ-49	PZ-50D	PZ-51S	PZ-51I	PZ-51D	PZ-52D	PZ-53D	PZ-54	PZ-55	PZ-56
ĺ	а	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ŀ	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
	С	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
	е	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 -	Samp	ling (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
	а	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
•	С	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 -	Basec	on your professional judgment, is the w											
		. ,	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	C	tive actions completed and date(s)	<u></u>			-							<u></u>

7 - Corrective actions completed and date(s):



			PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
1 - [		on/Identification Is the well visible and accessible?	Yes     N/A	Yes	Yes								
	b	Is the well properly identified with the correct well ID?	Yes     N/A	Yes	Yes								
Ī	С	Does the well require protection from traffic?	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     N/A	Yes	Yes								
2 - [	Protec	ctive Outer Casing	PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
	а	Is the protective casing free from apparent damage?	Yes     N/A	Yes	Yes								
	b	Is the casing free of degradation or deterioration?	Yes     N/A	Yes	Yes								
	С	Does the casing have a functioning weep hole?	Yes     N/A	Yes	Yes								
	d	Is the annular space between casings filled with pea gravel or sand?	Yes     N/A	Yes	Yes								
	е	Is the well locked, and is the lock in good working condition?	Yes     N/A	Yes	Yes								
3 - 5	Surfac	<u>se Pad</u>	PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
Ī	а	Is the well pad in good condition? (Not cracked or broken)	Yes     N/A	Yes	Yes								
	b	Does the well pad provide adequate surface seal and stability to the well?	Yes     N/A	Yes	Yes								
	С	Is the well pad in complete contact with the protective casing?	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     N/A	Yes	Yes								
	е	Is the pad surface clean? (Not covered by soil or debris)	Yes     N/A	Yes	Yes								
4 - <u>I</u>	ntern	al Well Casing	PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
	а	Does the well cap prevent entry of foreign material into the well?	Yes     N/A	Yes	Yes								
	b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes     N/A	Yes	Yes								
	С	Does the well have a venting hole near the top of casing?	Yes     N/A	Yes	Yes								
Ī	d	Is the survey point clearly marked on the inner casing?	Yes     N/A	Yes	Yes								
	е	Is the depth of the well consistent with the original well log?	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      N/A	No	No								
5 - 5	Samp	ling (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
Ī	а	Does the well recharge adequately when purged?	Yes	N/A	N/A	N/A	N/A						
		If dedicated sampling equipment is installed, is it in good condition?	N/A     N/A	N/A	N/A								
	С	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	N/A	N/A	N/A	N/A						
6 - <u>I</u>	Based	on your professional judgment, is the w											
			PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I	PZ-62I	PZ-63I	PZ-70	PB-1S	PB-2D	PB-4S
		achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes     N/A	Yes	Yes								

7 - Corrective actions completed and date(s):



		DD 4D	DD 70	DD 00	DD OD	DD 400	DD 40D	DD 400	DD 40D	114/15/4	114/ D. O.	DM 0.4
_	cation/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
1	Is the well visible and accessible? Is the well properly identified with the	Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes
-	Does the well require protection from											
(	traffic?	No	No	No	No	No	No	No	No	No	No	No
(	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
			1	1	1							
2 - <u>Pro</u>	tective 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
á	apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ŀ	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(	Is the annular space between casings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
												"" 0.4
3 - <u>Su</u>	face Pad  Is the well pad in good condition? (Not	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
á	cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ı	surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(	with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C	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
(	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4 - Int	ernal 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
4 - 1110	ernal Well Casing	10.40	10-73	. 5 00						144-15-1	IVV-D-Z	100-0-1
[	Does the well can prevent entry of	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Г	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or				Yes Yes	Yes Yes						
á	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
i	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?	Yes	Yes Yes	Yes Yes	Yes	Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
1	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes	Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes
i	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  Does the PVC casing move easily when touched or can it be taken apart by	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes
	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes
	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  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?  Does the well recharge adequately	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes No	Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  In the depth of the well consistent with the original well log?  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?  In the depth of the well recharge adequately when purged?  The deficient of the well recharge adequately when purged?	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No PB-7S	Yes Yes Yes Yes Yes No PB-8S	Yes Yes Yes Yes No PB-8D	Yes Yes Yes Yes No PB-10S	Yes Yes Yes Yes Yes No PB-10D	Yes Yes Yes Yes Yes No PB-13S	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No
6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  In the depth of the well consistent with the original well log?  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?  In the depth of the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment	Yes Yes Yes Yes Yes No PB-4D N/A	Yes Yes Yes Yes Yes No PB-7S	Yes Yes Yes Yes Yes No PB-8S	Yes Yes Yes Yes No PB-8D N/A	Yes Yes Yes Yes No PB-10S	Yes Yes Yes Yes Yes No PB-10D	Yes Yes Yes Yes Yes Yes PB-13S	Yes Yes Yes Yes Yes No PB-13D	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes No No
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  In the depth of the well consistent with the original well log?  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?  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	Yes Yes Yes Yes Yes No PB-4D N/A N/A	Yes Yes Yes Yes Yes No PB-7S N/A N/A	Yes Yes Yes Yes Yes No PB-8S N/A	Yes Yes Yes Yes No PB-8D N/A N/A	Yes Yes Yes Yes No PB-10S N/A N/A	Yes Yes Yes Yes Yes No PB-10D N/A N/A	Yes Yes Yes Yes Yes No PB-13S N/A N/A	Yes Yes Yes Yes Yes No PB-13D N/A N/A	Yes Yes Yes Yes Yes No No IW-B-1 N/A N/A	Yes Yes Yes Yes Yes No No N/A N/A	Yes Yes Yes Yes Yes No IW-C-1 N/A N/A
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10	Yes Yes Yes Yes Yes No PB-4D N/A N/A	Yes Yes Yes Yes Yes No PB-7S N/A N/A	Yes Yes Yes Yes Yes No PB-8S N/A	Yes Yes Yes Yes No PB-8D N/A N/A	Yes Yes Yes Yes No PB-10S N/A N/A	Yes Yes Yes Yes Yes No PB-10D N/A N/A	Yes Yes Yes Yes Yes No PB-13S N/A N/A	Yes Yes Yes Yes Yes No PB-13D N/A N/A	Yes Yes Yes Yes Yes No No IW-B-1 N/A N/A	Yes Yes Yes Yes Yes No No N/A N/A	Yes Yes Yes Yes Yes No IW-C-1 N/A N/A
; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Does the well cap prevent entry of foreign material into the well?  Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers)?  Does the well have a venting hole near the top of casing?  Is the survey point clearly marked on the inner casing?  Is the depth of the well consistent with the original well log?  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?  In the depth of the well consistent with the original well log?  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?  Does the well recharge adequately when purged?  If dedicated sampling equipment is installed, is it in good condition?  Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	Yes Yes Yes Yes Yes No PB-4D N/A N/A	Yes Yes Yes Yes Yes No PB-7S N/A N/A	Yes Yes Yes Yes Yes No PB-8S N/A N/A	Yes Yes Yes Yes No PB-8D N/A N/A	Yes Yes Yes No PB-10S N/A N/A	Yes Yes Yes Yes Yes No PB-10D N/A N/A N/A	Yes Yes Yes Yes Yes No PB-13S N/A N/A N/A	Yes Yes Yes Yes Yes No PB-13D N/A N/A	Yes Yes Yes Yes No No N/A N/A	Yes Yes Yes Yes Yes No No IW-B-2 N/A N/A	Yes Yes Yes Yes Yes No IW-C-1 N/A N/A N/A

7 - Corrective actions completed and date(s):



1 -	Locat	ion/Identification	IW-C-2	IW-D-1	IW-D-2	IW-E-1	
	а	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	
	С	Does the well require protection from traffic?	No	No	No	No	
	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)		Yes	Yes	Yes	Yes	

2 -	Prote	ctive Outer Casing	IW-C-2	IW-D-1	IW-D-2	IW-E-1	
	а	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	
	b	Is the casing free of degradation or deterioration?		Yes	Yes	Yes	
	С	loes the casing have a functioning Yes Yes		Yes	Yes	Yes	
	d	Is the annular space between casings filled with pea gravel or sand?			Yes	Yes	
	е	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	

3 -	Surfac	ce Pad	IW-C-2	IW-D-1	IW-D-2	IW-E-1
	а	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
	С	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
	е	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes

1 -	Interr	nal Well Casing	IW-C-2	IW-D-1	IW-D-2	IW-E-1
	а	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
	С	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
	е	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
а	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
С	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 w

	IW-C-2	IW-D-1	IW-D-2	IW-E-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. Au

Date: 8/22/2022



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

## Memorandum

Date: 23 January 2023

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 first semiannual reporting period of 2023. 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 1/23/2023. The groundwater monitoring well network was observed to be well maintained and in good condition; no deficiencies requiring maintenance or repair were identified.

\*\*\*\*\*

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Plant Branch/Ash Pond B/C/D/E	1/23/2023	BRGWA-2S	
Plant Branch/Ash Pond B/C/D/E	1/23/2023	BRGWA-2I	
Plant Branch/Ash Pond B/C/D/E	1/23/2023	BRGWA-5S	
Plant Branch/Ash Pond B/C/D/E	1/23/2023	BRGWA-5I	
Plant Branch/Ash Pond B/C/D/E	1/23/2023	BRGWA-6S	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWA-12S	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWA-12I	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-17S	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWA-23S	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-25I	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-27I	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-29I	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-30I	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-32S	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-33S	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-34S	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-35S	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-36S	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-37S	
Plant Branch/Ash Pond E	1/23/2023	BRGWC-38S	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-45	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-47	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-50	
Plant Branch/Ash Pond B/C/D	1/23/2023	BRGWC-52I	
Plant Branch	1/23/2023	PZ-1S	
Plant Branch	1/23/2023	PZ-1I	
Plant Branch	1/23/2023	PZ-1D	
Plant Branch	1/23/2023	PZ-3S	
Plant Branch	1/23/2023	PZ-3I	
Plant Branch	1/23/2023	PZ-3D	
Plant Branch	1/23/2023	PZ-4S	
Plant Branch	1/23/2023	PZ-4I	
Plant Branch	1/23/2023	PZ-7S	
Plant Branch	1/23/2023	PZ-8S	
Plant Branch	1/23/2023	PZ-9S	
Plant Branch	1/23/2023	PZ-10S	
Plant Branch	1/23/2023	PZ-11S	
Plant Branch	1/23/2023	PZ-12D	
Plant Branch	1/23/2023	PZ-13S	
Plant Branch	1/23/2023	PZ-14S	
Plant Branch	1/23/2023	PZ-14I	
Plant Branch	1/23/2023	PZ-15S	
Plant Branch	1/23/2023	PZ-15I	
Plant Branch	1/23/2023	PZ-16S	
Plant Branch	1/23/2023	PZ-16I	
Plant Branch Plant Branch	1/23/2023 1/23/2023	PZ-17I PZ-18S	
Plant Branch Plant Branch	1/23/2023	PZ-18S PZ-18I	
Plant Branch Plant Branch	1/23/2023	PZ-181 PZ-19S	
Plant Branch	1/23/2023	PZ-198 PZ-19I	
Plant Branch	1/23/2023	PZ-191 PZ-20S	
Plant Branch	1/23/2023	PZ-20S PZ-20I	
Plant Branch	1/23/2023	PZ-201 PZ-21S	
Plant Branch	1/23/2023	PZ-213 PZ-21I	
Plant Branch	1/23/2023	PZ-23I	
Plant Branch	1/23/2023	BRGWC-24S	
Plant Branch	1/23/2023	PZ-26I	
Plant Branch	1/23/2023	PZ-28I	
Plant Branch	1/23/2023	PZ-31S	
Plant Branch	1/23/2023	PZ-313	
Train Dianon	1/23/2023	12-37	

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Plant Branch	1/23/2023	PZ-40S	
Plant Branch	1/23/2023	PZ-41S	
Plant Branch	1/23/2023	PZ-42S	
Plant Branch	1/23/2023	PZ-43	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-44	
Plant Branch	1/23/2023	PZ-46	
Plant Branch	1/23/2023	PZ-48	
Plant Branch	1/23/2023	PZ-49	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-50D	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-51S	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-51I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-51D	
Plant Branch	1/23/2023	PZ-52D	
Plant Branch	1/23/2023	PZ-53D	
Plant Branch	1/23/2023	PZ-54	
Plant Branch	1/23/2023	PZ-55	
Plant Branch	1/23/2023	PZ-56	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-57I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-58I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-59I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-60I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-61I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-62I	
Plant Branch/Ash Pond B/C/D	1/23/2023	PZ-63I	
Plant Branch	1/23/2023	PZ-64I	
Plant Branch	1/23/2023	PZ-65I	
Plant Branch	1/23/2023	PZ-66I	
Plant Branch	1/23/2023	PZ-67	
Plant Branch	1/23/2023	PZ-68D	
Plant Branch	1/23/2023	PZ-69I	
Plant Branch	1/23/2023	PZ-70	
Plant Branch	1/23/2023	C2-02	
Plant Branch	1/23/2023	PB-1S	
Plant Branch	1/23/2023	PB-2D	
Plant Branch	1/23/2023	PB-4S	
Plant Branch	1/23/2023	PB-4D	
Plant Branch	1/23/2023	PB-7S	
Plant Branch	1/23/2023	PB-8S	
Plant Branch	1/23/2023	PB-8D	
Plant Branch	1/23/2023	PB-10S	
Plant Branch	1/23/2023	PB-10D	
Plant Branch	1/23/2023	PB-13S	
Plant Branch	1/23/2023	PB-13D	
Plant Branch	1/23/2023	IW-B-1	
Plant Branch	1/23/2023	IW-B-2	
Plant Branch	1/23/2023	IW-C-1	
Plant Branch	1/23/2023	IW-C-2	
Plant Branch	1/23/2023	IW-D-1	
Plant Branch	1/23/2023	IW-D-2	
Plant Branch	1/23/2023	IW-E-1	

# APPENDIX C

# Analytical Laboratory Results and Field Sampling Forms

# LABORATORY ANALYTICAL REPORTS

Fall 2022





gel.com

September 19, 2022

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

Re: Branch CCR Groundwater Compliance PZ-52D

Work Order: 591887

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 02, 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



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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 591887 GEL Work Order: 591887

#### 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.

	A. Mm	
Reviewed by		

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

## **Certificate of Analysis**

Report Date: September 19, 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 CompliancePZ-52D

Client Sample ID: PZ-52D Sample ID: 591887001

Matrix: WG

Collect Date: 01-SEP-22 12:32
Receive Date: 02-SEP-22
Collector: Client

Project: GPCC00101 Client ID: GPCC001

**Analyst Comments** 

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Anal	yst Date	Time	e Batch	Method
Field Data												
Client collected Field	pH "As Receiv	ved"										
Field pH	-	7.70			SU			EOS1	09/01/22	1232	2312053	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.24	0.0670	0.200	mg/L		1	JLD1	09/03/22	2240	2312366	2
Fluoride		0.140	0.0330	0.100	mg/L		1					
Sulfate		340	6.65	20.0	mg/L		50	JLD1	09/06/22	1407	2312366	3
Metals Analysis-ICP	-MS											
SW846 3005A/6020I	B - PZ-52D "As	s Received"										
Cobalt		0.00150	0.000300	0.00100	mg/L	1.00	1	PRB	09/14/22	0042	2312380	4
Boron		0.0403	0.00520	0.0150	mg/L	1.00	1	PRB	09/14/22	1740	2312380	5
Calcium		69.0	0.800	2.00	mg/L	1.00	10	PRB	09/14/22	1742	2312380	6
Solids Analysis												
SM2540C Dissolved	Solids "As Rec	ceived"										
Total Dissolved Solids		754	2.38	10.0	mg/L			CH6	09/08/22	1457	2313724	7
The following Prep N	Methods were p	erformed:										
Method	Descriptio	n		Analyst	Date	Т	im	e Pi	rep Batch			
SW846 3005A	ICP-MS 300:	5A PREP		PC1	09/06/22	0	910	23	312379			
The following Analy	tical Mathada	wara narfarm	ad.									

#### The following Analytical Methods were performed:

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

**Notes:** 

Page 3 of 14 SDG: 591887

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

**Certificate of Analysis** 

Report Date: September 19, 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 CompliancePZ-52D

Client Sample ID: PZ-52D Project: GPCC00101 Sample ID: 591887001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

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

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

# **QC Summary**

Report Date: September 19, 2022

Page 1 of 4

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

Atlanta, Georgia

Atlanta, Georgia
Contact: Joju Abraham

Workorder: 591887

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography								
Batch 2312366 ———————————————————————————————————		19.9	19.9	mg/L	0.191		(0%-20%) JLD1	09/06/22 12:07
Fluoride		0.367	0.242	mg/L	41.2*^		(+/-0.100)	09/03/22 19:41
Sulfate	U	ND U	ND	mg/L	N/A			
QC1205182662 LCS Chloride	5.00		4.95	mg/L		99	(90%-110%)	09/03/22 16:42
Fluoride	2.50		2.40	mg/L		95.9	(90%-110%)	
Sulfate	10.0		10.2	mg/L		102	(90%-110%)	
QC1205182661 MB Chloride		U	ND	mg/L				09/03/22 16:12
Fluoride		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205182664 591867001 PS Chloride	5.00	3.99	10.4	mg/L		129*	(90%-110%)	09/06/22 12:37
Fluoride	2.50	0.367	3.83	mg/L		139*	(90%-110%)	09/03/22 20:11
Sulfate	10.0 U	ND	15.5	mg/L		155*	(90%-110%)	

Page 5 of 14 SDG: 591887

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# **QC Summary**

Workorder: 591887 Page 2 of 4 Sample Qual **Parmname** NOM QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2312380 Batch QC1205182699 LCS 0.112 Boron 0.100 mg/L 112 (80%-120%) PRB 09/14/22 17:27 Calcium 2.00 1.95 mg/L 97.7 (80% - 120%)09/14/22 00:14 0.0500 0.0480 Cobalt mg/L 96 (80%-120%) QC1205182698 MB U ND 09/14/22 17:25 Boron mg/LU Calcium ND mg/L 09/14/22 00:10 U ND Cobalt mg/L QC1205182700 591881001 MS 0.100 1.20 1.24 N/A 09/14/22 17:31 Boron mg/L(75%-125%) 2.00 42.6 43.0 09/14/22 00:21 Calcium mg/L N/A (75% - 125%)Cobalt 0.0500 0.00560 0.0534 mg/L 95.6 (75%-125%) QC1205182701 591881001 MSD Boron 0.100 1.20 1.27 mg/L 2.04 N/A (0%-20%)09/14/22 17:33 42.6 42.9 Calcium 2.00 mg/L 0.254 N/A (0%-20%)09/14/22 00:24 Cobalt 0.0500 0.00560 0.0545 mg/L 2.08 97.8 (0%-20%)QC1205182702 591881001 SDILT Boron 120 26.6 ug/L 11.2 (0%-20%)09/14/22 17:37 Calcium 42600 8140 09/14/22 00:32 ug/L 4.58 (0%-20%)

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### **QC Summary**

				<u>•/</u>					
Workorder: 591887									Page 3 of 4
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range A	Anlst	Date Time
Metals Analysis - ICPMS Batch 2312380									
Cobalt		5.60	1.10	ug/L	1.7		(0%-20%)	PRB	09/14/22 00:32
Solids Analysis Batch 2313724									
QC1205185482 592010003 DUP									
Total Dissolved Solids		158	155	mg/L	1.92		(0%-5%)	CH6	09/08/22 14:57
QC1205185480 LCS									
Total Dissolved Solids	300		301	mg/L		100	(95%-105%)		09/08/22 14:57
QC1205185479 MB									
Total Dissolved Solids		U	ND	mg/L					09/08/22 14:57

#### **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

Page 7 of 14 SDG: 591887

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### **QC Summary**

Workorder: 591887

Page 4 of 4

Parmname

NOM Sample Qual QC Units RPD% REC% Range AnIst Date Time

- 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.
- 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.  $^{\circ}$  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.

Page 8 of 14 SDG: 591887

#### Technical Case Narrative Georgia Power Company SDG #: 591887

#### **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2312380

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2312379

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
591887001	PZ-52D
1205182698	Method Blank (MB)ICP-MS
1205182699	Laboratory Control Sample (LCS)
1205182702	591881001(PZ-70L) Serial Dilution (SD)
1205182700	591881001(PZ-70S) Matrix Spike (MS)
1205182701	591881001(PZ-70SD) 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 591887001 (PZ-52D) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

Amalysta	591887
Analyte	001
Calcium	10X

## **General Chemistry**

**Product: Ion Chromatography Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

**Analytical Batch:** 2312366

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
591887001	PZ-52D
1205182661	Method Blank (MB)
1205182662	Laboratory Control Sample (LCS)
1205182663	591867001(NonSDG) Sample Duplicate (DUP)
1205182664	591867001(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.

#### **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	1205182664 (Non SDG 591867001PS)	129* (90%-110%)
Fluoride	1205182664 (Non SDG 591867001PS)	139* (90%-110%)
Sulfate	1205182664 (Non SDG 591867001PS)	155* (90%-110%)

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Fluoride	1205182663 (Non SDG 591867001DUP)	abs(.242367)* (+/1 mg/L)

#### **Technical Information**

#### **Sample Dilutions**

The following samples 1205182663 (Non SDG 591867001DUP), 1205182664 (Non SDG 591867001PS) and 591887001 (PZ-52D) were diluted because target analyte concentrations exceeded the calibration range.

Page 10 of 14 SDG: 591887

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.

Amalasta	591887
Analyte	001
Sulfate	50X

**Product: Solids, Total Dissolved Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

**Analytical Batch:** 2313724

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

591887001 PZ-52D

1205185479 Method Blank (MB)

1205185480 Laboratory Control Sample (LCS)

1205185482 592010003(NonSDG) 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.

#### **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 11 of 14 SDG: 591887

GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	Phone: (843) 556-8171 Fax: (843) 766-1178	(Fill in the number of containers for each test)	< Preservative Type (6)	Ç	Note: extra sample is	required for sample specific QC	field pH = 7.70				Specify: (Subject to Surcharge)		[ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4	Yes     No Cooler Temp: 5 °C	ral []M			Please provide any additional details below regarding handling and/or	disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd	
ally Analytics	ent	lysis Requested (5)	Should this a NI	0C 2	11 of con 12 of con 13 of con 15 of con 15 of con	(7) Known or possible Haza Total number (CI, F, SC (EPA 300, 3) Meter (Meter (EPA 300, 4)	3 / /				TAT Requested: Normal: X Rush: Si	s [x] No	C of A [ ]QC Summary	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] C	Duplicate Sample, $G = Grab$ , $C = Composite$	dge, WQ=Water Quality Control Matrix 0/10874704 - 1) ST= Sodium Thiosulfate, if no preservative is added = leave field blank	O'T= Other / Unknown	(i.e.: Hightlow pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  Description:	
GEL Laboratories I Laboratories ILC	Vumber:	hone # 404-506-7116	Fax #		Send Results To: SCS & Geosyntec Contacts	*Date Collected Collected Collected (Military) QC Field Matrix dioactions (Military) QC Field Matrix dioactions (mm/ddyy) (thinm) Code (3) Fillered (3) (4) Programmed (4)	09/01/22 1232 0				Chain of Custody Signatures	Received by (signed) Date Time	0410 1 1/10 9/2/22 9/0	3		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, WQ=Water Quality Control Matrix 5.) Sample Analysis Requested: Analytical method requested (i.e. 82608, 6010B/7470A) and number of containers provided for each (i.e. 82608 - 3, 6010B/7470A - 1). 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	Characteristic Hazards FL = Flammable/Ignitable LW= Listed Waste	CO = Corrosive (f. K. P and U-listed wastes.)  RE = Reactive Waste code(s):	I SCA Regulated PCB = Polycharinated hinbende
Page: of Project # GEL Quote #:	COC Number ''.	Client Name: GA Power	Project/Site Name: Plant Branch Ash Pond - PZ-52D	Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	Collected By: Hunter An Id		PZ-52D				D	Date /- 1	00 12/2/2 NOD		<ul> <li>For sample shipping and delivery details, see Sample Receipt &amp; Review form (SRR.)</li> <li>Chain of Custody Number = Client Determined</li> </ul>	) QC Codes: N = Normal Sample, TB = Trip Blank, FD = ) Field Filtered: For liquid matrices, indicate with a - V - F.	Matrix Codes: WD=Drinking Water, WG=Groundwater     Sample Analysis Requested: Analytical method requeste     Preservative Type: HA = Hydrochloric Acid, NI = Nimic	KNOWN OR POSSIBLE HAZARDS		Cd = Cadmium Ag= Silver Cr = Chromium MR= Misc, RCRA metals Pb = Lead

Date Received By: MVH  Date Received A Carrier and Tracking Number    Carrier and Tracking Number	Client				SAMPLE RECEIPT & REVIEW FORM  (AR/COC/Work Order: 59   88   /59   88 3   /59   88 7
FedEx Express	Received By: MVH			200	30 00 0000
Hazard Class Shipped:   UN#:   If UN2910, Is the Radioactive Shipment Survey Compliant? Yes_No_					
Did the RSO classify the samples are to be exerved as radioactive?   COC notation or radioactive stickers on containers equal client designate the samples are to be exerved as radioactive?   COC notation or radioactive stickers on containers equal client designation.	iuspected Hazard Information	Yes	No	*If N	et Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Did the RSO classify the samples as   CoC notation or hazard labels on containers equal client designation.	dShipped as a DOT Hazardous?		X	Haza	
Consisted as: Rad 1 Rad 2 Rad 3  Constitution or huzard labels on containers equal client designation.    Did the client designate samples are hazardous?			Y	COC	notation or radioactive stickers on containers equal client designation.
Did the client designate samples are hazardous?   If D or E is yes, select Hazards below.   PCB's Flammable   Foreign Soil   RCRA   Asbestos   Beryllium   Other:			X	Maxi	
PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:    Sample Receipt Criteria   5   2   2   2   2   2   2   2   2   2	) Did the client designate samples are hazardous?		Y		
Shipping containers received intact and sealed?  Circle Applicable: Seals broken Damaged container Leaking container Other (describe)  Circle Applicable: Client contacted and provided COC COC created upon receipt with hipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR temperature gun?  Sample containers intact and sealed?  Sample containers intact and sealed?  Circle Applicable: Seals broken Damaged container Leaking container Other (describe)  TEMP:  Temperature Device Serial # (If Applicable):  Sample ID's and Containers Affected:  If Yes, are Encores or Soil Kits present for solids? Yes_No_NA_(If yes, take to VOA Freezer)  Do liquid VOA vials received within holding time?  To liquid VOA vials received within holding time?  To liquid VOA vials received:  ID's and containers affected:  ID's and containers affected:  ID's and containers affected:  TEMP:  Temperature Device Serial # (If Applicable):  To Pall applicable:  Temperature Device Serial # (If Applicable):  To Pall applicable:  Temperature Device Serial # (If Applicable):  To Pall applicable:  Temperature Device Serial # (If Applicable):	Did the RSO identify possible hazards?		4	If D c	
Chain of custody documents included with shipment?  Chain of custody documents included with shipment?  Chain of custody documents included with shipment?  Preservation Method: Wet Lee Ice Packs Dry ice None Other: *all temperature corded in Celsius  TEMP:  TE	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR temperature gun?  Sample containers intact and scaled?  Sample containers intact and scaled?  Sample requiring chemical preservation at proper pH?  Do any samples require Volatile Analysis?  Do any samples received within holding time?  Samples received within holding time?  Sample ID's and containers affected:  ID's and containers No times on containers COC missing info Other (describe)		V	Ç¢	(	
Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR temperature gun?  Sample containers intact and sealed?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile Analysis?  Do any samples require Volatile Analysis?  Sample ID's and containers affected:  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_(If unknown, select No)  Sample ID's and containers affected:  ID's and containers affected:  ID's and containers affected:  Circle Applicable: No dates on containers No times on containers COC missing info_Other (describe)		X		(	Circle Applicable: Client contacted and provided COC COC created upon receipt
Secondary Temperature Device Serial # (If Applicable):    Sample containers intact and sealed?   Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)				X	
Sample containers intact and sealed?  Sample requiring chemical preservation at proper pH?  Sample ID's and Containers Affected:  If Preservation added, Lot#:  If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do any samples require Volatile Analysis?  Do any sample received within holding time?  Sample ID's and containers affected:  ID's and tests affected:  ID's and containers affected:  ID's and containers affected:  ID's and containers affected:  Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)		X	W		
at proper pH?  If Preservation added, Lot#:  If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do any samples require Volatile Analysis?  If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:  ID's and tests affected:  ID's and containers affected:  Date & time on COC match ID's on  Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)	Sample containers intact and sealed?	X		(	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Do any samples require Volatile Analysis?   If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)		X			
Sample ID's on COC match ID's on bottles?  Date & time on COC match date & time  Circle Applicable: No dates on containers  No times on containers  COC missing info Other (describe)		1		V	f Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA
bottles?  Date & time on COC match date & time  Circle Applicable: No dates on containers  No times on containers  COC missing info  Other (describe)	Samples received within holding time?	X		1	D's and tests affected:
The second secon		X	8	I	D's and containers affected:
on bottles?	Date & time on COC match date & time on bottles?	X		(	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?  Circle Applicable: No container count on COC Other (describe)	The second of th	X	Ŋ	(	Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?				X	
COC form is properly signed in relinquished/received sections?  mments (Use Continuation Form if needed):	relinquished/received sections?	X		(	Circle Applicable: Not relinquished Other (describe)

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 19 September 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	
w asinington	C780





gel.com

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 AP - E and APE

Work Orders: 591881,590857 and 591351

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, August 29, 2022 and September 02, 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.

True & Frent

Sincerely,

Erin Trent Project Manager

Purchase Order: GPC82177-0003

Enclosures



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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 591881 GEL Work Order: 591881

#### 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.

Prie & Frent
Reviewed by

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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 591351 GEL Work Order: 591351

#### 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.

Prie & Frent
Reviewed by

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# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 590857 GEL Work Order: 590857

#### 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.

Prie & Frent
Reviewed by

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 ComplianceAP - E and APE

Client Sample ID: PZ-70 Project: GPCC00101 Sample ID: 591881001 Client ID: GPCC001

Matrix: WG

Collect Date: 01-SEP-22 10:55
Receive Date: 02-SEP-22
Collector: Client

Client collected Field pH "As Received"   SU   EMK   09/01/22   1055   2313386   1   1   1   1   1   1   1   1   1	Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst		yst Date	Time Batch		Method
Field pH	Field Data												
Field pH	Client collected Field pH	H "As Receiv	ved"										
EPA 300.0 Anions Liquid "As Received" Fluoride 1.43 0.0330 0.100 mg/L 50 JLD1 09/03/22 210 2312366 2 Chloride 10.8 3.35 10.0 mg/L 50 JLD1 09/03/22 210 2312366 2 Sulfare 172 6.65 20.0 mg/L 50 JLD1 09/03/22 210 2312366 2 Sulfare 172 0.655 20.0 mg/L 50 JLD1 09/03/22 210 2312366 2 Sulfare 172 0.001 Vapor Mercury, Liquid "As Received" Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury U ND 0.000067 0.00020 mg/L 1.00 1 JP2 09/07/22 1121 2312733 4 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received"  Antimony U ND 0.00000 0.00300 mg/L 1.00 1 JP2 09/14/22 017 2312380 5 Assenic U ND 0.00200 0.00500 mg/L 1.00 1 Berlilliam 0.0444 0.000670 0.00400 mg/L 1.00 1 Berlilliam U ND 0.000000 0.00000 mg/L 1.00 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Cadmium U ND 0.00300 0.00100 mg/L 1.00 1 Cadmium U ND 0.00300 0.00100 mg/L 1.00 1 Chromium U ND 0.00500 0.00000 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.00100 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.00100 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.0000 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.00300 mg/L 1.00 1 Chromium I 0	Field pH					SU			<b>EMK</b>	09/01/22	1055 23	13386	1
EPA 300.0 Anions Liquid "As Received" Fluoride 1.43 0.0330 0.100 mg/L 50 JLD1 09/03/22 210 2312366 2 Chloride 10.8 3.35 10.0 mg/L 50 JLD1 09/03/22 210 2312366 2 Sulfare 172 6.65 20.0 mg/L 50 JLD1 09/03/22 210 2312366 2 Sulfare 172 0.655 20.0 mg/L 50 JLD1 09/03/22 210 2312366 2 Sulfare 172 0.001 Vapor Mercury, Liquid "As Received" Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury U ND 0.000067 0.00020 mg/L 1.00 1 JP2 09/07/22 1121 2312733 4 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received"  Antimony U ND 0.00000 0.00300 mg/L 1.00 1 JP2 09/14/22 017 2312380 5 Assenic U ND 0.00200 0.00500 mg/L 1.00 1 Berlilliam 0.0444 0.000670 0.00400 mg/L 1.00 1 Berlilliam U ND 0.000000 0.00000 mg/L 1.00 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Cadmium U ND 0.00300 0.00100 mg/L 1.00 1 Cadmium U ND 0.00300 0.00100 mg/L 1.00 1 Chromium U ND 0.00500 0.00000 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.00100 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.00100 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.0000 mg/L 1.00 1 Chromium I 0.00615 0.00300 0.00300 mg/L 1.00 1 Chromium I 0	Ion Chromatography												
Flioride	0 1 0	id "As Recei	ived"										
Chloride 10.8 1.3.5 10.0 mg/L 50 JLD1 09.07.22 0709 2312366 3 Sulfate 172 6.65 20.0 mg/L 50 JLD1 09.07.22 0709 2312366 3 Sulfate 172 6.65 20.0 mg/L 50 JLD1 09.07.22 0709 2312366 3 Sulfate 172 6.65 20.0 mg/L 50 JLD1 09.07.22 0709 2312366 3 Sulfate 172 00.00000 00.00000 mg/L 1.00 1 JP2 09.07.22 1121 2312733 4 Metals Analysis-ICP-MS  SW846 3005A/6020B "As Received"  Matimony U ND 0.00000 0.00500 mg/L 1.00 1 JP2 09.07.22 1121 2312733 4 Metals Analysis-ICP-MS  SW846 3005A/6020B "As Received"  Matimony U ND 0.00200 0.00500 mg/L 1.00 1 JP8 09/14/22 017 2312380 5 Arsenic U ND 0.00200 0.00500 mg/L 1.00 1 JP8 09/14/22 017 2312380 5 Metals 10.00 1 JP8 09/14/2 017 2312380 5 Metals 10.00 1 JP8 0.000300 0.00100 mg/L 1.00 1 JP8 09/14/2 017 2312380 5 Metals 10.00 1 JP8 0.000300 0.00100 mg/L 1.00 1 JP8 09/14/2 017 2312380 5 Metals 10.00 1 JP8 0.000300 0.00100 mg/L 1.00 1 JP8 0.000300 0.00000 0.00000 mg/L 1.00 1 JP8 0.000300 0.00000 0.00000 mg/L 1.00 1 JP8 0.0003123 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00	Fluoride	10 110 11000		0.0330	0.100	mg/L		1	JLD1	09/03/22	2210 23	12366	2
Sulfate 172 6.65 20.0 mg/L 50	Chloride							50					
Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury	Sulfate					_							
Mercury   U ND   0.0000670   0.000200   mg/L   1.00   1   JP2   09/07/22   1121   2312733   4	Mercury Analysis-CVA	A				C							
Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         09/07/22         121         2312733         4           Metals Analysis-ICP-MS         SW846 3005A/6020B "As Received"         SW846	•		As Received"										
Metals Analysis-ICP-MS   SW846 3005A/6020B "As Received"   SW846 3005A/6020B "As Received   SW846 3005A/6020B				0.0000670	0.000200	mg/L	1.00	1	JP2	09/07/22	1121 23	12733	4
SW846 3005A/6020B "As Received"   SW846 3005A/6020B "As Received " SW846 3005A/6020B	•	S				8							
Antimony U ND 0.00100 0.00300 mg/L 1.00 1 PRB 09/14/22 0017 2312380 5 Arsenic U ND 0.00200 0.00500 mg/L 1.00 1 Barium 0.0444 0.000670 0.00400 mg/L 1.00 1 Barium 0.0444 0.000670 0.00400 mg/L 1.00 1 Barium 0.0444 0.000670 0.000500 mg/L 1.00 1 Calcium U ND 0.000300 0.00100 mg/L 1.00 1 Calcium 42.6 0.0800 0.200 mg/L 1.00 1 Calcium 0.00560 0.000560 0.000300 0.00100 mg/L 1.00 1 Calcium 0.00560 0.000560 0.000300 0.00100 mg/L 1.00 1 Calcium 0.00560 0.000560 0.000300 0.00100 mg/L 1.00 1 Calcium 0.00560 0.000300 0.0000 mg/L 1.00 1 Calcium 0.00560 0.000300 0.0000 mg/L 1.00 1 Calcium 0.00560 0.000300 0.0000 mg/L 1.00 1 Calcium 0.00560 0.000300 mg/L 1.00 1 Calcium 0.00560 mg/L 1.00 1 Calcium 0.00560 0.000300 0.000300 0.000300 0.000300 0.000300 0.000300 0.000300 0.000300 0.000300 0.000300 0.000300 0.000	•		"										
Arsenic U ND 0.00200 0.00500 mg/L 1.00 1 Barium 0.0444 0.000670 0.00400 mg/L 1.00 1 Barium U ND 0.000200 0.000500 mg/L 1.00 1 Cadmium U ND 0.000200 0.000500 mg/L 1.00 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Calcium 42.6 0.0800 0.200 mg/L 1.00 1 Chromium U ND 0.00300 0.00100 mg/L 1.00 1 Chromium U ND 0.00300 0.00100 mg/L 1.00 1 Crobalt 0.00560 0.000300 0.00100 mg/L 1.00 1 Crobalt 0.00560 0.000300 0.00100 mg/L 1.00 1 Calcium J 0.00615 0.00300 0.00100 mg/L 1.00 1 Calcium J 0.00615 0.00300 0.00100 mg/L 1.00 1 Calcium J 0.00615 0.00300 0.00000 mg/L 1.00 1 Calcium J 0.00625 0.00100 mg/L 1.00 1 Calcium J 0.00625 0.00100 mg/L 1.00 1 Calcium J 0.00625 0.00150 0.00500 mg/L 1.00 1 Calcium J 0.00620 0.00500 mg/L 1.00 1 Calcium J 0.00600  0.00500 mg/L 1.00 1 Calcium J 0				0.00100	0.00300	mg/L	1.00	1	PRB	09/14/22	0017 23	12380	5
Barium   0.0444   0.000670   0.00400   mg/L   1.00   1	Arsenic					_			1112	02/11/22	0017 20		
Beryllium	Barium	C				_							
Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         42.6         0.0800         0.200         mg/L         1.00         1           Chromium         U         ND         0.00300         0.0100         mg/L         1.00         1           Cobalt         0.00560         0.00300         0.00100         mg/L         1.00         1           Iron         1.48         0.0330         0.100         mg/L         1.00         1           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Lithium         J         0.00615         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.5         0.0100         0.0300         mg/L         1.00         1           Selenium         0.00625         0.0800         0.300         mg/L         1.00         1           Sodium         25.8         0.0800         0.250         mg/L         1.00         1           Boron         1.20         0.0520         0.150         mg/L         1.00         1         PRB		U				_							
Calcium       42.6       0.0800       0.200       mg/L       1.00       1         Chromium       U       ND       0.00300       0.0100       mg/L       1.00       1         Cobalt       0.00560       0.000300       0.00100       mg/L       1.00       1         Iron       1.48       0.0330       0.100       mg/L       1.00       1         Lead       U       ND       0.000500       0.00200       mg/L       1.00       1         Lithium       J       0.00615       0.00300       0.0100       mg/L       1.00       1         Magnesium       15.5       0.0100       0.0300       mg/L       1.00       1       1         Potassium       5.62       0.0800       0.300       mg/L       1.00       1	Cadmium					_							
Chromium	Calcium		42.6		0.200		1.00	1					
Tron	Chromium	U	ND	0.00300	0.0100		1.00	1					
Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Lithium         J         0.00615         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.5         0.0100         0.0300         mg/L         1.00         1           Potassium         5.62         0.0800         0.300         mg/L         1.00         1           Selenium         0.00625         0.00150         0.00500         mg/L         1.00         1           Sodium         25.8         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Boron         1.20         0.0520         0.150         mg/L         1.00         1         PRB         09/14/22         1729         2312380         6           Manganese         1.06         0.0100         0.0500         mg/L         1.00         1         PRB         09/13/22         2211         2312380         7           Solids Analysis         SM2540C Dissolved Solids "As Received"           Total Dissolved S	Cobalt		0.00560	0.000300	0.00100	mg/L	1.00	1					
Lithium J 0.00615 0.00300 0.0100 mg/L 1.00 1  Magnesium 15.5 0.0100 0.0300 mg/L 1.00 1  Potassium 5.62 0.0800 0.300 mg/L 1.00 1  Selenium 0.00625 0.00150 0.00500 mg/L 1.00 1  Sodium 25.8 0.0800 0.250 mg/L 1.00 1  Thallium U ND 0.00600 0.00200 mg/L 1.00 1  Boron 1.20 0.0520 0.150 mg/L 1.00 10  Manganese 1.06 0.0100 0.0500 mg/L 1.00 10  Molybdenum 0.00142 0.000200 0.00100 mg/L 1.00 10  Molybdenum 0.00142 0.000200 0.00100 mg/L 1.00 10  Solids Analysis  SM2540C Dissolved Solids "As Received"  Total Dissolved Solids 321 2.38 10.0 mg/L CH6 09/08/22 1457 2313724 8	Iron		1.48	0.0330	0.100	mg/L	1.00	1					
Magnesium         15.5         0.0100         0.0300         mg/L         1.00         1           Potassium         5.62         0.0800         0.300         mg/L         1.00         1           Selenium         0.00625         0.00150         0.00500         mg/L         1.00         1           Sodium         25.8         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.00600         0.00200         mg/L         1.00         1           Boron         1.20         0.0520         0.150         mg/L         1.00         10         PRB         09/14/22         1729         2312380         6           Manganese         1.06         0.0100         0.0500         mg/L         1.00         10         PRB         09/13/22         2211         2312380         7           Solids Analysis         SM2540C Dissolved Solids "As Received"           Total Dissolved Solids         321         2.38         10.0         mg/L         CH6         09/08/22         1457         2313724         8	Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Potassium	Lithium	J	0.00615	0.00300	0.0100	mg/L	1.00	1					
Selenium         0.00625         0.00150         0.00500         mg/L         1.00         1           Sodium         25.8         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.00600         0.00200         mg/L         1.00         1           Boron         1.20         0.0520         0.150         mg/L         1.00         10         PRB         09/14/22         1729         2312380         6           Manganese         1.06         0.0100         0.0500         mg/L         1.00         10         PRB         09/13/22         2211         2312380         7           Solids Analysis         SM2540C Dissolved Solids "As Received"           Total Dissolved Solids         321         2.38         10.0         mg/L         CH6         09/08/22         1457         2313724         8	Magnesium		15.5	0.0100	0.0300	mg/L	1.00	1					
Sodium         25.8         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Boron         1.20         0.0520         0.150         mg/L         1.00         10         PRB         09/14/22         1729         2312380         6           Manganese         1.06         0.0100         0.0500         mg/L         1.00         10         PRB         09/13/22         2211         2312380         7           Solids Analysis         SM2540C Dissolved Solids "As Received"           Total Dissolved Solids         321         2.38         10.0         mg/L         CH6         09/08/22         1457         2313724         8	Potassium		5.62	0.0800	0.300	mg/L	1.00	1					
Thallium	Selenium		0.00625	0.00150	0.00500	mg/L							
Boron 1.20 0.0520 0.150 mg/L 1.00 10 PRB 09/14/22 1729 2312380 6 Manganese 1.06 0.0100 0.0500 mg/L 1.00 10 Molybdenum 0.00142 0.000200 0.00100 mg/L 1.00 1 PRB 09/13/22 2211 2312380 7 Solids Analysis SM2540C Dissolved Solids "As Received" Total Dissolved Solids 321 2.38 10.0 mg/L CH6 09/08/22 1457 2313724 8	Sodium			0.0800	0.250	mg/L							
Manganese       1.06       0.0100       0.0500       mg/L       1.00       10         Molybdenum       0.00142       0.000200       0.00100       mg/L       1.00       1       PRB       09/13/22       2211       2312380       7         Solids Analysis         SM2540C Dissolved Solids "As Received"         Total Dissolved Solids       321       2.38       10.0       mg/L       CH6       09/08/22       1457       2313724       8	Thallium	U	ND	0.000600	0.00200		1.00	1					
Molybdenum       0.00142       0.000200       0.00100       mg/L       1.00       1       PRB       09/13/22       2211       2312380       7         Solids Analysis         SM2540C Dissolved Solids "As Received"         Total Dissolved Solids       321       2.38       10.0       mg/L       CH6       09/08/22       1457       2313724       8	Boron					mg/L			PRB	09/14/22	1729 23	12380	6
Solids Analysis         SM2540C Dissolved Solids "As Received"         Total Dissolved Solids       321       2.38       10.0       mg/L       CH6       09/08/22       1457       2313724       8	Manganese					_							
SM2540C Dissolved Solids "As Received"  Total Dissolved Solids 321 2.38 10.0 mg/L CH6 09/08/22 1457 2313724 8	Molybdenum		0.00142	0.000200	0.00100	mg/L	1.00	1	PRB	09/13/22	2211 23	12380	7
Total Dissolved Solids 321 2.38 10.0 mg/L CH6 09/08/22 1457 2313724 8	Solids Analysis												
	SM2540C Dissolved So	lids "As Rec	eived"										
Titration and Ion Analysis	Total Dissolved Solids		321	2.38	10.0	mg/L			CH6	09/08/22	1457 23	13724	8
	Titration and Ion Analys	sis											

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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 ComplianceAP - E and APE

Client Sample ID: PZ-70 GPCC00101 Project: Sample ID: 591881001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ar	nalyst Date	Time Batch	Method
Titration and Ion Anal	lysis									
SM 2320B Total Alka	linity "As Rec	eived"								
Alkalinity, Total as CaCO3		37.8	1.45	4.00	mg/L		HF	I2 09/08/22	1127 2312490	9
Bicarbonate alkalinity (CaC	CO3)	37.8	1.45	4.00	mg/L					
Carbonate alkalinity (CaCC	03) U	ND	1.45	4.00	mg/L					
The following Prep M	ethods were po	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch	l	
SW846 3005A	ICP-MS 3005	5A PREP		PC1	09/06/22		0910	2312379		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	09/06/22		1255	2312730		
The following Analyt	ical Methods v	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 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 AP - E and APE

Client Sample ID: BRGWC-17S Project: GPCC00101 Sample ID: 591351001 Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22 11:37
Receive Date: 29-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pH	"As Receiv	ved"									
Field pH		6.62			SU			EOS1	08/24/22	1137 2310138	1
Ion Chromatography											
EPA 300.0 Anions Liqui	d "As Recei	ived"									
Chloride		5.00	0.0670	0.200	mg/L		1	HXC1	08/30/22	1317 2310523	2
Fluoride		0.274	0.0330	0.100	mg/L		1				
Sulfate		157	2.66	8.00	mg/L		20	HXC1	08/30/22	2115 2310523	3
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercur	y, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1118 2310248	4
Metals Analysis-ICP-MS	,				•						
SW846 3005A/6020B "A		"									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1820 2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0512	0.000670	0.00400	mg/L	1.00	1				
Boron		0.0273	0.00520	0.0150	mg/L	1.00	1				
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		43.6	0.0800	0.200	mg/L	1.00	1				
Chromium		0.0127	0.00300	0.0100	mg/L	1.00					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00					
Magnesium		25.7	0.0100	0.0300	mg/L	1.00					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium Sodium		1.29	0.0800	0.300	mg/L	1.00 1.00					
Thallium	U	24.6 ND	0.0800 0.000600	0.250 0.00200	mg/L	1.00					
Beryllium	U	ND ND	0.000800	0.00200	mg/L mg/L	1.00		BAJ	00/07/22	0157 2310153	6
Selenium	J	0.00208	0.000200	0.00500	mg/L mg/L	1.00		DAJ	09/01/22	0137 2310133	Ü
Solids Analysis	J	0.00208	0.00130	0.00300	IIIg/L	1.00	1				
•	. 1 . 11	. 10									
SM2540C Dissolved Sol	ıds "As Rec				_						_
Total Dissolved Solids		370	2.38	10.0	mg/L			CH6	08/30/22	1449 2310249	7
Titration and Ion Analysi	is										

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## **Certificate of Analysis**

Report Date: October 3, 2022

Time Batch Method

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

Atlanta, Georgia 30308

Result

Contact: Joju Abraham

Qualifier

Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-17S Project: GPCC00101 Sample ID: 591351001 Client ID: GPCC001

Titration and Ion Analys	is								
SM 2320B Total Alkalir	ity "As Rece	eived"							
Alkalinity, Total as CaCO3		74.0	1.45	4.00	mg/L	HI	H2 09/07/22	1323 2310459	8
Bicarbonate alkalinity (CaCO3	3)	74.0	1.45	4.00	mg/L				
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L				
The following Prep Met	hods were pe	erformed:							
Method	Description	1		Analyst	Date	Time	Prep Batch		
SW846 3005A	ICP-MS 3005	A PREP		PC1	08/30/22	0900	2310152		
SW846 7470A Prep	EPA 7470A N	Iercury Prep Liquid		RM4	08/30/22	1252	2310247		
The following Analytics	al Methods v	vere performed:							
Method	Description				A	nalyst Comm	ents		
1	SM 4500-H B	SW846 9040C, SM 25	50B			•			

DL

RL

Units

PF

DF Analyst Date

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	SM 2540C		
8	SM 2320B		

#### **Notes:**

Parameter

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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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 AP - E and APE

Client Sample ID: BRGWC-35S Project: GPCC00101 Sample ID: 591351002 Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22 13:58
Receive Date: 29-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pH	"As Receiv	ved"									
Field pH		6.05			SU			EOS1	08/24/22	1358 2310138	3 1
Ion Chromatography											
EPA 300.0 Anions Liqui	d "As Recei	ived"									
Chloride	a Tis Recei	6.53	0.0670	0.200	mg/L		1	HXC1	08/30/22	1347 2310523	3 2
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Sulfate		279	2.66	8.00	mg/L		20	HXC1	08/30/22	2244 2310523	3
Mercury Analysis-CVA	Α				-						
7470 Cold Vapor Mercui		As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1120 2310248	3 4
Metals Analysis-ICP-MS											
SW846 3005A/6020B "A		"									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1934 2310153	3 5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00		2.10	03/01/22	150. 2010100	
Barium	C	0.0339	0.000670	0.00400	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Chromium	J	0.00752	0.00300	0.0100	mg/L	1.00	1				
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1				
Iron		0.162	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		36.9	0.0100	0.0300	mg/L	1.00					
Manganese		0.0170	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium		4.24	0.0800	0.300	mg/L	1.00					
Sodium		19.8	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					_
Beryllium	J	0.000210	0.000200	0.000500	mg/L	1.00		BAJ	09/07/22	0215 2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00			00/05/22	1011 201015	_
Boron		2.23	0.104	0.300	mg/L	1.00		BAJ	09/07/22	1841 2310153	3 7
Calcium		68.5	1.60	4.00	mg/L	1.00	20				
Solids Analysis											
SM2540C Dissolved Sol	ids "As Rec	eived"									
Total Dissolved Solids		507	2.38	10.0	mg/L			CH6	08/30/22	1449 2310249	8
Titration and Ion Analysi	is										

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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-35S GPCC00101 Project: Sample ID: 591351002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Aı	nalyst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	50.6	1.45	4.00	mg/L		HF	I2 09/07/22	1332 2310459	9
Bicarbonate alkalinity (Ca	CO3)	50.6	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were pe	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch	Į.	
SW846 3005A	ICP-MS 3005	5A PREP		PC1	08/30/22		0900	2310152		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	08/30/22		1252	2310247		
The following Analy	tical Methods v	were performed:								

#### 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 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 ComplianceAP - E and APE

Client Sample ID: BRGWC-36S Project: GPCC00101 Sample ID: 591351003 Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22 09:52
Receive Date: 29-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pH	"As Receiv	ved"									
Field pH		5.59			SU			EOS1	08/24/22	0952 2310138	1
Ion Chromatography											
EPA 300.0 Anions Liqui	d "As Recei	ived"									
Chloride	u 715 Recei	7.96	0.0670	0.200	mg/L		1	HXC1	08/30/22	1416 2310523	2
Fluoride		0.194	0.0330	0.100	mg/L		1	112101	00/30/22	1410 2310323	_
Sulfate		224	2.66	8.00	mg/L		20	HXC1	08/30/22	2314 2310523	3
Mercury Analysis-CVA	<b>\</b>				8						
7470 Cold Vapor Mercui		As Pagaiyad"									
Mercury	y, Diquid 1	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/21/22	1121 2310248	4
Metals Analysis-ICP-MS		ND	0.0000070	0.000200	IIIg/L	1.00	1	JF Z	06/31/22	1121 2310240	4
•											
SW846 3005A/6020B "A											
Antimony	U	ND	0.00100	0.00300	mg/L	1.00		BAJ	09/07/22	1937 2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00					
Barium		0.0296	0.000670	0.00400	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00					
Calcium		48.1	0.0800	0.200	mg/L	1.00					
Chromium	J	0.00713	0.00300	0.0100	mg/L	1.00					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00					
Magnesium		20.5	0.0100	0.0300	mg/L	1.00					
Manganese	J	0.00295	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium		3.78	0.0800	0.300	mg/L	1.00					
Sodium		40.6	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		BAJ	09/07/22	0219 2310153	6
Selenium	J	0.00246	0.00150	0.00500	mg/L	1.00					
Boron		1.10	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1844 2310153	7
Solids Analysis											
SM2540C Dissolved Sol	ids "As Rec	eived"									
Total Dissolved Solids		418	2.38	10.0	mg/L			CH6	08/30/22	1449 2310249	8
Titration and Ion Analysi	is				8 –						
Thursday and Toli Tildly Si											

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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-36S GPCC00101 Project: Sample ID: 591351003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	20.6	1.45	4.00	mg/L		HH2	09/07/22	1334 2310459	9
Bicarbonate alkalinity (Ca	CO3)	20.6	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were p	erformed:								
Method	Descriptio	n		Analyst	Date		Time 1	Prep Batch	ı	
SW846 3005A	ICP-MS 3005	5A PREP		PC1	08/30/22		0900	2310152		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	08/30/22		1252	2310247		
The following Analy	tical Mathada	vara parformadi								

#### 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 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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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 ComplianceAP - E and APE

Client Sample ID: FD-04 Project: GPCC00101 Sample ID: 591351004 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	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liqui	id "As Recei	ved"									
Chloride		7.95	0.0670	0.200	mg/L		1	HXC1	08/30/22	1446 2310523	1
Fluoride		0.209	0.0330	0.100	mg/L		1				
Sulfate		222	2.66	8.00	mg/L		20	HXC1	08/30/22	2344 2310523	2
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu	ry, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1123 2310248	3
Metals Analysis-ICP-MS	S				•						
SW846 3005A/6020B "A		"									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1940 2310153	4
Arsenic	Ü	ND	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0282	0.000670	0.00400	mg/L	1.00	1				
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		44.3	0.0800	0.200	mg/L	1.00	1				
Chromium	J	0.00668	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		18.8	0.0100	0.0300	mg/L	1.00	1				
Manganese	J	0.00286	0.00100	0.00500	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Potassium		3.51	0.0800	0.300	mg/L	1.00	1				
Sodium		37.2	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	0229 2310153	5
Selenium	J	0.00227	0.00150	0.00500	mg/L	1.00	1				
Boron		1.07	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1847 2310153	6
Solids Analysis											
SM2540C Dissolved Sol	lids "As Rec	eived"									
Total Dissolved Solids		419	2.38	10.0	mg/L			CH6	08/30/22	1449 2310249	7
Titration and Ion Analys	sis										
SM 2320B Total Alkalir		eived"									
Alkalinity, Total as CaCO3	115 115 1100	20.4	1.45	4.00	mg/L			HH2	09/07/22	1336 2310459	8
Bicarbonate alkalinity (CaCO3	3)	20.4	1.45	4.00	mg/L			11112	07/01/22	1330 2310439	o
Diearonaic aikaning (Caco:	-,	20.4	1.43	7.00	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

Branch CCR Groundwater ComplianceAP - E and APE Project:

Client Sample ID: FD-04 Project: GPCC00101 Sample ID: 591351004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Titration and Ion A	Analysis								
SM 2320B Total A	Alkalinity "As Rece	eived"							

Carbonate alkalinity (CaCO3) 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	2310247

#### 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 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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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-34S Project: GPCC00101 Sample ID: 591351005 Client ID: GPCC001

Matrix: WG

Collect Date: 24-AUG-22 14:40 Receive Date: 29-AUG-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pH	I "As Receiv	ved"									
Field pH		5.75			SU			EOS1	08/24/22	1440 2310138	1
Ion Chromatography											
EPA 300.0 Anions Liqui	id "As Rece	ived"									
Chloride		6.17	0.0670	0.200	mg/L		1	HXC1	08/30/22	1516 2310523	2
Fluoride		0.140	0.0330	0.100	mg/L		1				
Sulfate		268	2.66	8.00	mg/L		20	HXC1	08/31/22	0114 2310523	3
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu	ry, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1125 2310248	4
Metals Analysis-ICP-MS	S				•						
SW846 3005A/6020B "A		["									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1943 2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0249	0.000670	0.00400	mg/L	1.00	1				
Cadmium	J	0.000517	0.000300	0.00100	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.00438	0.000300	0.00100	mg/L	1.00	1				
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00					
Magnesium		18.6	0.0100	0.0300	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium		3.79	0.0800	0.300	mg/L	1.00					
Sodium		22.8	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00		DAT	00/07/22	0222 2210152	
Beryllium	U U	ND ND	0.000200 0.00150	0.000500	mg/L	1.00 1.00		BAJ	09/07/22	0233 2310153	6
Selenium Boron	U	ND 2.45	0.00150	0.00500 0.300	mg/L	1.00		BAJ	09/07/22	1850 2310153	7
Calcium		75.0	1.60	4.00	mg/L	1.00		DAJ	09/07/22	1830 2310133	/
Manganese		73.0 2.97	0.0200	0.100	mg/L mg/L	1.00					
· ·		2.91	0.0200	0.100	IIIg/L	1.00	20				
Solids Analysis											
SM2540C Dissolved Sol	lids "As Rec				_						_
Total Dissolved Solids		452	2.38	10.0	mg/L			CH6	08/30/22	1449 2310249	8
Titration and Ion Analys	is										

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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-34S GPCC00101 Project: Sample ID: 591351005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Aı	nalyst Date	Time Batch	Method
Titration and Ion Anal	lysis									
SM 2320B Total Alka	linity "As Rec	eived"								
Alkalinity, Total as CaCO3		28.6	1.45	4.00	mg/L		H	H2 09/07/22	1339 2310459	9
Bicarbonate alkalinity (CaC	CO3)	28.6	1.45	4.00	mg/L					
Carbonate alkalinity (CaCC	03) U	ND	1.45	4.00	mg/L					
The following Prep M	lethods were po	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		PC1	08/30/22		0900	2310152		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	08/30/22		1252	2310247		
The following Analyt	ical Methods v	were performed:								

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 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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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 ComplianceAP - E and APE

Client Sample ID: EB-08 Project: GPCC00101 Sample ID: 591351006 Client ID: GPCC001

Matrix: WQ

Collect Date: 24-AUG-22 13:25
Receive Date: 29-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											_
EPA 300.0 Anions Liqu	ıid "As Recei	ived"									
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	08/30/22	1546 2310523	1
Fluoride	J	0.0366	0.0330	0.100	mg/L		1				
Sulfate	U	ND	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	λA										
7470 Cold Vapor Merci	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1126 2310248	2
Metals Analysis-ICP-M	IS										
SW846 3005A/6020B "	'As Received	"									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1946 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					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00					
Manganese	J	0.00124	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium	U	ND	0.0800	0.300	mg/L	1.00					
Sodium	U	ND	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		BAJ	09/07/22	0237 2310153	4
Selenium	U	ND	0.00150	0.00500	mg/L	1.00					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	BAJ	09/08/22	0646 2310153	5
Solids Analysis											
SM2540C Dissolved So	olids "As Rec	eived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/30/22	1449 2310249	6
Titration and Ion Analy	sis										
SM 2320B Total Alkali	nity "As Rec	eived"									
Alkalinity, Total as CaCO3	l l	2.40	1.45	4.00	mg/L			HH2	09/07/22	1342 2310459	7
Bicarbonate alkalinity (CaCO	)3) J	2.40	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 ComplianceAP - E and APE

Client Sample ID: EB-08 Project: GPCC00101 Sample ID: 591351006 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Titration and Ion Ar	nalysis								
SM 2320B Total Al	kalinity "As Rece	eived"							
Carbonate alkalinity (Car	CO3) U	ND	1.45	4.00	mg/L				
The following Prep	Methods were pe	erformed:							
Mathad	D			A 1 4	Doto		T' Duan Datal		

Method Prep Batch Description Analyst Date Time SW846 3005A ICP-MS 3005A PREP PC1 08/30/22 0900 2310152 SW846 7470A Prep 08/30/22 2310247 EPA 7470A Mercury Prep Liquid RM4 1252

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

Lc/LC: Critical Level

PF: Prep Factor

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 AP - E and APE

Client Sample ID: BRGWC-33S Project: GPCC00101 Sample ID: 590857001 Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22 14:45
Receive Date: 24-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Anal	yst Date	Time Batch	Method
Field Data											
Client collected Field pH	"As Receiv	ved"									
Field pH		4.67			SU			EOS1	08/23/22	1445 2308303	3 1
Ion Chromatography											
EPA 300.0 Anions Liqui	d "As Recei	ived"									
Fluoride		0.187	0.0330	0.100	mg/L		1	JLD1	08/25/22	2056 2308691	. 2
Chloride		30.3	2.68	8.00	mg/L		40	JLD1	08/26/22	0325 2308691	. 3
Sulfate		385	5.32	16.0	mg/L		40				
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercui	rv. Liquid "	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1154 2308555	5 4
Metals Analysis-ICP-MS	<b>,</b>				Ü						
SW846 3005A/6020B "A		"									
Arsenic	J	0.00262	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0046 2308385	5 5
Barium		0.0409	0.000670	0.00400	mg/L	1.00					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00					
Cobalt		0.0639	0.000300	0.00100	mg/L	1.00	1				
Iron	J	0.0381	0.0330	0.100	mg/L	1.00	1				
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1				
Lithium		0.0109	0.00300	0.0100	mg/L	1.00	1				
Potassium		13.0	0.0800	0.300	mg/L	1.00	1				
Selenium		0.00610	0.00150	0.00500	mg/L	1.00	1				
Sodium		24.0	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00		BAJ	09/03/22	1506 2308385	
Beryllium		0.00241	0.000200	0.000500	mg/L	1.00		BAJ	09/03/22	1236 2308385	7
Cadmium	J	0.000509	0.000300	0.00100	mg/L	1.00					
Magnesium		14.7	0.0100	0.0300	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Boron		0.975	0.104	0.300	mg/L	1.00		BAJ	09/03/22	1210 2308385	8
Calcium		119	1.60	4.00	mg/L	1.00					
Manganese		2.75	0.0200	0.100	mg/L	1.00	20				
Solids Analysis											
SM2540C Dissolved Sol	ids "As Rec	eived"									
Total Dissolved Solids		614	2.38	10.0	mg/L			CH6	08/26/22	1530 2309029	9
Titration and Ion Analysi	is				ū						
: :,											

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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-33S Project: GPCC00101 Sample ID: 590857001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF An	alyst Date	Time Batch	Method
Titration and Ion Analy	vsis									
SM 2320B Total Alkali	inity "As Rec	eived"								
Alkalinity, Total as CaCO3	J	3.40	1.45	4.00	mg/L		HH	2 09/04/22	1352 2309339	10
Bicarbonate alkalinity (CaCC	D3) J	3.40	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO3	) U	ND	1.45	4.00	mg/L					
The following Prep Me	thods were pe	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		PC1	08/26/22		0900	2308382		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	08/25/22		1147	2308553		
The following Analytic	cal Methods v	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

Lc/LC: Critical Level

PF: Prep Factor

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 ComplianceAP - E and APE

Client Sample ID: BRGWC-37S Project: GPCC00101 Sample ID: 590857002 Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22 11:36
Receive Date: 24-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field p	H "As Receiv	ved"									
Field pH		5.82			SU			EOS1	08/23/22	1136 2308303	1
Ion Chromatography											
EPA 300.0 Anions Liqu	ıid "As Recei	ved"									
Chloride		1.97	0.0670	0.200	mg/L		1	JLD1	08/25/22	2226 2308691	2
Fluoride		0.105	0.0330	0.100	mg/L		1				
Sulfate	J	0.307	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	AA										
7470 Cold Vapor Merci	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1155 2308555	3
Metals Analysis-ICP-M	IS										
SW846 3005A/6020B "	'As Received	"									
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0050 2308385	4
Barium		0.0260	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		1.84	0.0800	0.300	mg/L	1.00	1				
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1				
Sodium		4.51	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	1508 2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1140 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		3.70	0.0800	0.200	mg/L	1.00	1				
Magnesium		1.29	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 So	olids "As Rec				_						_
Total Dissolved Solids		40.0	2.38	10.0	mg/L			CH6	08/26/22	1530 2309029	7
Titration and Ion Analy	sis										

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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-37S Project: GPCC00101 Sample ID: 590857002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alk	calinity "As Rec	eived"								
Alkalinity, Total as CaCO	)3	21.2	1.45	4.00	mg/L		HH2	09/04/22	1355 2309339	8
Bicarbonate alkalinity (Ca	aCO3)	21.2	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	CO3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were p	erformed:								
Method	Description	n		Analyst	Date		Time 1	Prep Batch	Į.	
SW846 3005A	ICP-MS 3003	5A PREP		PC1	08/26/22		0900 2	2308382		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	08/25/22		1147	2308553		
The following Analy	vtical Methods v	were performed:								

#### 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

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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## **Certificate of Analysis**

Report Date: October 3, 2022

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-38S GPCC00101 Project: Sample ID: 590857003 Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22 16:00 24-AUG-22 Receive Date: Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batcl	Method
Field Data											
Client collected Fi	eld pH "As Recei	ved"									
Field pH	1	3.97			SU			EOS1	08/23/22	1600 230830	3 1
Ion Chromatograp	hy										
EPA 300.0 Anions	•	ived"									
Chloride	214010	6.42	0.0670	0.200	mg/L		1	JLD1	08/25/22	2355 230869	1 2
Fluoride		0.609	0.0330	0.100	mg/L		1				
Sulfate		389	5.32	16.0	mg/L		40	JLD1	08/26/22	1120 230869	1 3
Mercury Analysis-	-CVAA										
7470 Cold Vapor I		As Received"									
Mercury	J	0.000117	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1157 230855	5 4
Metals Analysis-IO	<del>-</del>				8						
SW846 3005A/602		יין									
Arsenic	J	0.00337	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0053 230838	5 5
Barium	,	0.0141	0.000670	0.00400	mg/L mg/L	1.00	1	D113	07/03/22	230030	.5
Chromium	J	0.00398	0.00300	0.0100	mg/L	1.00					
Cobalt		0.173	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		0.0214	0.00300	0.0100	mg/L	1.00	1				
Potassium		5.75	0.0800	0.300	mg/L	1.00	1				
Selenium		0.0296	0.00150	0.00500	mg/L	1.00	1				
Sodium		44.1	0.0800	0.250	mg/L	1.00					
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	1510 230838	
Beryllium		0.00854	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1239 230838	5 7
Cadmium	J	0.000459	0.000300	0.00100	mg/L	1.00	1				
Calcium		37.1 41.3	0.0800 0.0100	0.200 0.0300	mg/L	1.00 1.00					
Magnesium Molybdenum	U	41.3 ND	0.000200	0.0300	mg/L	1.00	1				
Boron	U	1.67	0.000200	0.300	mg/L mg/L	1.00	20	BAJ	09/03/22	1213 230838	5 8
Manganese		1.80	0.0200	0.100	mg/L	1.00		DAJ	07/03/22	1213 230030	5 6
Solids Analysis		1.00	0.0200	0.100	mg/L	1.00	20				
SM2540C Dissolv	rad Salide "As Das	oivad"									
Total Dissolved Solids			2.38	10.0	m ∞ /T			CUZ	00/26/22	1520 22000	9 9
		568	2.38	10.0	mg/L			CH6	08/26/22	1530 230902	9
Titration and Ion A	Anarysis										

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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 ComplianceAP - E and APE

Client Sample ID: BRGWC-38S Project: GPCC00101 Sample ID: 590857003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF An	alyst Date	Time Batch	Method
Titration and Ion Anal	lysis									
SM 2320B Total Alka	linity "As Rec	eived"								
Alkalinity, Total as CaCO3	U	ND	1.45	4.00	mg/L		HH	2 09/04/22	1356 2309339	10
Bicarbonate alkalinity (CaC	CO3) U	ND	1.45	4.00	mg/L					
Carbonate alkalinity (CaCC	03) U	ND	1.45	4.00	mg/L					
The following Prep M	lethods were p	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch	ı	
SW846 3005A	ICP-MS 3005	5A PREP		PC1	08/26/22		0900	2308382		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	08/25/22		1147	2308553		
The following Analyt	tical Methods v	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

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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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 ComplianceAP - E and APE

Client Sample ID: PZ-53D Project: GPCC00101 Sample ID: 590857004 Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22 13:55
Receive Date: 24-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	yst Date	Time Batcl	n Method
Field Data											
Client collected Field pH	I "As Receiv	ved"									
Field pH		7.18			SU			EOS1	08/23/22	1355 230830	3 1
Ion Chromatography											
EPA 300.0 Anions Liqui	d "As Rece	ived"									
Chloride		4.94	0.0670	0.200	mg/L		1	JLD1	08/26/22	0025 230869	1 2
Fluoride		0.164	0.0330	0.100	mg/L		1				
Sulfate		348	5.32	16.0	mg/L		40	JLD1	08/26/22	1150 230869	1 3
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercui	rv. Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1159 230855	5 4
Metals Analysis-ICP-MS	5										
SW846 3005A/6020B "A		"									
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0057 230838	5 5
Barium		0.0547	0.000670	0.00400	mg/L	1.00					
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		0.294	0.0330	0.100	mg/L	1.00	1				
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1				
Lithium		0.0171	0.00300	0.0100	mg/L	1.00					
Potassium		6.44	0.0800	0.300	mg/L	1.00					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00		BAJ	09/03/22	1511 230838	
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		BAJ	09/03/22	1242 230838	5 7
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00					
Magnesium		19.3	0.0100	0.0300	mg/L	1.00					
Manganese		0.641 0.00265	0.00100	0.00500 0.00100	mg/L	1.00 1.00					
Molybdenum		1.04	0.000200 0.104	0.00100	mg/L	1.00		BAJ	09/03/22	1216 230838	5 8
Boron Calcium		76.4	1.60	4.00	mg/L	1.00		BAJ	09/03/22	1210 230838	5 8
Sodium		52.0	1.60	5.00	mg/L mg/L	1.00					
Solids Analysis		32.0	1.00	5.00	mg/L	1.00	20				
•	: 1. !! A . D	.1 . 40									
SM2540C Dissolved Sol	ias "As Rec			10.6	<i>,</i> -			OTT -	00/04/5	1500 00000	
Total Dissolved Solids		543	2.38	10.0	mg/L			CH6	08/26/22	1530 230902	9 9
Titration and Ion Analysi	1S										

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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 ComplianceAP - E and APE

Client Sample ID: PZ-53D Project: GPCC00101 Sample ID: 590857004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF An	alyst Date	Time Batch	Method
Titration and Ion Analy	sis									
SM 2320B Total Alkali	nity "As Rec	eived"								
Alkalinity, Total as CaCO3		82.8	1.45	4.00	mg/L		HH	2 09/04/22	1358 2309339	10
Bicarbonate alkalinity (CaCC	03)	82.8	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO3	) U	ND	1.45	4.00	mg/L					
The following Prep Me	thods were pe	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch	ı	
SW846 3005A	ICP-MS 3005	5A PREP		PC1	08/26/22		0900	2308382		<del></del>
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	08/25/22		1147	2308553		
The following Analytic	cal Methods v	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

Lc/LC: Critical Level

PF: Prep Factor

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 ComplianceAP - E and APE

Client Sample ID: PZ-13S Project: GPCC00101 Sample ID: 590857005 Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22 13:15
Receive Date: 24-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Anal	yst Date	Time Batch	Method
Field Data											
Client collected Field pH	I "As Receiv	ved"									
Field pH		5.46			SU			EOS1	08/23/22	1315 2308303	1
Ion Chromatography											
EPA 300.0 Anions Liqui	id "As Recei	ived"									
Chloride	115 11000	4.20	0.0670	0.200	mg/L		1	JLD1	08/26/22	0055 2308691	2
Fluoride		0.128	0.0330	0.100	mg/L		1				
Sulfate		51.0	1.33	4.00	mg/L		10	JLD1	08/26/22	1220 2308691	3
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu		As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1201 2308555	4
Metals Analysis-ICP-MS	S				Ü						
SW846 3005A/6020B "A		"									
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0100 2308385	5
Barium		0.0562	0.000670	0.00400	mg/L	1.00	1				
Chromium		0.0128	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		3.59	0.0800	0.300	mg/L	1.00	1				
Selenium	J	0.00157	0.00150	0.00500	mg/L	1.00	1				
Sodium		12.5	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	1513 2308385	
Beryllium	J	0.000331	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1144 2308385	7
Boron	U	ND	0.00520	0.0150	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00					
Calcium		9.69	0.0800	0.200	mg/L	1.00	1				
Magnesium		5.94	0.0100	0.0300	mg/L	1.00	1				
Manganese	J	0.00137	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 Sol	lids "As Rec	eived"									
Total Dissolved Solids		130	2.38	10.0	mg/L			CH6	08/26/22	1530 2309029	8
Titration and Ion Analys	is										

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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 ComplianceAP - E and APE

Client Sample ID: PZ-13S GPCC00101 Project: Sample ID: 590857005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF An	alyst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	21.4	1.45	4.00	mg/L		HH	2 09/04/22	1359 2309339	9
Bicarbonate alkalinity (Ca	CO3)	21.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were pe	erformed:								
Method	Description	n		Analyst	Date		Time	Prep Batch	1	
SW846 3005A	ICP-MS 3005	SA PREP		PC1	08/26/22		0900	2308382		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	08/25/22		1147	2308553		
The following Analy	tical Mathada	wara parformadi								

#### 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 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 ComplianceAP - E and APE

Client Sample ID: FB-04 Project: GPCC00101 Sample ID: 590857006 Client ID: GPCC001

Matrix: WQ

Collect Date: 23-AUG-22 12:45
Receive Date: 24-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Anal	yst Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liqui	id "As Recei	ived"									
Chloride		0.329	0.0670	0.200	mg/L		1	JLD1	08/26/22	0125 230869	1 1
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Sulfate	U	ND	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu	ry, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1206 230855	5 2
Metals Analysis-ICP-MS	S										
SW846 3005A/6020B "A		"									
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0104 230838	5 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	J	0.0334	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					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00					
Sodium	U	ND	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00		BAJ	09/03/22	1515 230838	
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		BAJ	09/03/22	1220 230838	5 5
Boron	U	ND	0.00520	0.0150	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00					
Calcium	U	ND	0.0800	0.200	mg/L	1.00					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Solids Analysis											
SM2540C Dissolved Sol	lids "As Rec	eived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/26/22	1619 230905	8 6
Titration and Ion Analys	is										
SM 2320B Total Alkalin	nity "As Rec	eived"									
Alkalinity, Total as CaCO3	-	33.2	1.45	4.00	mg/L			HH2	09/04/22	1400 230933	9 7
Bicarbonate alkalinity (CaCO3	3)	33.2	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 ComplianceAP - E and APE

Client Sample ID: FB-04 GPCC00101 Project: Sample ID: 590857006 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Titration and Ion A	nalysis								
SM 2320B Total A	Ikalinity "As Rec	eived"							

Carbonate alkalinity (CaCO3) 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

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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: 591881

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2312366 ———									
QC1205182663 591867001 DUP Chloride		19.9		19.9	mg/L	0.191		(0%-20%) JLD1	09/06/22 12:07
Fluoride		0.367		0.242	mg/L	41.2*^		(+/-0.100)	09/03/22 19:41
Sulfate	U	ND	U	ND	mg/L	N/A			
QC1205182662 LCS Chloride	5.00			4.95	mg/L		99	(90%-110%)	09/03/22 16:42
Fluoride	2.50			2.40	mg/L		95.9	(90%-110%)	
Sulfate	10.0			10.2	mg/L		102	(90%-110%)	
QC1205182661 MB Chloride			U	ND	mg/L				09/03/22 16:12
Fluoride			U	ND	mg/L				
Sulfate			U	ND	mg/L				
QC1205182664 591867001 PS Chloride	5.00	3.99		10.4	mg/L		129*	(90%-110%)	09/06/22 12:37
Fluoride	2.50	0.367		3.83	mg/L		139*	(90%-110%)	09/03/22 20:11
Sulfate	10.0 U	ND		15.5	mg/L		155*	(90%-110%)	

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## **QC Summary**

Workorder: 591881 Page 2 of 10 RPD% NOM Sample Qual QC **Parmname** Units REC% Range Anlst Date Time Metals Analysis - ICPMS 2312380 Batch QC1205182699 LCS 0.0500 0.0483 96.6 PRB 09/14/22 00:14 Antimony mg/L (80%-120%) Arsenic 0.0500 0.0477 mg/L 95.3 (80% - 120%)0.0500 0.0501 100 Barium mg/L(80%-120%) 0.0506 Beryllium 0.0500 mg/L 101 (80%-120%) Boron 0.100 0.112 112 (80%-120%) 09/14/22 17:27 mg/L0.0490 Cadmium 0.0500 mg/L 98 (80% - 120%)09/14/22 00:14 2.00 Calcium 1.95 mg/L 97.7 (80%-120%) Chromium 0.0500 0.0489 97.8 mg/L (80%-120%) Cobalt 0.0500 0.0480 mg/L96 (80%-120%) 2.00 1.99 99.4 Iron mg/L (80%-120%) Lead 0.0500 0.0494 98.7 mg/L (80%-120%) 0.0471 Lithium 0.0500 mg/L94.1 (80%-120%) Magnesium 2.00 2.13 mg/L 106 (80%-120%) 0.0500 0.0496 99.2 09/14/22 17:27 Manganese (80%-120%) mg/LMolybdenum 0.0500 0.0489 mg/L 97.7 (80%-120%) 09/13/22 22:07

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## **QC Summary**

		<u>QC BI</u>	amma	<u>.y</u>						
Workorder: 591881									Page 3	3 of 10
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date 7	Гіте
Metals Analysis - ICPMS Batch 2312380										
Potassium	2.00		1.97	mg/L		98.6	(80%-120%)	PRB	09/14/22	00:14
Selenium	0.0500		0.0487	mg/L		97.3	(80%-120%)			
Sodium	2.00		2.04	mg/L		102	(80%-120%)			
Thallium	0.0500		0.0467	mg/L		93.5	(80%-120%)			
QC1205182698 MB Antimony		U	ND	mg/L					09/14/22	2 00:10
Arsenic		U	ND	mg/L						
Barium		U	ND	mg/L						
Beryllium		U	ND	mg/L						
Boron		U	ND	mg/L					09/14/22	2 17:25
Cadmium		U	ND	mg/L					09/14/22	2 00:10
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						

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## **QC Summary**

		<u> </u>	Summa	<u>. y</u>				
Workorder: 591881								Page 4 of 10
Parmname MALLA L. LORMO	NOM	Sample Qua	l QC	Units	RPD% REC	% Range	Anlst	Date Time
Metals Analysis - ICPMS Batch 2312380								
Lithium		U	ND	mg/L			PRB	09/14/22 00:10
Magnesium		U	ND	mg/L				
gestern				8				
Manganese		U	ND	mg/L				09/14/22 17:25
Wanganese		S	ND	mg/L				0)/14/22 17.23
MILL		т	0.000271	Л				00/12/22 22 04
Molybdenum		J	0.000271	mg/L				09/13/22 22:04
				_				
Potassium		U	ND	mg/L				09/14/22 00:10
Selenium		U	ND	mg/L				
Sodium		U	ND	mg/L				
Thallium		U	ND	mg/L				
QC1205182700 591881001 MS	0.0500 II	ND	0.0500	/T	101	(750/ 1250/	`	00/14/22 00:21
Antimony	0.0500 U	ND	0.0509	mg/L	101	(75%-125%	)	09/14/22 00:21
Arsenic	0.0500 U	ND	0.0496	mg/L	96.2	(75%-125%	)	
Barium	0.0500	0.0444	0.0934	mg/L	97.9	(75%-125%	)	
Beryllium	0.0500 U	ND	0.0516	mg/L	103	(75%-125%	)	
Boron	0.100	1.20	1.24	mg/L	N/A	(75%-125%	)	09/14/22 17:31
Cadmium	0.0500 U	ND	0.0496	mg/L	99.2	(75%-125%	)	09/14/22 00:21
Calcium	2.00	42.6	43.0	mg/L	N/A	(75%-125%	)	
				-				

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## **QC Summary**

Workorder: 591881 Page 5 of 10 Sample Qual QC **Parmname** NOM Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2312380 Batch Chromium 0.0500 ND 0.0498 mg/L 97.6 (75% - 125%)PRB 09/14/22 00:21 0.00560 0.0534 Cobalt 0.0500 mg/L 95.6 (75%-125%) Iron 2.00 1.48 3.34 mg/L 93.1 (75%-125%) U ND Lead 0.0500 0.0492 mg/L 98 (75%-125%) Lithium 0.0500 0.00615 0.0535 mg/L 94.6 (75%-125%) 2.00 15.5 16.8 N/A Magnesium (75%-125%) mg/L Manganese 0.0500 1.06 1.10 mg/L N/A (75%-125%) 09/14/22 17:31 0.00142 0.0528 0.0500 103 09/13/22 22:14 Molybdenum mg/L (75%-125%) 2.00 5.62 7.34 86.3 09/14/22 00:21 Potassium mg/L (75%-125%) 0.0500 0.00625 0.0546 Selenium 96.8 (75% - 125%)mg/L 25.8 Sodium 2.00 26.6 N/A mg/L (75%-125%) Thallium 0.0500 U ND 0.0475 94.8 (75% - 125%)mg/L QC1205182701 591881001 MSD 0.0500 U ND 0.0507 mg/L 0.395 101 (0%-20%)09/14/22 00:24 Antimony 0.0500 U ND 0.0499 0.49 96.7 Arsenic mg/L(0%-20%)Barium 0.0500 0.0444 0.0937 mg/L 0.405 98.6 (0%-20%)

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## **QC Summary**

		<u>QC b</u>	umma	<u>.y</u>				
Workorder: 591881								Page 6 of 10
Parmname  Matala Analysis ICPMS	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 2312380								
Beryllium	0.0500 U	ND	0.0501	mg/L	3.13	99.9	(0%-20%) PRB	09/14/22 00:24
Boron	0.100	1.20	1.27	mg/L	2.04	N/A	(0%-20%)	09/14/22 17:33
Cadmium	0.0500 U	ND	0.0490	mg/L	1.29	97.9	(0%-20%)	09/14/22 00:24
Calcium	2.00	42.6	42.9	mg/L	0.254	N/A	(0%-20%)	
Chromium	0.0500 U	ND	0.0494	mg/L	0.805	96.8	(0%-20%)	
Cobalt	0.0500	0.00560	0.0545	mg/L	2.08	97.8	(0%-20%)	
Iron	2.00	1.48	3.45	mg/L	3.27	98.6	(0%-20%)	
Lead	0.0500 U	ND	0.0495	mg/L	0.699	98.7	(0%-20%)	
Lithium	0.0500 J	0.00615	0.0534	mg/L	0.187	94.4	(0%-20%)	
Magnesium	2.00	15.5	16.6	mg/L	1.27	N/A	(0%-20%)	
Manganese	0.0500	1.06	1.08	mg/L	1.28	N/A	(0%-20%)	09/14/22 17:33
Molybdenum	0.0500	0.00142	0.0541	mg/L	2.51	105	(0%-20%)	09/13/22 22:18
Potassium	2.00	5.62	7.39	mg/L	0.567	88.4	(0%-20%)	09/14/22 00:24
Selenium	0.0500	0.00625	0.0553	mg/L	1.29	98.2	(0%-20%)	
Sodium	2.00	25.8	26.7	mg/L	0.195	N/A	(0%-20%)	

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## **QC Summary**

Workorder: 591881 Page 7 of 10 Sample Qual QC RPD% **Parmname** NOM Units REC% Range Anlst Date Time Metals Analysis - ICPMS 2312380 Batch Thallium 0.0500 U ND 0.0475 mg/L 0.137 94.7 (0%-20%)PRB 09/14/22 00:24 QC1205182702 591881001 SDILT U ND U ND N/A (0%-20%)09/14/22 00:32 Antimony ug/L U U Arsenic ND ND ug/L N/A (0%-20%)Barium 44.4 8.34 ug/L 6.1 (0%-20%)U ND U ND Beryllium ug/L N/A (0%-20%)Boron 120 26.6 ug/L 11.2 (0%-20%)09/14/22 17:37 U ND U ND ug/L 09/14/22 00:32 Cadmium N/A (0%-20%)Calcium 42600 8140 ug/L 4.58 (0%-20%)U U Chromium ND ND ug/L N/A (0%-20%)Cobalt 5.60 1.10 ug/L 1.7 (0%-20%)1480 290 1.92 Iron ug/L (0%-20%)U U Lead ND ND ug/L N/A (0%-20%)J 6.15 U ND Lithium ug/L N/A (0%-20%)2970 Magnesium 15500 ug/L 4.32 (0%-20%)106 20.6 ug/L 3.13 (0%-20%)09/14/22 17:37 Manganese

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## **QC Summary**

					<u> 200</u>	ummai	<u> </u>					
Workorder: 591881												Page 8 of 10
Parmname		NOM	[	Sample	Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Time
Metals Analysis - ICPMS Batch 2312380												
Molybdenum				1.42	J	0.372	ug/L	31.3		(0%-20%)	PRB	09/13/22 22:25
Potassium				5620		1060	ug/L	5.59		(0%-20%)		09/14/22 00:32
Selenium				6.25	U	ND	ug/L	N/A		(0%-20%)		
Sodium				25800		4990	ug/L	3.42		(0%-20%)		
Thallium			U	ND	U	ND	ug/L	N/A		(0%-20%)		
Metals Analysis-Mercury Batch 2312733												
QC1205183555 591729001 Mercury	DUP		U	ND	U	ND	mg/L	N/A			JP2	09/07/22 10:51
QC1205183554 LCS Mercury		0.00200				0.00203	mg/L		102	(80%-120%)		09/07/22 10:42
QC1205183553 MB Mercury					U	ND	mg/L					09/07/22 10:40
QC1205183556 591729001 Mercury	MS	0.00200	U	ND		0.00203	mg/L		102	(75%-125%)		09/07/22 10:52
QC1205183557 591729001 Mercury	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%)		09/07/22 10:54
Solids Analysis Batch 2313724												
QC1205185482 592010003 Total Dissolved Solids	DUP			158		155	mg/L	1.92		(0%-5%)	СН6	09/08/22 14:57

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## **QC Summary**

		<u> </u>	**********	<u>-/</u>					
Workorder: 591881									Page 9 of 1
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Solids Analysis Batch 2313724									
QC1205185480 LCS Total Dissolved Solids	300		301	mg/L		100	(95%-105%)	СН6	09/08/22 14:57
QC1205185479 MB Total Dissolved Solids		U	ND	mg/L					09/08/22 14:57
Titration and Ion Analysis Batch 2312490 ———									
QC1205182984 591877005 DUP Alkalinity, Total as CaCO3		282	284	mg/L	0.707		(0%-20%)	HH2	09/08/22 11:20
Bicarbonate alkalinity (CaCO3)		282	284	mg/L	0.707		(0%-20%)		
Carbonate alkalinity (CaCO3)	U	ND U	ND	mg/L	N/A				
QC1205182983 LCS Alkalinity, Total as CaCO3	100		104	mg/L		104	(90%-110%)		09/08/22 11:15
QC1205182985 591877005 MS Alkalinity, Total as CaCO3	100	282	383	mg/L		101	(80%-120%)		09/08/22 11:25

#### **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**

Page 10 of 10 Sample Qual Parmname **NOM** OC Units RPD% REC% Range Anlst Date Time

N1 See case narrative

591881

Workorder:

- 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
- Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD. U
- 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.
- 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.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 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 e reporting purposes
- Preparation or preservation holding time was exceeded 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: 591351

Parmname	NOM	Sample Qua	al 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: 591351 Page 2 of 10 NOM QC RPD% REC% **Parmname** Sample Qual Units Range Anlst Date Time Metals Analysis - ICPMS 2310153 Batch QC1205178580 LCS 108 0.0500 0.0540 BAJ 09/07/22 18:17 Antimony mg/L (80%-120%) Arsenic 0.0500 0.0568 mg/L114 (80% - 120%)0.0500 0.0523 105 Barium mg/L(80%-120%) 0.0563 Beryllium 0.0500 mg/L 113 (80%-120%) 09/07/22 01:53 Boron 0.100 0.108 108 (80%-120%) 09/07/22 18:17 mg/L0.0568 Cadmium 0.0500 mg/L 114 (80%-120%) 2.00 106 Calcium 2.13 mg/L (80%-120%) Chromium 0.0500 0.0512 102 mg/L (80%-120%) Cobalt 0.0500 0.0513 103 mg/L(80%-120%) 2.00 2.04 102 Iron mg/L (80%-120%) Lead 0.0500 0.0528 106 mg/L (80%-120%) 0.0505 Lithium 0.0500 101 mg/L(80%-120%) Magnesium 2.00 2.14 mg/L 107 (80%-120%)

0.0508

0.0534

mg/L

mg/L

102

107

(80%-120%)

(80%-120%)

Manganese

Molybdenum

0.0500

0.0500

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# **QC Summary**

Workorder: 591351 Page 3 of 10 NOM QC RPD% REC% Date Time **Parmname** Sample Qual Units Range Anlst Metals Analysis - ICPMS 2310153 Batch Potassium 2.00 2.10 mg/L 105 (80%-120%) BAJ 09/07/22 18:17 0.0499 Selenium 0.0500 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 101 mg/L (80%-120%) QC1205178579 U Antimony ND 09/07/22 18:14 mg/LU ND Arsenic mg/L U ND Barium mg/L U ND Beryllium 09/07/22 01:50 mg/L U ND 09/07/22 18:14 Boron mg/L U ND Cadmium mg/L Calcium U ND mg/L U ND Chromium mg/L Cobalt U ND mg/L U ND Iron mg/L U Lead ND mg/L

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# **QC Summary**

591351 Page 4 of 10 NOM QC RPD% REC% **Parmname** Sample Qual Units Range Anlst Date Time Metals Analysis - ICPMS 2310153 Batch Lithium U ND mg/L BAJ 09/07/22 18:14 U ND Magnesium mg/L U Manganese ND mg/L U ND Molybdenum mg/L U ND Potassium mg/L U ND Selenium 09/07/22 01:50 mg/LU ND 09/07/22 18:14 Sodium mg/L U ND Thallium mg/L QC1205178581 591351001 MS 0.0500 U ND 0.0519 103 09/07/22 18:23 Antimony mg/L (75%-125%) 0.0500 U ND 0.0532 104 Arsenic mg/L (75%-125%) Barium 0.0500 0.0512 0.104 106 mg/L(75%-125%) U ND 0.0560 Beryllium 0.0500 mg/L 112 (75%-125%) 09/07/22 02:00 Boron 0.100 0.0273 0.134 mg/L 107 (75%-125%) 09/07/22 18:23 Cadmium 0.0500 U ND 0.0522 104 (75%-125%)mg/LCalcium 2.00 43.6 47.5 mg/L N/A (75% - 125%)

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Workorder:

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# **QC Summary**

Workorder: 591351 Page 5 of 10 Sample Qual QC **Parmname** NOM Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2310153 Batch Chromium 0.0500 0.0127 0.0655 mg/L 106 (75% - 125%)BAJ 09/07/22 18:23 ND 0.0502 Cobalt 0.0500 U mg/L 100 (75%-125%) Iron 2.00 U ND 2.08 mg/L 103 (75%-125%) U ND 0.0511 Lead 0.0500 mg/L 102 (75%-125%) Lithium 0.0500 U ND 0.0528 mg/L 103 (75%-125%) 2.00 25.7 28.9 N/A Magnesium (75%-125%) mg/L U ND 0.0507 Manganese 0.0500 mg/L 100 (75%-125%) U ND 0.0559 0.0500 112 Molybdenum mg/L (75%-125%) 2.00 1.29 3.38 105 Potassium mg/L (75%-125%) 0.0500 0.00208 0.0515 98.9 Selenium (75% - 125%)09/07/22 02:00 mg/L 27.8 Sodium 2.00 24.6 N/A 09/07/22 18:23 mg/L (75%-125%) Thallium 0.0500 U ND 0.0502 100 (75% - 125%)mg/L QC1205178582 591351001 MSD 0.0500 U ND 0.0533 mg/L 2.66 106 (0%-20%)09/07/22 18:26 Antimony 0.0500 U ND 0.0555 109 4.3 (0%-20%)Arsenic mg/LBarium 0.0500 0.0512 0.105 mg/L 0.178 107 (0%-20%)

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# **QC Summary**

Page 6 of 10 Sample Qual QC **Parmname** NOM Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2310153 Batch Beryllium 0.0500 ND 0.0546 mg/L 2.52 109 (0%-20%)BAJ 09/07/22 02:04 0.100 0.0273 0.134 mg/L 0.174 107 (0%-20%)09/07/22 18:26 Boron Cadmium 0.0500 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 98.7 mg/L 1.65 (0%-20%)2.00 U ND Iron 2.06 mg/L 1.04 102 (0%-20%)U ND 0.0512 0.0500 0.258 102 Lead mg/L (0%-20%)Lithium 0.0500 U ND 0.0515 2.49 101 mg/L (0%-20%)25.7 27.9 N/A Magnesium 2.00 mg/L 3.37 (0%-20%)U ND 0.0506 0.05000.0711 100 Manganese mg/L (0%-20%)Molybdenum 0.0500 U ND 0.0558 0.308 111 (0%-20%)mg/L 105 Potassium 2.00 1.29 3.38 mg/L 0.0861 (0%-20%)Selenium 0.0500 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 09/07/22 18:26 (0%-20%)

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Workorder:

591351

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# **QC Summary**

Workorder: 591351 Page 7 of 10 Sample Qual QC RPD% REC% **Parmname** NOM Units Range Anlst Date Time Metals Analysis - ICPMS 2310153 Batch Thallium 0.0500 U ND 0.0503 mg/L 0.279 100 (0%-20%)BAJ 09/07/22 18:26 QC1205178583 591351001 SDILT U ND U ND ug/L N/A (0%-20%)09/07/22 18:54 Antimony U U Arsenic ND ND ug/L N/A (0%-20%)Barium 51.2 9.71 ug/L 5.13 (0%-20%)U ND U ND 09/07/22 02:11 Beryllium ug/L N/A (0%-20%)J ug/L Boron 27.3 5.37 1.81 (0%-20%)09/07/22 18:54 U ND U ND ug/L Cadmium N/A (0%-20%)Calcium 43600 8480 2.85 ug/L (0%-20%)U Chromium 12.7 ND ug/L N/A (0%-20%)U Cobalt ND U ND ug/L N/A (0%-20%)U ND U ND N/A Iron ug/L (0%-20%)U Lead U ND ND ug/L N/A (0%-20%)U ND U ND Lithium ug/L N/A (0%-20%)25700 4930 Magnesium ug/L 4.31 (0%-20%)U ND U ND ug/L N/A (0%-20%)Manganese

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# **QC Summary**

Workorder: 591351 Page 8 of 10 -Parmname QC NOM Sample Qual Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2310153 Batch Molybdenum U ND U ND ug/L N/A (0%-20%)BAJ 09/07/22 18:54 Potassium 1290 J 250 ug/L (0%-20%)2.87 ug/L Selenium J 2.08 U ND N/A (0%-20%)09/07/22 02:11 4790 Sodium 24600 ug/L 2.6 (0%-20%)09/07/22 18:54 U Thallium ND U ND ug/L N/A (0%-20%)Metals Analysis-Mercury 2310248 Batch QC1205178784 590142001 DUP Mercury U ND ND N/A JP2 08/31/22 10:55 mg/L QC1205178783 LCS Mercury 0.00200 0.00200 mg/L 99.9 (80% - 120%)08/31/22 10:52 QC1205178782 MB U ND 08/31/22 10:47 mg/L Mercury QC1205178785 590142001 MS Mercury 0.00200 U ND 0.00195 mg/L96.6 (75%-125%) 08/31/22 10:57 QC1205178786 590142001 SDILT U Mercury ND U ND ug/L N/A (0%-10%)08/31/22 10:59 Solids Analysis 2310249 Batch QC1205178791 591355007 DUP 1990 2040 Total Dissolved Solids mg/L 2.54 (0%-5%)CH6 08/30/22 14:49

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# **QC Summary**

					<u>./</u>						
Workorder: 591351											9 of 10
Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	<b>Date</b>	Time
Solids Analysis Batch 2310249											
QC1205178789 LCS											
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)	СН6	08/30/2	2 14:49
QC1205178788 MB											
Total Dissolved Solids			U	ND	mg/L					08/30/2	22 14:49
Titration and Ion Analysis											
Batch 2310459 ——											
QC1205179132 591351001 DUP											
Alkalinity, Total as CaCO3		74.0		74.8	mg/L	1.08		(0%-20%)	HH2	09/07/2	2 13:27
Bicarbonate alkalinity (CaCO3)		74.0		74.8	mg/L	1.08		(0%-20%)	ı		
2.0000000000000000000000000000000000000					6			(2,72 =2)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205179131 LCS											
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		09/07/2	22 13:17
0.01205150122											
QC1205179133 591351001 MS Alkalinity, Total as CaCO3	100	74.0		175	mg/L		101	(80%-120%)	1	09/07/2	22 13:29

#### **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**

591351 Page 10 of 10 Sample Qual Parmname **NOM** OC Units RPD% REC% Range Anlst Date Time

N1 See case narrative

Workorder:

- 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
- Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD. U
- 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.
- 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.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 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 e reporting purposes
- Preparation or preservation holding time was exceeded 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 Joju Abraham

Workorder: 590857

**Contact:** 

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: 590857 Page 2 of 11 RPD% Sample Qual QC **Parmname** NOM Units REC% Range Anlst Date Time Ion Chromatography 2308691 Batch 106 Fluoride 2.50 ND 2.65 mg/L (90%-110%) JLD1 08/25/22 13:58 Sulfate 10.0 0.452 11.6 mg/L 111\* (90%-110%) QC1205175348 590857001 PS 08/26/22 04:24 Chloride 5.00 5.74 99.7 0.759 (90%-110%) mg/L Fluoride 2.50 0.187 2.68 mg/L 99.9 (90%-110%) 08/25/22 21:56 Sulfate 10.0 9.63 20.5 109 (90%-110%) 08/26/22 04:24 mg/LMetals Analysis - ICPMS 2308385 QC1205174766 LCS 0.0500 0.0497 Antimony mg/L 99.4 (80%-120%) BAJ 09/03/22 14:29 0.0500 0.0512 102 09/02/22 23:30 Arsenic mg/L (80%-120%) Barium 0.0500 0.0504 101 mg/L (80%-120%) Beryllium 0.0500 0.0588 mg/L 118 (80%-120%) 09/03/22 10:40 Boron 0.100 0.114 114 (80%-120%) mg/L Cadmium 0.0500 0.0519 mg/L 104 (80%-120%) 2.18 Calcium 2.00 mg/L 109 (80%-120%) Chromium 0.0500 0.0510 mg/L 102 (80%-120%) 09/02/22 23:30 0.0500 Cobalt 0.0497 99.4 (80%-120%) mg/L

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# **QC Summary**

Workorder: 590857 Page 3 of 11 NOM QC RPD% REC% Date Time **Parmname** Sample Qual Units Range Anlst Metals Analysis - ICPMS 2308385 Batch Iron 2.00 2.10 mg/L 105 (80%-120%) BAJ 09/02/22 23:30 0.0527 Lead 0.0500 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 0.0512 Manganese 0.0500 mg/L 102 (80%-120%) 0.0500 0.0521 Molybdenum 104 (80%-120%) mg/LPotassium 2.00 1.99 99.7 09/02/22 23:30 mg/L (80%-120%) 0.0500 0.0494 Selenium mg/L 98.9 (80%-120%) Sodium 2.00 2.22 111 (80%-120%) mg/L Thallium 0.0500 0.0460 92.1 mg/L (80%-120%) QC1205174765 MB Antimony U ND 09/03/22 14:27 mg/LU ND 09/02/22 23:27 Arsenic mg/L Barium U ND mg/L Beryllium U ND 09/03/22 10:37 mg/LU Boron ND mg/L

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# **QC Summary**

		<u>QC bi</u>	11111111a1	<u>.y</u>					
Workorder: 590857									Page 4 of 11
Parmname Mark Andrew Kopper	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					
				C					
Chromium		U	ND	mg/L					09/02/22 23:27
				8					
Cobalt		U	ND	mg/L					
Cobait			ND	mg/L					
Iron		U	ND	mg/L					
non		C	ND	mg/L					
Lead		U	ND	mg/L					
Lead		C	ND	mg/L					
That		ĪĪ	NID	Л					
Lithium		U	ND	mg/L					
		**	N.D.	σ.					00/00/00 10 00
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	0.0500 11	ND	0.0501	77		00.4	(750/ 1252)	`	00/02/22 14 22
Antimony	0.0500 U	ND	0.0501	mg/L		99.4	(75%-125%	)	09/03/22 14:32

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# **QC Summary**

590857 Page 5 of 11 RPD% Sample Qual QC **Parmname** NOM Units REC% Range Anlst Date Time Metals Analysis - ICPMS 2308385 Batch Arsenic 0.0500 ND 0.0500 mg/L 98 (75% - 125%)BAJ 09/02/22 23:37 0.0615 Barium 0.0500 0.0120 mg/L 99.1 (75%-125%) Beryllium 0.0500 U ND 0.0613 mg/L 123 (75% - 125%)09/03/22 10:46 J 0.00532 Boron 0.100 0.120 mg/L 115 (75%-125%) ND Cadmium 0.0500 U 0.0529 mg/L 106 (75%-125%) Calcium 2.00 4.65 7.04 120 (75%-125%) mg/L 0.0603 Chromium 0.0500 0.00908 mg/L 102 (75%-125%) 09/02/22 23:37 0.000844 0.0514 Cobalt 0.0500 101 mg/L (75%-125%) 2.00 J 0.0763 2.13 103 Iron mg/L (75%-125%) 0.0500 U ND 0.0508 101 Lead (75% - 125%)mg/L U ND 0.0545 Lithium 0.0500 108 mg/L (75%-125%) 2.00 4.86 7.40 127\* (75% - 125%)09/03/22 10:46 Magnesium mg/L 0.0930 Manganese 0.0500 0.0391 mg/L 108 (75%-125%) Molybdenum 0.0500 U ND 0.0538 mg/L 108 (75% - 125%)Potassium 2.00 0.439 2.44 100 09/02/22 23:37 mg/L (75%-125%)

Workorder:

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# **QC Summary**

Workorder: 590857 Page 6 of 11 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS Batch 2308385 Selenium 0.0500 ND 0.0496 mg/L 99.2 (75% - 125%)BAJ 09/02/22 23:37 Sodium 2.00 3.36 5.52 108 mg/L (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 0.0500 U ND 0.0495 1.13 96.9 09/02/22 23:41 Arsenic mg/L(0%-20%)Barium 0.0500 0.0120 0.0611 mg/L 0.618 98.3 (0%-20%)U Beryllium 0.0500 ND 0.0604 mg/L 1.57 121 (0%-20%)09/03/22 10:49 0.005320.119 114 Boron 0.100 J mg/L 1.12 (0%-20%)ND mg/L 103 Cadmium 0.0500 0.0516 2.52 (0%-20%)2.00 4.65 6.88 Calcium mg/L 2.39 111 (0%-20%)Chromium 0.0500 0.00908 0.0589 2.28 99.7 09/02/22 23:41 mg/L (0%-20%)J 0.0503 Cobalt 0.0500 0.000844 mg/L 2.26 98.9 (0%-20%)2.00 J 0.0763 2.09 mg/L 1.79 101 Iron (0%-20%)U ND 0.0506 101 0.0500 0.396 Lead mg/L(0%-20%)Lithium 0.0500 U ND 0.0534 mg/L 2.01 105 (0%-20%)

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# **QC Summary**

590857 Page 7 of 11 Sample Qual QC **Parmname** NOM Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2308385 Batch Magnesium 2.00 4.86 7.28 mg/L 1.68 121 (0%-20%)BAJ 09/03/22 10:49 0.0500 0.0391 0.0926 mg/L 0.447 107 (0%-20%)Manganese 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 1.34 105 mg/L (0%-20%)0.0500 U ND 0.0449 Thallium mg/L 2.98 89.8 (0%-20%)QC1205182314 590838001 PS 4860 7000 107 09/03/22 10:52 Magnesium 2000 ug/L (75%-125%) QC1205174769 590838001 SDILT U ND U ND Antimony ug/L N/A (0%-20%)09/03/22 14:37 U ND U ND 09/02/22 23:48 Arsenic ug/L N/A (0%-20%)12.0 J 2.29 Barium ug/L 4.59 (0%-20%)Beryllium U ND U ND ug/L N/A (0%-20%)09/03/22 11:04 J 5.32 U ND Boron ug/L N/A (0%-20%)U ND Cadmium ND U ug/L N/A (0%-20%)Calcium 4650 892 ug/L 4.21 (0%-20%)

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Workorder:

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# **QC Summary**

				umma	<u>.y</u>					
Workorder: 590857										Page 8 of 11
Parmname Mark Andria ICPMG	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
					C					
Cobalt	J	0.844	U	ND	ug/L	N/A		(0%-20%)		
					-8-	1,712		(070 2070)		
Iron	J	76.3	U	ND	ug/L	N/A		(0%-20%)		
non	j	70.3	C	ND	ug/L	IV/A		(070-2070)		
T 1	U	ND	U	NID	Л	NT/A		(00/ 200/)		
Lead	O	ND	U	ND	ug/L	N/A		(0%-20%)		
	**	N.D.		N.D.	æ	27/1		(0.1. 20.1)		
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	IJ	ND	mg/L	N/A			IDΊ	08/26/22 11:15
iviciculy	O	ND	J	ND	mg/L	1 <b>N</b> /A			JF Z	00/20/22 11.13
0.01007197119										
QC1205175117 LCS Mercury	0.00200			0.00220	mg/L		110	(80%-120%)		08/26/22 11:07
-					-			ŕ		

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# **QC Summary**

Page 9 of 11 -Parmname **NOM** Sample Qual  $\mathbf{QC}$ Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury 2308555 Batch QC1205175116 U ND JP2 08/26/22 11:05 Mercury mg/L QC1205175119 589727024 MS 0.00200 U ND 0.00222 110 (75% - 125%)08/26/22 11:17 Mercury mg/L QC1205175120 589727024 SDILT U ND U ND 08/26/22 11:19 Mercury ug/L N/A (0%-10%)**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 300 300 100 (95%-105%) 08/26/22 15:30 **Total Dissolved Solids** mg/L QC1205176098 MB U ND **Total Dissolved Solids** mg/L 08/26/22 15:30 2309058 Batch QC1205176171 590900002 DUP 501 Total Dissolved Solids 500 0.2 (0%-5%)CH6 08/26/22 16:19 mg/L QC1205176170 Total Dissolved Solids 300 301 100 (95%-105%) 08/26/22 16:19 mg/LOC1205176169 U ND 08/26/22 16:19 Total Dissolved Solids mg/L **Titration and Ion Analysis** 2309339 QC1205176799 590838001 DUP 32.6 Alkalinity, Total as CaCO3 32.2 HH2 09/04/22 13:40 mg/L 1.23 (0%-20%)

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Workorder:

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# **QC Summary**

Page 10 of 11 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Titration and Ion Analysis 2309339 Batch HH2 09/04/22 13:40 Bicarbonate alkalinity (CaCO3) 32.6 32.2 mg/L 1.23 (0%-20%)U ND U ND mg/L Carbonate alkalinity (CaCO3) N/A OC1205176801 590857001 DUP J 3.40 J 09/04/22 13:53 Alkalinity, Total as CaCO3 3.60 5.71 ^ (+/-4.00)mg/L Bicarbonate alkalinity (CaCO3) J 3.40 J 3.60 mg/L 5.71 ^ (+/-4.00)Carbonate alkalinity (CaCO3) U ND U ND N/A mg/L QC1205176798 LCS 100 104 104 Alkalinity, Total as CaCO3 09/04/22 13:37 mg/L (90%-110%) OC1205176800 590838001 MS Alkalinity, Total as CaCO3 100 32.6 136 mg/L 104 (80% - 120%)09/04/22 13:42 QC1205176802 590857001 MS 100 Alkalinity, Total as CaCO3 3.40 107 104 (80% - 120%)09/04/22 13:54 mg/L

#### **Notes:**

Workorder:

590857

The Qualifiers in this report are defined as follows:

- Result is less than value reported
- Result is greater than value reported >
- В The target analyte was detected in the associated blank.
- Ε % difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- Е General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FΒ 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
- Η 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
- RPD or %Recovery limits do not apply.

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## **QC Summary**

Page 11 of 11 Sample Qual Parmname **NOM** OC Units RPD% REC% Range Anlst Date Time

N1 See case narrative

590857

Workorder:

- 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
- Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD. U
- 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.
- 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.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 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 e reporting purposes
- Preparation or preservation holding time was exceeded 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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#### Technical Case Narrative Georgia Power Company SDG #: 591881

### **Metals**

Product: Determination of Metals by ICP-MS Analytical Method: SW846 3005A/6020B Analytical Procedure: GL-MA-E-014 REV# 35

**Analytical Batch:** 2312380

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2312379

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
591881001	PZ-70
1205182698	Method Blank (MB)ICP-MS
1205182699	Laboratory Control Sample (LCS)
1205182702	591881001(PZ-70L) Serial Dilution (SD)
1205182700	591881001(PZ-70S) Matrix Spike (MS)
1205182701	591881001(PZ-70SD) 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 591881001 (PZ-70) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

Amalasta	591881
Analyte	001
Boron	10X
Manganese	10X

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**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 38

**Analytical Batch:** 2312733

**Preparation Method:** SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 38

**Preparation Batch:** 2312730

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
591881001	PZ-70
1205183553	Method Blank (MB)CVAA
1205183554	Laboratory Control Sample (LCS)
1205183557	591729001(NonSDGL) Serial Dilution (SD)
1205183555	591729001(NonSDGD) Sample Duplicate (DUP)
1205183556	591729001(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:** 2312366

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
591881001	PZ-70
1205182661	Method Blank (MB)
1205182662	Laboratory Control Sample (LCS)
1205182663	591867001(NonSDG) Sample Duplicate (DUP)
1205182664	591867001(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.

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#### **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	1205182664 (Non SDG 591867001PS)	129* (90%-110%)
Fluoride	1205182664 (Non SDG 591867001PS)	139* (90%-110%)
Sulfate	1205182664 (Non SDG 591867001PS)	155* (90%-110%)

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Fluoride	1205182663 (Non SDG 591867001DUP)	abs(.242367)* (+/1 mg/L)

#### **Technical Information**

#### **Sample Dilutions**

The following samples 1205182663 (Non SDG 591867001DUP), 1205182664 (Non SDG 591867001PS) and 591881001 (PZ-70) 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.

A malvita	591881
Analyte	001
Chloride	50X
Sulfate	50X

### Sample Re-analysis

Sample 591881001 (PZ-70) was re-analyzed to verify the result.

**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

**Analytical Batch:** 2313724

The following samples were analyzed using the above methods and analytical procedure(s).

**GEL Sample ID#** Client Sample Identification 591881001 PZ-70

1205185479 Method Blank (MB)

1205185480 Laboratory Control Sample (LCS)

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1205185482 592010003(NonSDG) 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:** 2312490

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

591881001 PZ-70

1205182983 Laboratory Control Sample (LCS)

1205182984 591877005(NonSDG) Sample Duplicate (DUP) 1205182985 591877005(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.

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### Technical Case Narrative Georgia Power Company SDG #: 591351

## **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> 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).

GEL Sample ID#	Client Sample Identification
591351001	BRGWC-17S
591351002	BRGWC-35S
591351003	BRGWC-36S
591351004	FD-04
591351005	BRGWC-34S
591351006	EB-08
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.

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A	591351			
Analyte	002	003	004	005
Boron	20X	20X	20X	20X
Calcium	20X	1X	1X	20X
Manganese	1X	1X	1X	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:** 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).

<b>GEL Sample ID#</b>	Client Sample Identification
591351001	BRGWC-17S
591351002	BRGWC-35S
591351003	BRGWC-36S
591351004	FD-04
591351005	BRGWC-34S
591351006	EB-08
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).

GEL Sample ID# Client Sample Identification

591351001 BRGWC-17S

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591351002	BRGWC-35S
591351003	BRGWC-36S
591351004	FD-04
591351005	BRGWC-34S
591351006	EB-08
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), 591351001 (BRGWC-17S), 591351002 (BRGWC-35S), 591351003 (BRGWC-36S), 591351004 (FD-04) and 591351005 (BRGWC-34S) 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.

Amalanta	591351				
Analyte	001	002	003	004	005
Sulfate	20X	20X	20X	20X	20X

**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).

GEL Sample ID#	Client Sample Identification
591351001	BRGWC-17S
591351002	BRGWC-35S
591351003	BRGWC-36S
591351004	FD-04
591351005	BRGWC-34S
591351006	EB-08
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:** 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).

<b>GEL Sample ID#</b>	Client Sample Identification
591351001	BRGWC-17S
591351002	BRGWC-35S
591351003	BRGWC-36S
591351004	FD-04
591351005	BRGWC-34S
591351006	EB-08
1205179131	Laboratory Control Sample (LCS)
1205179132	591351001(BRGWC-17S) Sample Duplicate (DUP)
1205179133	591351001(BRGWC-17S) 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.

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#### Technical Case Narrative Georgia Power Company SDG #: 590857

## **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> 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).

<b>GEL Sample ID#</b>	Client Sample Identification
590857001	BRGWC-33S
590857002	BRGWC-37S
590857003	BRGWC-38S
590857004	PZ-53D
590857005	PZ-13S
590857006	FB-04
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

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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. Samples 590857001 (BRGWC-33S), 590857003 (BRGWC-38S) and 590857004 (PZ-53D) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

A 14 -	590857			
Analyte	001	003	004	
Boron	20X	20X	20X	
Calcium	20X	1X	20X	
Manganese	20X	20X	1X	
Sodium	1X	1X	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:** 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).

<b>GEL Sample ID#</b>	Client Sample Identification
590857001	BRGWC-33S
590857002	BRGWC-37S
590857003	BRGWC-38S
590857004	PZ-53D
590857005	PZ-13S
590857006	FB-04
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.

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#### **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).

<b>GEL Sample ID#</b>	Client Sample Identification
590857001	BRGWC-33S
590857002	BRGWC-37S
590857003	BRGWC-38S
590857004	PZ-53D
590857005	PZ-13S
590857006	FB-04
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), 590857001 (BRGWC-33S), 590857003 (BRGWC-38S), 590857004 (PZ-53D) and 590857005 (PZ-13S) were diluted

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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.

Amalasta		590	857	
Analyte	001	003	004	005
Chloride	40X	1X	1X	1X
Sulfate	40X	40X	40X	10X

**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).

<b>GEL Sample ID#</b>	Client Sample Identification
590857001	BRGWC-33S
590857002	BRGWC-37S
590857003	BRGWC-38S
590857004	PZ-53D
590857005	PZ-13S
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: Solids, Total Dissolved Analytical Method:** SM 2540C

**Analytical Procedure:** GL-GC-E-001 REV# 19

**Analytical Batch:** 2309058

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
590857006	FB-04
1205176169	Method Blank (MB)
1205176170	Laboratory Control Sample (LCS)
1205176171	590900002(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

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### **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).

<b>GEL Sample ID#</b>	Client Sample Identification
590857001	BRGWC-33S
590857002	BRGWC-37S
590857003	BRGWC-38S
590857004	PZ-53D
590857005	PZ-13S
590857006	FB-04
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.

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1/1/1			SDC	5/AR/COC/Work Order: 59   88   59   88 3   59   88 7
teceived By: MVH			Dat	e Received: 59-52 - 2522 Circle Applicable:
Carrier and Tracking Number				FedEx Express FedEx Ground UPS Field Services Courier Other
uspected Hazard Information	Yes	No	*If N	let Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation
Shipped as a DOT Hazardous?		X	Haza	rd Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
) Did the client designate the samples are to be eccived as radioactive?		Y	COC	notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as idioactive?		X	Max	imum Net Counts Observed* (Observed Counts - Area Background Counts): CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
) Did the client designate samples are hazardous?	,	7		notation or hazard labels on containers equal client designation.  Or E is yes, select Hazards below.
) Did the RSO identify possible hazards?		X		PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	NA NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and scaled?	V			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	X			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*			X	Preservation Method: Wet Ice Ice Packs Dry ice None Other:  *all temperatures are recorded in Celsius TEMP:
Daily check performed and passed on IR temperature gun?	X	Y		Temperature Device Serial #: <u>IR2-21</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	X			Circle Applicable: Scals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	/	V	X	If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
8 Samples received within holding time?	X			ID's and tests affected:
Sample ID's on COC match ID's on bottles?	X			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	K	h		Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as			X	
GEL provided by use of GEL labels?	V			Circle Applicable: Not relinquished Other (describe)

GL-CHL-SR-001 Rev 7

GEL Work Order Number   Send Results To: SCS & G   Send Results To: SCS &	Chain  Chain  Chain  Fax #  Fax #  (Military)  (Milita		Stody and Analytical Requess GEL Project Manager: Erin Trem Considered Sample Readily Sample (If Sample Sample Be considered Sample Beard Sample B	alytical Re nager: Erin Should this	Chemistry   Radiochemistry   Radiobioassay   Specialty Analytics   Custody and Analytical Request   GEL Project Manager: Erin Trent	Analytics		Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178	541353
Power  Plant Branch Ash Ponds £  Plant Branch Ash Ponds £  Ph McGill Blvd SE, Atlanta GA 3  Bample ID  Sample ID  Sample ID  Sample ID  Sample ID  Sample ID  Page NC - 175  Bag NC - 175  Bag NC - 355  ED - 0 H  EB - 0 &  EB - 0 &	Phone # 404-  Fax #  *Time Collected (Miltary) (hhmm) (137 G 1358 (2 0952	GEL   GEL   S06-7116   Oct   Field   Oct   Filtered   Oct   N   Oct   N   Oct   N   Oct   N   Oct   N   Oct   N   Oct   Oct	Sample (If Matrix 4) Matrix (9) Matrix (10) Radioactive	nager: Erir Should this	n Trent			Fax: (843) 766-1178	
	Phone # 404  Fax #  *Time Collected (Military) (Hhmm) (Hhmm) (1358  1325	A N Filtered O N N G N N G N N C C N N C C N N C C N N C C N N C C N N C C N N N C C N	Marin (If	Should this sample be	1 1 ~				) ) ) ;
			Sample Matrix (4) WG	The state of the s	Sample An	alysis Ke	Sample Analysis Requested (5) (Fill in	(Fill in the number of containers for each test)	ners for each test)
			Sample Matrix (4) WG	sample pe	S.		IN IN		< Preservative Type (6)
			Sample Matrix (4) WG	considered:	5		87		ommon of
*Date Collected  *Date Collected  *Date Collected  (mm/dd/xy)  BR (5 M C - 17 S	*Time Collected (Williary) (himm)   1137   1358   20952   1440   1440   1325	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sample Matrix (4) WG	ıbbjy	er of cor		776 & 2 0B, 6010		Note: extra sample is
BAGWC-355 08/24/22 BAGWC-365 08/24/22 FD-04 08/24/22 BAGWC-345 08/24/22 EB-08	1137	2 2 b b b b	WG MG	yes, please su isotopic info. (7) Known o			EPA 602		required for sample specific QC
02 T 82	1325		J/1		7	/	/		field pH = (Q . 6 2
57 7 8	1940		C		7	1	>		field pH = 6.05
7 (7)			MG		7	>	> >		field pH = 5.59
5			MG		7	>	> >		
			₽ SM		7	>	> >		field pH = 5,75
			Q 3		7	>	11		field pH = NA
									field pH =
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									field pH =
Chain of Custody Signatures	es			4	TAT Requested:		Normal: x Rush:	Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time Received by (signed)	signed) Date	re Time		Fax I	Fax Results: [ ] Yes	Yes [x] No	No		
11 A 8129/22 1515 Mudisia	Total Control	m 829	5151 22		et Deliverable	e: [ ] C of	Select Deliverable: [ ] C of A [ ] QC Summary	[ ] level 1 [x] Level 2	el 2 [ ] Level 3 [ ] Level 4
2		,		Addi	Additional Remarks:	-ks: *	Metals: B,Ca,Sb,As,B	a,Be,Cd,Cr,Co,Pb,Li,Mo	Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg
3				For.	Lab Receivin	ng Use On.	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	[ ] No	Cooler Temp: °C
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	rm (SRR.)		Sa	umple Collec	ction Time Z	one: [x] I	Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central		[ ] Mountain [ ] Other:
<ol> <li>Chain of Custody Number = Client Determined</li> <li>QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MS</li> <li>QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MS</li> <li>Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered</li> </ol>	nk, MS = Matrix Spi	Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite as not field filtered.	= Matrix Spike	Duplicate Samp	ole, G = Grab, C	= Composite			
4.) Matrix Codes: WD=Brinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachafte, SO=Soil, SE=Senfreit, SE=Senfreit, SE=Studge, WG=Groundwater, WS=Surface Water, WD=Brinking Water, WG=Groundwater, WG=Gro	ter, WL=Leachate, S  oer of containers prov  Sulfuric Acid AA = ,	oU=Soil, SE=Sed vided for each (i.e Ascorbic Acid, H	8260B - 3, 601	10B/7470A - 1).  Sodium Thio	sulfate, If no pre	ve is	added = leave field blank		
6.) Preservative Type: HA Type: HA Type: HA Type: HA Type: HA Type: HAZARDS (Characteristic Hazards	Listed Waste	Vaste		Other	ar			Please pr	Please provide any additional details
als	. n	LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	astes.)	OT= (i.e.: misc Desc	OT=Other / Unknown (i.e.: High/low p.H, asbess misc. health hazards, etc. Description:	cnown H, asbesto. rrds, etc.,	OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

(CIVCC			SDC	G/AR/COC/Work Order: 59 1751 (571795)
ved By: Thyasia Tatum		T	Dat	te Received: 8 79 30
				FedEx Express FedEx Ground UPS Field Services Courier Other
cted Hazard Information	Yes	No	*If1	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
pped as a DOT Hazardous?		V	Haza	ard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
	7	/	COC	C notation or radioactive stickers on containers equal client designation.
	1	/	Max	cimum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
d the client designate samples are hazardous?		/	/	Chotation or hazard labels on containers equal client designation.
I the RSO identify possible hazards?		V	עוו	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	Z	No.	Comments/Qualifiers (Required for Non-Conforming Items)
	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
	/			Circle Applicable: Client contacted and provided COC COC created upon receipt  Preservation Method Wet Ice Jace Packs Dry ice None Other:
	V	,		*all temperatures are recorded in Celsius TEMP:
	/			Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?	1			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
	V			Sample ID's and Containers Affected:  If Preservation added, Lot#:
Do any samples require Volatile Analysis?		K	L	If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer)  Do Jiquid 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:
Samples received within holding time?	/			ID's and tests affected:
	/			ID's and containers affected:
				Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
number indicated on COC?			1	Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels? COC form is properly signed in elinquished/received sections?	V			Circle Applicable: Not relinquished Other (describe)
	Shipping containers received intact and glealed?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Sample containers intact and sealed?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile	pped as a DOT Hazardous?  d the client designate the samples are to be ed as radioactive?  d the RSO classify the samples as ctive?  d the RSO identify possible hazards?  Sample Receipt Criteria Shipping containers received intact and scaled?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile Analysis?  Samples received within holding time?  Samples received within holding time?  Date & time on COC match ID's on bottles?  Number of containers received match number indicated on COC?	pped as a DOT Hazardous?  d the client designate the samples are to be ed as radioactive?  d the RSO classify the samples as ctive?  d the RSO identify possible hazards?  Sample Receipt Criteria Shipping containers received intact and scaled?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile Analysis?  Samples received within holding time?  Samples received within holding time?  Date & time on COC match date & time on bottles?  Number of containers received match number indicated on COC?	pped as a DOT Hazardous?  d the client designate the samples are to be ed as radioactive?  d the RSO classify the samples as ctive?  d the RSO identify possible hazards?  Sample Receipt Criteria  Shipping containers received intact and scaled?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile  Analysis?  Samples received within holding time?  Samples received within holding time?  Samples received within holding time?  Date & time on COC match date & time on bottles?  Number of containers received match number indicated on COC?

GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phomes (843) \$56,8171		s) (Fill in the number of containers for each test)	< Preservative Type (6)	C	Comments Note: extra sample is	required for sample specific QC	「Los ph = Hold ph = よ。し	1 field pH = 5.42	Field pH = 3, 97	$\mathcal{F}_{i}$ $\mathcal{F}_{i}$ $\mathcal{F}_{i}$ $\mathcal{F}_{i}$	field pH = $\mathcal{S} \cdot \mathcal{H} \mathcal{L}_{e}$	field pH = NA	= Hd plai	= Hd plai	= Held bl=	= Held bl=	Rush: Specify: (Subject to Surcharge)		[]QC Summary []level1 [x] Level2 []Level3 []Level4	lo,Se,Tl,Fe,Mg,Mn,K,Na,	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes [ ] No Cooler Temp: "C ollection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:		teld blank    Please provide any additional details	OTE-Other / Unknown  (i.e.: High/low pH, asbestos, beryllium, irritants, other sample(s), type of site collected from, odd matrices, etc.)	
		Sample Analysis Requested (5)	IN	87	B, 6010	Meta EPA 6020 Radium 2	/	1	1	1	)	1					Normal: x	[x] No		Metals: B,C	ly: Custody Eastern [		added = leave f	s, beryllium	
y Analytics		nalysis R		OC	SM 254 Sicarb A 320B	EPA 300, E	1	7	1	1	1	)							le: [ ] C of A		ing Use On Zone: [x] E	C = Composite	reservative is a	known H, asbestos ards, etc.)	
y I Specialt	Trent	ample A	S	Editor S	Shar	Total numbe	7	٢	7	7	7	7					TAT Requested:	Fax Results: [ ] Yes	Select Deliverable: [ ]	Additional Remarks:	on Time	G = Grab, (	fate, If no pr	OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	
Laboratories LLC  Chain of Custody and Analytical Recurses	GEL Project Manager: Erin Trent	S	Should this	sample be considered:		yes, please su isotopic info.) (7) Known or possible Haza										(a.)	T			Additio	For Lab Receiving Use Only: Cus Sample Collection Time Zone: [x] Eastern	uplicate Sample,  WQ=Water Qu	AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank ted Waste Other	OT= Other / (i.e.: High/lo misc. health . Description:	
atoric dischemistry	roject Man				11)	Sample Matrix (4)	MG	MG	MG	MG	MG	Sy.							183 x34	22	Sam	latrix Spike Du t, SL=Sludge,	Hexane, ST =	S.)	
abor mistry   Ra	GEL P	116				Field (3) N	z	2	2	2	2	7						Time	1/24/	2 1		e, MSD = M Itered. SE=Sedimen	Acid, HX =	TWE Listed Waste (F,K,P and U-listed wastes.) Waste code(s):	
	5	404-506-7116			ontacts			9	5	9	5	9						Date	d	8/24/2		Spike Sampl s not field fi ; SO=Soil, i	= Ascorbic Waste	LW= Listed Waste (F,K,P and U-listea Waste code(s):	
Chair		Phone # 4	Fax#		eosyntec C	*Time Collected (Military) (hhmm)	777	1136	1600	1355	1315	1245							M	00	(SRR.)	MS = Matrix &  for sample wa  WL=Leachate  f containers pi	iric Acid, AA	LW= I (F,K,P Waste	
O	GEL Work Order Number:				esults To: SCS & G	*Date Collected (mm/dd/vv)	08/23/22	08/23/22	08/23/22	08/23/22	08/23/22	08/13/12					Chain of Custody Signatures	Received by (signed)	1 July	12 Star	3 ceint & Review form	EB = Equipment Blank, is e was field filtered or - N - vater, WW-Waste Water, or 1087/470A) and number or the state of the	d, SH = Sodium Hydroxide, SA = Sulfi Characteristic Hazards	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	Poulared
	GEL W			ta GA 30308	hm HKer Send Ro	a date/time											Chain of Ch	Time	12KO	182 187	see Sample Rea	FD = Field Duplicate  V - for yes the sampli ater, WS=Surface W ested (i.e. 8260B, 60	fitric Acid, SH = Soc		
of .		3A Power	Project/Site Name: Plant Branch Ash Ponds	241 Ralph McGill Blvd SE, Atlanta GA 30308	Taylor Go 516 Anna Schutter Send Results To: SCS & Geosyntec Contacts	Sample ID * For composites - indicate start and stop date time	BRGWC-335	BRGWC-375	BRGWC-385	P2-5370	PZ-135	FB-04						y (Signed) Date	77-17-17	11 8/84	3	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, 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, 7.) KNOWN OR POSSIBLE HAZARDS   Characteristic Hazards   List	Hg= Mercury Se= Selenium	A $\sigma = \text{NIIVer}$
Page: Project # GEL Quote #:	PO Number:	Client Name: GA Power	Project/Site Nan	Address: 241 Ra	Collected By:	* For col												Relinquished By (Signed)	1 Tarlon	2	S For sample sh	1.) Chain of Custod) 2.) QC Codes: N = 3.) Field Filtered: Fc 4.) Matrix Codes: W 5.) Sample Analysis I	6.) Preservative Typ.	RCRA Metals As = Arsenic Ba = Barium	d = Cadmium

The state of the s				
<sub>eceived By:</sub> Thyasia Tatum			1	OG/AR/COC/Work Order: 590838, 590840, 590845, ate Received:
Carrier and Tracking Number		·		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
spected Hazard Information	Yes	Š	*If	Net Counts > 100cpm on samples not marked "radicactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		V	Haz	zard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
Did the client designate the samples are to be cived as radioactive?			СО	C notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as ioactive?			Ma	eximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Did the client designate samples are hazardous	,	/	<u>.</u>	ட் notation or hazard labels on containers equal client designation.
Did the RSO identify possible hazards?			If D	O or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	¥	g	Comments/Qualifiers (Required for Non-Conforming Hems)
Shipping containers received intact and sealed?	V	~		Circle Applicable: Scals broken Damaged container Leaking container Other (describe)
Chain of custody documents included with shipment?	V			Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	V			Preservation Method Vet Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius  TEMP:
Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?		/		Sample ID's and Containers Affected:  If Preservation added, Lot#:
Do any samples require Volatile Analysis?				It Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
Samples received within holding time?	V			ID's and tests affected:
Sample ID's on COC match ID's on bottles?				ID's and containers affected:
Date & time on COC match date & time on bottles?	V			Circle Applicable: No dates on containers  No times on containers  COC missing info  Other (describe)
Number of containers received match number indicated on COC?				Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?	1		/.	
relinquished/received sections?	2			Chick Applicable: Not refinduished. Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?  COC form is properly signed in	1		/.	Circle Applicable: Not relinquished Other (describe)

Page 80 of 84 SDG: 591881 Rev1

#### **Erin Trent**

From: Erin Trent

**Sent:** Tuesday, September 6, 2022 11:20 AM **To:** Betsy McDaniel; Abraham, Joju; Team Trent

Cc: Chris Parker; Monte Jones; Charles Adams; Matt Malone; Ryan Walker; Lauren Coker

(laucoker@southernco.com); Hodges, John Benjamin; Smilley, Michael Jay;

Ibmidkif@southernco.com; Hunter Auld

**Subject:** RE: Branch Samples Received at 10 Degrees C

#### Betsy,

I apologize for the confusion. I just spoke with the group leader and the samples were at 5 degrees when received. The tech who called me about them being at 10 degrees was confused about which samples we were discussing. These samples were in temperature spec, so I will remove the qualifiers from the data. Again, I apologize for the confusion.

Thanks.

## Erin Trent Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417 Office Direct: 843.769.7374 | Office Main: 843.556.8171 | Fax: 843.766.1178

E-Mail: <a href="mailto:erin.trent@gel.com">erin.trent@gel.com</a> | Website: <a href="mailto:www.gel.com">www.gel.com</a>

**Analytical Testing** 







From: Betsy McDaniel <betsy.mcdaniel@atlcc.net>

Sent: Tuesday, September 6, 2022 9:36 AM

To: Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>; Erin Trent <Erin.Trent@gel.com>; Team Trent

<Team.Trent@gel.com>

Cc: Chris Parker <chris.parker@atlcc.net>; Monte Jones <monte.jones@atlcc.net>; Charles Adams

<charles.adams@atlcc.net>; Matt Malone <matt.malone@atlcc.net>; Ryan Walker <ryan.walker@atlcc.net>; Lauren

Coker (laucoker@southernco.com) < laucoker@southernco.com>; Hodges, John Benjamin

<JOHHODGE@SOUTHERNCO.COM>; Smilley, Michael Jay <MJSMILLE@SOUTHERNCO.COM>; lbmidkif@southernco.com;

Hunter Auld <hunter.auld@atlcc.net>

Subject: RE: Branch Samples Received at 10 Degrees C

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Erin:

Please find attached the COCs our field technician (Hunter Auld) received upon delivering the Plant Branch samples last Friday. I can't read the signature of your lab representative, but the cooler temp is noted as 5 degrees C for both samples. Our technician delivered the samples on ice in his own cooler and mentioned at GEL Sample Receiving that he

wanted the cooler back, so the samples were removed from the ACC technician's cooler at the lab. Our technician concurred that the ice had partially melted, but the samples were maintained on ice while they were in ACC custody.

#### Betsy McDaniel

Atlantic Coast Consulting, Inc.

1150 Northmeadow Pkwy, Suite 100, Roswell, Georgia 30076 Office: 770-594-5998 | Cell: 678-448-8459 | www.atlcc.net

"Our work helps produce a cleaner environment for all"

From: Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>

Sent: Friday, September 2, 2022 6:19 PM

To: Erin Trent <Erin.Trent@gel.com>; Betsy McDaniel <betsy.mcdaniel@atlcc.net>; Chris Parker

<<u>chris.parker@atlcc.net</u>>; Monte Jones <<u>monte.jones@atlcc.net</u>>; Charles Adams <<u>charles.adams@atlcc.net</u>>; Matt

Malone <matt.malone@atlcc.net>; Ryan Walker <ragn.walker@atlcc.net>; Hartley, Lauren

<<u>LAUCOKER@SOUTHERNCO.COM</u>>; Hodges, Ben <<u>JOHHODGE@SOUTHERNCO.COM</u>>; Smilley, Michael Jay

< MJSMILLE@SOUTHERNCO.COM >; Midkiff, Laura B. < lbmidkif@southernco.com >

Cc: Team Trent < Team. Trent@gel.com >

Subject: RE: Branch Samples Received at 10 Degrees C

Erin,

Please qualify the samples with the noted temp and proceed with the requested analyses. We will follow up on this issue

Joju

From: Erin Trent < <a href="mailto:Erin.Trent@gel.com">Erin.Trent@gel.com</a> Sent: Friday, September 02, 2022 5:18 PM

To: Betsy McDaniel < <a href="mailto:betsy.mcdaniel@atlcc.net">betsy.mcdaniel@atlcc.net</a>; Chris Parker < <a href="mailto:chris.parker@atlcc.net">chris.parker@atlcc.net</a>; Monte Jones

<monte.jones@atlcc.net>; Charles Adams <charles.adams@atlcc.net>; Matt Malone <matt.malone@atlcc.net>;

Ryan Walker <<u>ryan.walker@atlcc.net</u>>; Adria Reimer <<u>areimer@geosyntec.com</u>>; Anthony Szwast

<anthony.szwast@geosyntec.com>; cnelson@geosyntec.com; Abraham, Joju

<JABRAHAM@SOUTHERNCO.COM>; Jurinko, Kristen Nichole <KNJURINK@SOUTHERNCO.COM>; Hartley, Lauren

<<u>LAUCOKER@SOUTHERNCO.COM</u>>; Singleton, Robert <<u>ROSINGLE@SOUTHERNCO.COM</u>>; Hodges, Ben

<JOHHODGE@SOUTHERNCO.COM>; Smilley, Michael Jay <MJSMILLE@SOUTHERNCO.COM>; Muskus Ruiz,

Noelia S. < NSMUSKUS@SOUTHERNCO.COM>; Midkiff, Laura B. < lbmidkif@southernco.com>

Cc: Team Trent < Team.Trent@gel.com >

Subject: Branch Samples Received at 10 Degrees C

**EXTERNAL MAIL: Caution Opening Links or Files** 

Good Afternoon,

The following samples were received at 10 degrees C. Please advise on how to proceed.

PZ-70

PZ-52D

These were in the same cooler together. The ice was partially melted.

2

#### Erin Trent Project Manager



2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417 Office Direct: 843.769.7374 | Office Main: 843.556.8171 | Fax: 843.766.1178

E-Mail: <a href="mailto:erin.trent@gel.com">erin.trent@gel.com</a> | Website: <a href="mailto:www.gel.com">www.gel.com</a> [gel.com]

**Analytical Testing** 



gellaboratories.com]



[linkedin.com]

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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
0	





gel.com

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 APE Work Orders: 590859,591353 and 591883

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, August 29, 2022 and September 02, 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



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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 590859 GEL Work Order: 590859

#### 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.

	Edish M.	Test	
Reviewed by			

Page 2 of 38 SDG: 590859 Rev1

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# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 591353 GEL Work Order: 591353

#### 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.

	Edish M.	Kent	
Reviewed by	,		

Page 3 of 38 SDG: 590859 Rev1

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## Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 591883 GEL Work Order: 591883

#### 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.

	Edish	M.	Test	
Reviewed by				

Page 4 of 38 SDG: 590859 Rev1

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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 ComplianceAPE

Client Sample ID: BRGWC-33S Project: GPCC00101 Sample ID: 590859001 Client ID: GPCC001

Matrix: WG

Collect Date: 23-AUG-22 Receive Date: 24-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date Tin	e Batch	Mtd.
Rad Gas Flow Proporti	onal Countir	ıg											
GFPC Ra228, Liquid	"As Received	"											
Radium-228	U	0.835	+/-1.09	1.85	+/-1.11	3.00	pCi/L			JXC9	09/16/22 105	230917	7 1
Radium-226+Radium	-228 Calculat	tion "See Pa	rent Product	s"									
Radium-226+228 Sum		1.94	+/-1.16	1.85	+/-1.19		pCi/L		1	NXL1	09/20/22 095	230918	1 2
Rad Radium-226													
Lucas Cell, Ra226, Li	quid "As Rece	eived"											
Radium-226		1.10	+/-0.413	0.341	+/-0.446	1.00	pCi/L			LXP1	09/16/22 100	230917	9 3

The following Analytical Methods were performed

MethodDescription1EPA 904.0/SW846 9320 Modified2Calculation

Calculation
EPA 903.1 Modified

Surrogate/Tracer RecoveryTestBatch IDRecovery%Acceptable LimitsBarium-133 TracerGFPC Ra228, Liquid "As Received"230917785.7(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

DL: Detection Limit

Lc/LC: Critical Level

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

MDC: Minimum Detectable Concentration

Page 5 of 38 SDG: 590859 Rev1

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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 ComplianceAPE

Client Sample ID: **BRGWC-37S** Project: GPCC00101 Sample ID: GPCC001 590859002 Client ID:

Matrix: WG

Collect Date: 23-AUG-22 Receive Date: 24-AUG-22 Collector: Client

Parameter	Qualifier	Result Ui	ncertainty	MDC	TPU	KL	Units	PF	DF An	alyst	Date Time	Batch	Mtd.
Rad Gas Flow Proport	tional Countii	ıg											
GFPC Ra228, Liquid	l "As Received	"											
Radium-228	U	1.08	+/-1.44	2.45	+/-1.47	3.00	pCi/L		JX	C9	09/16/22 1055	2309177	1
Radium-226+Radium	n-228 Calculai	tion "See Pa	rent Produc	ts"									
Radium-226+228 Sum	U	2.37	+/-1.49	2.45	+/-1.53		pCi/L		1 NX	IL1	09/20/22 0955	2309181	2
Rad Radium-226													
Lucas Cell, Ra226, L	iquid "As Rece	eived"											
Radium-226		1.29	+/-0.385	0.219	+/-0.442	1.00	pCi/L		LX	TP1	09/16/22 1006	2309179	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery Barium-133 Tracer GFPC Ra228, Liquid "As Received"

Batch ID Recovery% **Acceptable Limits** 2309177 80.1 (15% - 125%)

#### **Notes:**

Method

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

Page 6 of 38 SDG: 590859 Rev1

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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 ComplianceAPE

Client Sample ID: BRGWC-38S Project: GPCC00101 Sample ID: GPCC001 590859003 Client ID:

Matrix: WG

Collect Date: 23-AUG-22 Receive Date: 24-AUG-22 Collector: Client

Parameter	Qualifier	Result Ui	ncertainty	MDC	TPU	KL	Units	PF	DF	Analyst	Date Time	Batch	Mtd.
Rad Gas Flow Proportion		0											
Radium-228	As Receivea	2.71	+/-1.32	1.92	+/-1.48	3.00	pCi/L			JXC9	09/16/22 1055	2309177	1
Radium-226+Radium-	228 Calculati	on "See Pa	rent Products	s"									
Radium-226+228 Sum		3.12	+/-1.34	1.92	+/-1.50		pCi/L		1	NXL1	09/20/22 0955	2309181	2
Rad Radium-226													
Lucas Cell, Ra226, Liq	quid "As Recei	ived"											
Radium-226		0.407	+/-0.232	0.260	+/-0.247	1.00	pCi/L			LXP1	09/16/22 1006	2309179	3

The following Analytical Methods were performed **Description** 

	-
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery

Batch ID Recovery% **Acceptable Limits** 2309177 82.2 Barium-133 Tracer GFPC Ra228, Liquid "As Received" (15% - 125%)

#### **Notes:**

Method

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

Page 7 of 38 SDG: 590859 Rev1

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

#### **Certificate of Analysis**

Company: Georgia Power Company, Southern

Company Address:

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: Project: PZ-53D GPCC00101 Sample ID: Matrix: GPCC001 590859004 Client ID:

WG Collect Date: 23-AUG-22

Receive Date: 24-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proporti	onal Countir	ng												
GFPC Ra228, Liquid	"As Received	"												
Radium-228		2.35	+/-1.43	2.23	+/-1.55	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
Radium-226+Radium-	-228 Calculat	ion "See Pa	rent Product	s"										
Radium-226+228 Sum		3.04	+/-1.47	2.23	+/-1.59		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Lie	quid "As Rece	eived"												
Radium-226		0.695	+/-0.330	0.372	+/-0.354	1.00	pCi/L			LXP1	09/16/22	1007	2309179	3

The following Analytical Methods were performed **Description** 

	•
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	83.7	(15%-125%)

Method

**Notes:** 

The MDC is a sample specific MDC.

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

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

MDC: Minimum Detectable Concentration

Page 8 of 38 SDG: 590859 Rev1

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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 ComplianceAPE

Client Sample ID: Project: **PZ-13S** GPCC00101 Sample ID: Matrix: GPCC001 590859005 Client ID:

WG Collect Date: 23-AUG-22 Receive Date: 24-AUG-22

Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analys	Date T	ime	Batch	Mtd.
Rad Gas Flow Proporti	onal Countir	ıg												
GFPC Ra228, Liquid	"As Received	"												
Radium-228	U	0.879	+/-1.16	1.97	+/-1.18	3.00	pCi/L			JXC9	09/16/22 10	)55	2309177	1
Radium-226+Radium	-228 Calculat	ion "See Pa	rent Product	s"										
Radium-226+228 Sum	U	1.83	+/-1.20	1.97	+/-1.23		pCi/L		1	NXL1	09/20/22 09	955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Li	quid "As Rece	eived"												
Radium-226		0.956	+/-0.316	0.198	+/-0.371	1.00	pCi/L			LXP1	09/16/22 10	007	2309179	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery

Batch ID Recovery% **Acceptable Limits** 2309177 79.9 Barium-133 Tracer GFPC Ra228, Liquid "As Received" (15% - 125%)

#### **Notes:**

Method

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 ComplianceAPE

Client Sample ID: Project: FB-04 GPCC00101 Sample ID: Matrix: Client ID: GPCC001 590859006

WQ Collect Date: 23-AUG-22 Receive Date: 24-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date Tim	e Batch	Mtd.
Rad Gas Flow Proportion  GFPC Ra228, Liquid		8											
Radium-228	U	1.64	+/-1.23	1.95	+/-1.30	3.00	pCi/L			JXC9	09/16/22 1056	2309177	7 1
Radium-226+Radium-	228 Calculat	ion "See Pa	rent Product	's"									
Radium-226+228 Sum		2.10	+/-1.26	1.95	+/-1.33		pCi/L		1	NXL1	09/20/22 0955	2309181	1 2
Rad Radium-226 Lucas Cell, Ra226, Liq	juid "As Rece	eived"											
Radium-226		0.458	+/-0.287	0.362	+/-0.294	1.00	pCi/L			LXP1	09/16/22 1041	2309179	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery Test Batch ID Recovery% **Acceptable Limits** 2309177 77 Barium-133 Tracer GFPC Ra228, Liquid "As Received" (15% - 125%)

#### **Notes:**

Method

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 ComplianceAPE

GPCC00101 Client Sample ID: BRGWC-17S Project: GPCC001 Sample ID: Client ID: 591353001

Matrix: WG

Collect Date: 24-AUG-22 Receive Date: 29-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date T	ime	Batch	Mtd.
Rad Gas Flow Proporti		U												
GFPC Ra228, Liquid	"As Received													
Radium-228	U	-2.32	+/-1.31	2.83	+/-1.31	3.00	pCi/L			JXC9	09/20/22 1	002	2310792	2 1
Radium-226+Radium-	-228 Calculai	tion "See Pa	rent Product	s"										
Radium-226+228 Sum	U	0.152	+/-1.33	2.83	+/-1.33		pCi/L		1	NXL1	09/23/22 0	955	2310789	2
Rad Radium-226														
Lucas Cell, Ra226, Lie	quid "As Rece	eived"												
Radium-226	U	0.152	+/-0.211	0.365	+/-0.213	1.00	pCi/L			LXP1	09/15/22 0	920	2310752	2 3

The following Analytical Methods were performed

Method **Description** 1 EPA 904.0/SW846 9320 Modified 2 Calculation

EPA 903.1 Modified

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test Barium-133 Tracer GFPC Ra228, Liquid "As Received" 2310792 67.5 (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

TPU: Total Propagated Uncertainty MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

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## **Certificate of Analysis**

Company: Georgia Power Company, Southern

Company Address:

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-35S Project: GPCC00101 Sample ID: Matrix: GPCC001 591353002 Client ID:

WG

Collect Date: 24-AUG-22 Receive Date: 29-AUG-22 Collector: Client

Parameter	Qualifier	Result Ui	ncertainty	MDC	TPU	KL	Units	PF	DF	Analys	t Date Tim	e Batch	Mtd.
Rad Gas Flow Propor GFPC Ra228, Liquid		8											
Radium-228		2.43	+/-1.23	1.78	+/-1.37	3.00	pCi/L			JXC9	09/20/22 1002	2310792	1
Radium-226+Radium	n-228 Calculat	ion "See Pa	rent Product	ts"									
Radium-226+228 Sum		3.10	+/-1.27	1.78	+/-1.41		pCi/L		1	NXL1	09/23/22 0955	2310789	2
Rad Radium-226													
Lucas Cell, Ra226, I	Liquid "As Rece	eived"											
Radium-226		0.669	+/-0.328	0.390	+/-0.342	1.00	pCi/L			LXP1	09/15/22 0920	2310752	3

The following Analytical Methods were performed **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	79.5	(15%-125%)

Method

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

Company Address:

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: Sample ID: Matrix: BRGWC-36S Project: GPCC00101 GPCC001 591353003 Client ID:

WG

Collect Date: 24-AUG-22 Receive Date: 29-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date Tim	e Batch	Mtd.
Rad Gas Flow Proportion		0											
Radium-228	U	0.704	+/-1.05	1.81	+/-1.06	3.00	pCi/L			JXC9	09/20/22 1002	2310792	2 1
Radium-226+Radium-	228 Calculat	ion "See Pa	rent Product	s"									
Radium-226+228 Sum	U	1.38	+/-1.08	1.81	+/-1.10		pCi/L		1	NXL1	09/23/22 0955	2310789	2
Rad Radium-226 Lucas Cell, Ra226, Liq	juid "As Rece	rived"											
Radium-226		0.673	+/-0.263	0.191	+/-0.294	1.00	pCi/L			LXP1	09/15/22 0920	2310752	2 3

The following Analytical Methods were performed **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	(15%-125%)

#### **Notes:**

Method

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

Company Address:

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: Project: FD-04 GPCC00101 Sample ID: Matrix: GPCC001 591353004 Client ID:

WG Collect Date: 24-AUG-22 Receive Date: 29-AUG-22

Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analys	t Date Time	e Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		8											
Radium-228	U	0.727	+/-0.977	1.67	+/-0.995	3.00	pCi/L			JXC9	09/20/22 1002	2310792	. 1
Radium-226+Radium													
Radium-226+228 Sum		3.24	+/-1.11	1.67	+/-1.23		pCi/L		1	NXL1	09/23/22 0955	2310789	2
Rad Radium-226													
Lucas Cell, Ra226, Li	quid "As Rece	eived"											
Radium-226		2.52	+/-0.523	0.212	+/-0.717	1.00	pCi/L			LXP1	09/15/22 0920	2310752	. 3

The following Analytical Methods were performed **Description** 

	<del>-</del>
1	EPA 904.0/SW846 9320 Modified
2	Calculation
_	

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits		
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82.6	(15%-125%)		

Method

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

Company Address:

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-34S Project: GPCC00101 Sample ID: Matrix: GPCC001 591353005 Client ID:

WG

Collect Date: 24-AUG-22 Receive Date: 29-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	KL	Units	PF	DF	Analys	t Date Time	Batch	Mtd.
Rad Gas Flow Proport		8											
GFPC Ra228, Liquid	l "As Receive	d''											
Radium-228		1.62	+/-0.934	1.34	+/-1.02	3.00	pCi/L			JXC9	09/20/22 1002	2310792	1
Radium-226+Radium	n-228 Calculo	ation "See Pa	arent Produc	ts"									
Radium-226+228 Sum		1.86	+/-0.971	1.34	+/-1.05		pCi/L		1	NXL1	09/23/22 0955	2310789	2
Rad Radium-226													
Lucas Cell, Ra226, L	iquid "As Red	ceived"											
Radium-226	U	0.232	+/-0.267	0.444	+/-0.269	1.00	pCi/L			LXP1	09/15/22 0920	2310752	3

The following Analytical Methods were performed **Description** 

	<u>•</u>
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	79.8	(15%-125%)

Method

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

Company Address:

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: Sample ID: Matrix: Project: GPCC00101 EB-08 GPCC001 591353006 Client ID:

WQ Collect Date: 24-AUG-22 Receive Date: 29-AUG-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date Tim	e Batch	Mtd.
Rad Gas Flow Proportion		8											
Radium-228	U	0.416	+/-0.862	1.54	+/-0.868	3.00	pCi/L			JXC9	09/20/22 1002	2310792	2 1
Radium-226+Radium-2	228 Calculat												
Radium-226+228 Sum	U	0.972	+/-0.900	1.54	+/-0.913		pCi/L		1	NXL1	09/23/22 0955	2310789	9 2
Rad Radium-226													
Lucas Cell, Ra226, Liq	uid "As Rece	eived"											
Radium-226		0.556	+/-0.258	0.298	+/-0.284	1.00	pCi/L			LXP1	09/15/22 0920	2310752	2 3

The following Analytical Methods were performed **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	78.5	(15%-125%)

#### **Notes:**

Method

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 ComplianceAPE

GPCC00101 Client Sample ID: Project: PZ-70 GPCC001 Sample ID: Client ID: 591883001

Matrix: WG Collect Date: 01-SEP-22 Receive Date: 02-SEP-22 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date T	ime	Batch	Mtd.
Rad Gas Flow Proport	ional Countir													
GFPC Ra228, Liquid	"As Received	"												
Radium-228	U	0.802	+/-1.15	1.96	+/-1.16	3.00	pCi/L			JE1	09/27/22 0	923	2312614	1
Radium-226+Radium														
Radium-226+228 Sum	U	1.57	+/-1.19	1.96	+/-1.22		pCi/L		1	NXL1	09/29/22 1	056	2312610	2
Rad Radium-226														
Lucas Cell, Ra226, Li	iquid "As Rece	eived"												
Radium-226		0.771	+/-0.340	0.383	+/-0.361	1.00	pCi/L			LXP1	09/28/22 0	911	2312595	3

The following Analytical Methods were performed **Description** 

1 EPA 904.0/SW846 9320 Modified 2 Calculation EPA 903.1 Modified

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test Barium-133 Tracer GFPC Ra228, Liquid "As Received" 2312614 88 (15% - 125%)

#### Notes:

Method

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

TPU: Total Propagated Uncertainty MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

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Report Date: December 7, 2022

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

**QC Summary** 

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 590859

2309177 —	NOM	Sample	Oual	QC	T.T., *4	DDD A /	DECO	T	
2309177 —			~	QC_	Units	RPD%	REC%	Range Anlst	Date Time
23091//									
590840001 DUP									
	U	0.281	U	0.509	pCi/L	0		N/A JXC9	09/16/2210:54
	Uncert:	+/-1.08		+/-0.796					
	TPU:	+/-1.08		+/-0.806					
LCS									
	44.1			39.6	pCi/L		89.9	(75%-125%) JXC9	09/16/2210:54
	Uncert:								
	TPU:			+/-10.4					
MB									
			U		pCi/L			JXC9	09/16/2210:54
	TPU:			+/-1.37					
2309179 —									
590840001 DUP									
	U	0.250	U	0.114	pCi/L	0		N/A LXP1	09/16/2210:41
	Uncert:	+/-0.237		+/-0.177					
	TPU:	+/-0.242		+/-0.178					
LCS									
	26.6			20.1	pCi/L		75.8	(75%-125%) LXP1	09/16/2210:41
	Uncert:			+/-1.38					
	TPU:			+/-4.51					
MB									
				0.319	pCi/L			LXP1	09/16/2210:41
	Uncert:			+/-0.220					
	TPU:			+/-0.227					
590840001 MS									
	132 U	0.250		103	pCi/L		78	(75%-125%) LXP1	09/16/2210:41
	MB  2309179 — 590840001 DUP  LCS  MB	44.1 Uncert: TPU: MB  Uncert: TPU:  2309179  590840001 DUP  Uncert: TPU: LCS  26.6 Uncert: TPU: MB  Uncert: TPU: TPU:	44.1 Uncert: TPU:  MB  Uncert: TPU:  2309179  590840001 DUP  U 0.250 Uncert: +/-0.237 TPU: +/-0.242  LCS  26.6 Uncert: TPU:  MB  Uncert: TPU:  MB  Uncert: TPU:  TPU:	44.1 Uncert: TPU:  MB  U Uncert: TPU:  2309179  590840001 DUP  U Uncert: +/-0.237 TPU: +/-0.242  LCS  26.6 Uncert: TPU:  MB  Uncert: TPU:  MB  Uncert: TPU:  TPU:	44.1 39.6 Uncert: +/-3.28 TPU: +/-10.4  MB  U -0.160 Uncert: +/-1.37 TPU: +/-1.37  2309179  590840001 DUP  U 0.250 U 0.114 Uncert: +/-0.237 +/-0.177 TPU: +/-0.242 +/-0.178  LCS  26.6 20.1 Uncert: +/-1.38 TPU: +/-4.51  MB  Uncert: +/-4.51  MB  Uncert: +/-0.220 TPU: +/-0.227	44.1	44.1 39.6 pCi/L Uncert: +/-3.28 TPU: +/-10.4  MB  U -0.160 pCi/L Uncert: +/-1.37 TPU: +/-1.37  2309179  590840001 DUP  U 0.250 U 0.114 pCi/L 0 Uncert: +/-0.237 +/-0.177 TPU: +/-0.242 +/-0.178  LCS  26.6 20.1 pCi/L Uncert: +/-1.38 TPU: +/-4.51  MB  0.319 pCi/L Uncert: +/-0.220 TPU: +/-0.227	MB  44.1  Uncert:	MB  ### 44.1  ### 19.50  ### 19.5

+/-7.73

+/-17.8

#### **Notes:**

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Uncert:

TPU:

+/-0.237

+/-0.242

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: 590859 Page 2 of 2 NOM Sample Qual  $\mathbf{OC}$ RPD% REC% Parmname Units Range Anlst Date Time See case narrative for an explanation J

- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- Analyte present. Reported value may be biased low. Actual value is expected to be higher. L
- M if above MDC and less than LLD M
- REMP Result > MDC/CL and < RDL M
- RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ
- One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- Sample results are rejected R
- 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.
- 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 acceptence 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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Report Date: December 7, 2022

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

**QC Summary** 

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 591353

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	09/20/2210:02
		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	09/20/2210:02
		Uncert:			+/-3.20					
		TPU:			+/-10.7					
QC1205179814	MB									
Radium-228				U	0.428	pCi/L			JXC9	09/20/2210:02
		Uncert:			+/-0.992					
		TPU:			+/-0.998					
Rad Ra-226	2210752 —									
Batch	2310752									
QC1205179719	591353001 DUP									
Radium-226		U	0.152		0.436	pCi/L	96.4		(0% - 100%) LXP1	09/15/2210:25
		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	09/15/2210:25
		Uncert:			+/-1.40					
		TPU:			+/-4.47					
QC1205179718	MB									
Radium-226				U	0.312	pCi/L			LXP1	09/15/2210:25
		Uncert:			+/-0.270					
		TPU:			+/-0.276					
QC1205179720	591353001 MS	100	0.150		100	G: ~		<b>55</b> 0	(550) 1050() 1777	00/15/2010 25
Radium-226		132 U	0.152		103	pCi/L		77.8	(75%-125%) LXP1	09/15/2210:25
		Uncert:	+/-0.211		+/-7.31					
		TPU:	+/-0.213		+/-17.6					

#### **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: 591353

Page 2 of 2

Parmname

NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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 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 acceptence 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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Report Date: December 7, 2022

Page 1 of 2

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

**QC Summary** 

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 591883

- 391003									
Parmname	NOM	Sample (	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow									
Batch 2312614									
QC1205183302 591883001 DUP									
Radium-228	U	0.802	U	0.487	pCi/L	0		N/A JE1	09/27/2209:23
	Uncert:	+/-1.15		+/-1.24					
	TPU:	+/-1.16		+/-1.25					
QC1205183303 LCS									
Radium-228	43.9			41.8	pCi/L		95.3	(75%-125%) JE1	09/27/2209:23
	Uncert:			+/-3.24					
OC1205192201 ND	TPU:			+/-10.9					
QC1205183301 MB Radium-228			U	0.716	-С:Л			JE1	00/27/2200-22
Radium-228	Uncert:		U	+/-1.07	pCi/L			JE1	09/27/2209:23
	TPU:			+/-1.09					
Rad Ra-226	110.			1/-1.07					
Batch 2312595									
QC1205183271 591613003 DUP									
Radium-226		1.03		1.10	pCi/L	6.62		(0% - 100%) LXP1	09/28/2210:14
	Uncert:	+/-0.384		+/-0.385					
	TPU:	+/-0.425		+/-0.450					
QC1205183273 LCS									
Radium-226	26.6			21.3	pCi/L		80	(75%-125%) LXP1	09/28/2210:14
	Uncert:			+/-1.47					
	TPU:			+/-3.62					
QC1205183270 MB				0.000	~. ·				00/00/00/00
Radium-226	<b>T</b> T		U	0.258	pCi/L			LXP1	09/28/2210:14
	Uncert:			+/-0.245					
OC1205192272 501612002 Mg	TPU:			+/-0.248					
QC1205183272 591613003 MS Radium-226	135	1.03		106	pCi/L		77 1	(75%-125%) LXP1	09/28/2210:14
Nautuill-220	Uncert:	+/-0.384		+/-7.23	pCI/L		/ / .4	(15%-125%) LAPI	09/28/2210:14
	TPU:	+/-0.384		+/-1.23					
	iro.	T/-U.42J		±/-10.3					

#### 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

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#### **QC Summary**

Workorder: 591883

Page 2 of 2

Parmname

NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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 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 acceptence 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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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 590859

**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).

GEL Sample ID#	Client Sample Identification
590859001	BRGWC-33S
590859002	BRGWC-37S
590859003	BRGWC-38S
590859004	PZ-53D
590859005	PZ-13S
590859006	FB-04

#### **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).

GEL Sample ID#	Client Sample Identification
590859001	BRGWC-33S
590859002	BRGWC-37S
590859003	BRGWC-38S
590859004	PZ-53D
590859005	PZ-13S
590859006	FB-04
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.

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#### **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.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> 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).

GEL Sample ID#	Client Sample Identification
590859001	BRGWC-33S
590859002	BRGWC-37S
590859003	BRGWC-38S
590859004	PZ-53D
590859005	PZ-13S
590859006	FB-04
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.

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#### **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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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 591353

**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).

GEL Sample ID#	Client Sample Identification
591353001	BRGWC-17S
591353002	BRGWC-35S
591353003	BRGWC-36S
591353004	FD-04
591353005	BRGWC-34S
591353006	EB-08

#### **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).

<b>GEL Sample ID#</b>	Client Sample Identification
591353001	BRGWC-17S
591353002	BRGWC-35S
591353003	BRGWC-36S
591353004	FD-04
591353005	BRGWC-34S
591353006	EB-08
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.

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#### **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
591353001 (BRGWC-17S)	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).

GEL Sample ID#	Client Sample Identification
591353001	BRGWC-17S
591353002	BRGWC-35S
591353003	BRGWC-36S
591353004	FD-04
591353005	BRGWC-34S
591353006	EB-08
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**

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#### **Additional Comments**

The matrix spike, 1205179720 (BRGWC-17SMS), 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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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 591883

**Product:** Radium-226+Radium-228 Calculation

**Analytical Method:** Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

**Analytical Batch:** 2312610

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

591883001 PZ-70

## **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:** 2312614

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

591883001 PZ-70

1205183301 Method Blank (MB)

1205183302 591883001(PZ-70) Sample Duplicate (DUP)

1205183303 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.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

**Analytical Procedure:** GL-RAD-A-008 REV# 15

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## **Analytical Batch:** 2312595

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
591883001	PZ-70
1205183270	Method Blank (MB)
1205183271	591613003(NonSDG) Sample Duplicate (DUP)
1205183272	591613003(NonSDG) Matrix Spike (MS)
1205183273	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**

## **CSU**

The blank (See Below) result is greater than 1.65 times the CSU but less than the MDC.

Sample	Analyte	Value
1205183270 (MB)	Radium-226	Blank result > 1.65 CSU

## **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1205183272 (Non SDG 591613003MS), 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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CEL   Work Order Number   CEL	Page 0f			-		5				22	22007	5	GEL Laboratories 1.1.C		
Part	St # Suote #:				ADOF mistry   Rac	atori()	SS LL( Radiobioass	say I Spec	ialty Ana	lytics		2040 Charle	Savage Road eston, SC 29407		
Provide the Branch Arch Provides   Provide 2 494-516-7116   Standard Arch Provides   Provide 3 494-516-7116   Standard Arch Provides   Provide 4 494-516-7116   Standard Arch Provides   Provides 4 494-516-7116   Standard Arch Provides   Provides 4 494-516-7116   Standard Arch Provides   Provides 4 494-516-7116   Provides 4 494-516-716   Provide	PO Number:	GEL Work Order Number			GEL Pr	oject Man	ager: Erin	n Trent					843) 766-1178		
Sumple to the Portion of Authority Send Results To SCS & Goesynee Contacts	Client Name: GA Power		Phone # 4(	14-506-7	91			Sample	Analy	sis Re	quest	d (5) (Fill in the nur	mber of contain	ers for each test)	
Sample ID	Project/Site Name: Plant Branch Ash Ponds		Fax#			01	should this	S.			-			< Preservative Type (6)	
Sumple   Date	Address: 241 Ralph McGill Blvd SE, Atlanta GA	30308					sample be onsidered:	ısıineı	OC	ЭП		07		C	
Sample ID		Send Results To: SCS & G	eosyntec C	ontacts					rsz WS	350B	B, 601	56 'SIS		Note: extra sample is	
B B C C C No. 235   C S S S S S S S S S S S S S S S S S S	$ ho_{f v}$ Sample ID $^*$ For composites - indicate start and stop date?	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)		Field Siltered	Radioactive	isotopic info.)		EPA 300,	Z WS	EPA 6020	2M-846 9		required for sample specific QC	
Pack	BRGWC-335	08/23/2	177.5	G	7	9/		7	1	>	>			field pH = 中。トフ	
PQ - 53-5   PQ - 13   PV   PV   PV   PV   PV   PV   PV   P	1	12312	1136		2	5)		٢	7	1	1			field pH = 5.42	
P2 - 53 - 5   P2 - 53 - 5   P3 - 5   P4   P4   P4   P4   P4   P4   P4	BRGWC-385	08/23/22	1600	5		20		7	1	>	1			field pH = 3,97	
P2 - 13   S	P2-5375	04/23/22	1355	9		76		7	1	1	1			field pH = 7,14	
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Chain of Custody Signatures   Costody Signatures   Castody Signatures   Cast	FB-04	08/23/22		9		9		7	7	)	)			field pH = NA	
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Chain of Custody Signatures  Chain of Custody Signatures  Chain of Custody Signatures  Received by (signed) Date Time Received by (signed) Date Time Received by (signed) Received by (signed) Date Time Received by (signed) Received by (signed) Date Time Receiving Use Only: Castody Seal Intercel Time Received by (signed) Date Time Received By (signed) Date Time Received By (signed) Date Time Receiving Use Only: Castody Seal Intercel Time Requested: Analytical method requested (s. 8240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R7470A) and number of containers provided for each (i. 8.240R, e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R7470A) and number of e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R7470A) and number of e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R7470A).  Requested: Analytical method requested (i. 8.240R, e010R												7		field pH =	
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(Signed) Date Time Received by (signed) Date Time Fax Results. [1 Yes [x] No Date Time Received by (signed) Date Time Fax Results. [1 Yes [x] No Date Time Received by (signed) Date Time Fax Results. [1 Yes [x] No Date Time Fax Results. [1] Cof A [1] OC Summary [1] Level Additional Remarks: A Metals: B.Ca.S.b.As.Ba.B.C.Cl.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.								-						field pH =	
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Standard	Date			ate	Time			esults:	[ ] Yes		70				
Solution	22	IN THE	M	d	4			t Deliver	rable: [	]C of				12 [ ] Level 3 [ ] Level 4	
3	2 July 8/24/20	7	8	241	2 1	11	Addit	ional Re	marks:	*	Metals:	B,Ca,Sb,As,Ba,Be,Cd,	Cr,Co,Pb,Li,Mo,S	Se,TI,Fe,Mg,Mn,K,Na,Hg	T
ipping and delivery details, see Sample Receipt & Review form (SRR.)    Sample Collection Time Zone: [x] Eastern [] Pacific [] Central Sample, see Sample Receipt & Review form (SRR.)   Number = Client Determined	3						For I	ab Rece	eiving L	se Onl	v: Cus	ody Seal Intact? [ ]	[ ] No	L	
Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  or liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  Or Drinking Water, WG=Groundwater, WS=Surface Water, WU=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix  Requested: Analytical method requested (i.e. 8260B, 6010B7/470A) and number of containers provided for each (i.e. 8260B - 3, 6010B7/470A - 1).  Requested: Analytical method requested (i.e. 8260B, 6010B7/470A) and number of containers provided for each (i.e. 8260B - 3, 6010B7/470A - 1).  Requested: Analytical method requested (i.e. 8260B, 6010B7/470A) and number of containers provided for each (i.e. 8260B - 3, 6010B7/470A - 1).  Requested: Analytical method requested (i.e. 8260B, 6010B7/470A) and number of containers provided for each (i.e. 8260B - 3, 6010B7/470A - 1).  Listed Waste  CO = Corrosive  RE = Reactive  RE = Polychlorinated  Ag= Silver  MR = Misc. RCRA metals  RE = Polychlorinated  Harris Spike Sample, MS = Matrix Spike Duptice (i.e. 826mium in it is added = leave field blank  Requested (i.e. 826mium in it is added = leave field blank  Requested (i.e. 826mium in it is added = leave field blank  RE = Required (i.e. 826mium in it is added = leave field blank  RE = Reactive  RE = Reactive  REACTIVE (i.e. High/low PH, asbestos, beryllium, irritants, other misc. Regulated  Requested (i.e. 826mium in it is added = leave field blank  Reductive (i.e. 826mium in it is added = leave field blank  Reductive (i.e. 826mium in it is added = leave field blank  RE = Reactive (i.e. 826mium in it is added = leave field blank  RE	> For sample shipping and delivery details, see Sa	ample Receipt & Review form	(SRR.)			Sam	ple Collect	tion Tim	e Zone	[x] E	astern	77.7	- 1	intain [ ] Other:	
Descripting Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix   Requested: Analytical method requested (i.e. 8260B, 6010B77470A) and number of containers provided for each (i.e. 8260B - 3, 6010B77470A - 1).   Requested: Analytical method requested (i.e. 8260B, 6010B77470A) and number of containers provided for each (i.e. 8260B - 3, 6010B77470A - 1).   Requested: Analytical method requested (i.e. 8260B - 3, 6010B77470A - 1).   Characteristic Hazards	<ol> <li>Chain of Custody Number = Client Determined</li> <li>QC Codes: N = Normal Sample, TB = Trip Blank, FD = Fiel</li> <li>Field Filtered: For liquid matrices, indicate with a - Y - for ve.</li> </ol>	eld Duplicate, $\mathbf{EB} = \mathbf{Equipment Blank}$ , res the sample was field filtered or - N -	MS = Matrix S for sample was	pike Samplı not field fil	, MSD = M	ıtrix Spike Du	plicate Sampl	e, G = Gra	16, C = Cc	mposite					
Characteristic Hazards   Listed Waste   Other	Matrix Codes: WD=Drinking Water, WG=Groundwater, WS     Sample Analysis Requested: Analytical method requested (i.e.). Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid.	S=Surface Water, WW=Waste Water, e. 8260B, 6010B/7470A) and number of id. SH = Sodium Hydroxide, SA = Sulfi	WL=Leachate, of containers pr uric Acid, AA *	SO=Soil, Sovided for e	E=Sediment ach (i.e. 826 Acid, HX = I	SL=Sludge,  18 - 3, 6010B  Lexane, ST = 1	WQ=Water C 77470A - 1). Sodium Thios	Quality Cor ulfate, If no	ntrol Matr	ix itive is ac	ded = lea	ve field blank			
TECA Regulated  TECA Regulated  MR= Misc. RCRA metals  TSCA Regulated  TSCA Regulated  TSCA Regulated  MR= Misc. RCRA metals  TSCA Regulated	7.) KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	Listed	Waste			Other	T. Total	Talmon	$\Box$			Please pro	Please provide any additional details	
Se= Selenium Ag= Silver Ag= MR= Misc. RCRA metals PCB = Polychlorinated hisharule	Hg= Mercury	FL = Flammaole/1gmaole CO = Corrosive RE = Reactive	(F,K,P)	and U-list ode(s):	ted wastes	ſ:	(i.e.: Junisc.	High/low health h	v pH, as azards,	bestos,	beryll	um, irritants, other	disposal co sample(s),	verow regurang manang anwor disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd	
Ag= Silver MR= Misc. RCRA metals	Se= Selenium					ĺ	Descr	iption:					matrices, e	tc.)	
	Ag= Silver MR= Misc. RCRA metals	PCB = Polychlorinated				Ī									
	Pb = Lead	biphenyls						M							

C	ient:			$\top$	SAMPLE RECEIPT & REVIEW FORM 590851, 5908	
-		··· -			G/AR/COC/Work Order: 590838, 590840, 590845,	
Re	eceived By: Thyasia Tatum		<u>-</u>	Da	Ate Received: Circle Applicable:	
	Carrier and Tracking Number				FedEx Express FedEx Ground UPS Field Services Courier Other	
Sus	spected Hazard Information	Ye	ž	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	-
A)\$	Shipped as a DOT Hazardous?	<u> </u>	V	Ha	zard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo	
	Did the client designate the samples are to be cived as radioactive?			cc	C notation or radioactive stickers on containers equal client designation.	***
	Did the RSO classify the samples as ioactive?	i		Ma	ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D)	Did the client designate samples are hazardous?			L	C notation or hazard labels on containers equal client designation.  For E is yes, select Hazards below.	
E) I	Did the RSO identify possible hazards?				PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	
	Sample Receipt Criteria	Yes	Z	ŝ	Comments/Qualifiers (Required for Non-Conforming Items)	╡
1	Shipping containers received intact and scaled?	V	: .		Circle Applicable: Scals broken Damaged container Leaking container Other (describe)	
2	Chain of custody documents included with shipment?	L			Circle Applicable: Client contacted and provided COC COC created upon receipt	-
3	Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	V			Preservation Method Vert Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius  TEMP:  TEMP:	
4	Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable):	_
5	Sample containers intact and sealed?	/			Circle Applicable: Scals broken Damaged container Leaking container Other (describe)	
6	Samples requiring chemical preservation at proper pH?	./			Sample ID's and Containers Affected:  If Preservation added, Lot#:	1
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?	V			ID's and tests affected:	-
9	Sample ID's on COC match ID's on bottles?				ID's and containers affected:	
10	Date & time on COC match date & time on bottles?	V			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)	$\dashv$
11	Number of containers received match number indicated on COC?			,	Circle Applicable: No container count on COC Other (describe)	
12	Are sample containers identifiable as GEL provided by use of GEL labels?	/		/.		1
13 Con	COC form is properly signed in relinquished/received sections?	~			Circle Applicable: Not relinquished Other (describe)	

-GL-GHL-SR-001-Rev 7 -

GEL Work Order Num   30308   Send Results To: SCS   Send Results T	### Chain   Chain   Chain   Chain   Chain		dy and Av	Stody and Analytical Requess GEL Project Manager: Erin Trem    Should this sample   Should th	Chemistry   Radiochemistry   Radiochemis	Analy & SM 2340C	Sample Analytics  Feducate  Trent  Trent  Total number of containers  CI, F, SO4, TDS  EPA 300, SM 2540C  Total & Bicarb Analysis  CI, F, SO4, TDS  Metals & Metals & MI  Radium 226 & 228  NI  Radium	Charleston, SC 29407	171 541353 38 anners for each test) ( Preservative Type (6)
Power  Plant Branch Ash Ponds £  Iph McGill Blvd SE, Atlanta GA 3  Sample ID  Posites - Indicene start and stop date!  BR (FWC - 175  BRGWC - 355  ERGWC - 365  FD - 0 H  BRGWC - 345  ERGWC - 345	## Phone # 404    Phone # 404     Fax #     *Time     Collected (Williary)     1137     22   1358     22   0952     22   1358     22   1358     22   1358     22   1358     22   1358     23   1325     24   1325     25   1325     26   1325     27   1325     27   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     28   1325     38   1325	OC   OC   Field   OC   OC   OC   OC   OC   OC   OC   O	L Project M Sample WG WG ING	Radionetive (If yes, please supply is in the first in the	Sample Hazards in Trent And Trent An	Total & Bicarb Alk   Six Say	Metals 7    Metals 7   Metals 8	Fax: (843) 766-1178 in the number of conta	ainers for each test)
	# Phone # 404    Pax #	0 C Code (3) Filterec Code (3) Filterec Code (3) Filterec Code (3) N C C C C C C C C C C C C C C C C C C	Sample WG WG WG WG WG	S S S S S S S S S S S S S S S S S S S	Sample Hazards T. Containers Total number of containers	Total & Bicarb Alk   Six 2300, SM 2320B   Six	Mainis   M	in the number of conta	ainers for each test)
					phaceH oldisand	Total & Bicarb Alk Total & Bicarb Alk SM 2320B	IN 825 & 228 SW-846 9315, 9320 WI PPA 6000B, 6010D PPA 6010B WI PPA 60		Preservative Type (6)
					possible Hazards  CI, F, SO4, TDS	Total & Bicarb Alk  Total & Bicarb Alk  SM 2320B	EPA 6020B, 6010D		3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A
				yes, please supply isotopic info.)	Data Indian Indian Parands  Cl. F. SO4, TD9  Cl. F. SO4, TD9	Total & Bicarb A SACS SM 254	EPA 6020B, 6010		Commonte
time	*Time Collected (Military) (Milit	8 8 N N D D D		yes, please si isotopic info.	Possible Haz	Total & SM	EPA 602		Note: extra sample is
	1137 1358 0952 1440	20000	WG WG			>>>	/ /		required for sample specific QC
555			MG MG			>>>	>		field pH = (ク・6 2
55	51 51		NG 9			>> .	>		field pH = 6.05
7 9			NG			>	> >		field pH = 5.59
9				2	2	*	\ \ \		field pH = NA
			5 №		7	>	>		field pH = 5, 75
			d			>	1		field pH = NA
									field pH =
									field pH =
									field pH =
									field pH =
Chain of Custody Signatures	ures				TAT Requested:		Normal: x Rush:	1: Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time Received by (signed)		Date Time	e e	Fax	Fax Results: [ ] Yes		[x] No		
11 A 8129/22 1515 Mudisia	Total Control	m 829	5151 22		ect Deliverabl	ile: [ ] C of	Select Deliverable: [ ] C of A [ ] QC Summary	[ ] level 1	[x] Level 2 [ ] Level 3 [ ] Level 4
2				Ada	Additional Remarks:	ırks:	* Metals: B,Ca,Sb,As	s,Ba,Be,Cd,Cr,Co,Pb,Li,A	Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg
33				For	r Lab Receivi.	ing Use Or.	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes		Cooler
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	form (SRR.)			Sample Colle	ection Time 2	Zone: [x]	Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central		[ ] Mountain [ ] Other:
<ol> <li>Chain of Custody Number = Client Determined</li> <li>QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MS</li> <li>QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MS</li> <li>Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered</li> </ol>	Blank, MS = Matrix S or - N - for sample was	pike Sample, MS not field filtered.	D = Matríx Spil	ce Duplicate San	Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite as not field filtered.	C = Composit	a		
4.) Matrix Codes: WD=Brinking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachafte, SO=Soil, SE=Senfreit, SE=Senfreit, SE=Studge, WG=Groundwater, WS=Surface Water, WD=Brinking Water, WG=Groundwater, WG=Gro	water, w L=Leachate, number of containers pro	SO=Solit, SE=Se ovided for each (i	earment, St.—Su. i.e. 8260B - 3, 6  HX = Hexane, 9	5010B/7470A - 1 T = Sodium Thi	1). iosulfate, If no pr	ve is	added = leave field blank		
5.) Preservative Type: HA = Hydrocalone Acid, M = Maine Acid, M = Maine Acid, M = Maine Acid, M = M = M = M = M = M = M = M = M = M	ls Listed Waste	Waste		Ott	Other				Please provide any additional details
sls		LW= Listed Waste (F. R. P and U-listed wastes.) Waste code(s):	vastes.)	O.T. (i.e mis Dea	OT= Other / Unknown (i.e.: High/low pH, asbess misc. health hazards, etc. Description:	ıknown oH, asbest: :ards, etc.,	OT=Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
				1					

(CIVCC			SDC	G/AR/COC/Work Order: 59 1751 (571795)
ved By: Thyasia Tatum		Т	Dat	te Received: 8 79 70
				FedEx Express FedEx Ground UPS Field Services Courier Other
cted Hazard Information	Yes	No	*If1	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
pped as a DOT Hazardous?		V	Haza	ard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
	7	/	COC	C notation or radioactive stickers on containers equal client designation.
	1	/	Max	cimum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
d the client designate samples are hazardous?		/	/	Chotation or hazard labels on containers equal client designation.
I the RSO identify possible hazards?		V	עוו	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	Z	No.	Comments/Qualifiers (Required for Non-Conforming Items)
	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
	/			Circle Applicable: Client contacted and provided COC COC created upon receipt  Preservation Method Wet Ice Jace Packs Dry ice None Other:
	V	,		*all temperatures are recorded in Celsius TEMP:
	/			Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?	1			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
	V			Sample ID's and Containers Affected:  If Preservation added, Lot#:
Do any samples require Volatile Analysis?		K	L	If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer)  Do Jiquid 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:
Samples received within holding time?	/			ID's and tests affected:
	/			ID's and containers affected:
				Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
number indicated on COC?			/	Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels? COC form is properly signed in elinquished/received sections?	V			Circle Applicable: Not relinquished Other (describe)
	Shipping containers received intact and glealed?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Sample containers intact and sealed?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile	pped as a DOT Hazardous?  d the client designate the samples are to be ed as radioactive?  d the RSO classify the samples as ctive?  d the RSO identify possible hazards?  Sample Receipt Criteria Shipping containers received intact and scaled?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile Analysis?  Samples received within holding time?  Samples received within holding time?  Date & time on COC match ID's on bottles?  Number of containers received match number indicated on COC?	pped as a DOT Hazardous?  d the client designate the samples are to be ed as radioactive?  d the RSO classify the samples as ctive?  d the RSO identify possible hazards?  Sample Receipt Criteria Shipping containers received intact and scaled?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile Analysis?  Samples received within holding time?  Samples received within holding time?  Date & time on COC match date & time on bottles?  Number of containers received match number indicated on COC?	pped as a DOT Hazardous?  d the client designate the samples are to be ed as radioactive?  d the RSO classify the samples as ctive?  d the RSO identify possible hazards?  Sample Receipt Criteria  Shipping containers received intact and scaled?  Chain of custody documents included with shipment?  Samples requiring cold preservation within (0 ≤ 6 deg. C)?*  Daily check performed and passed on IR emperature gun?  Samples requiring chemical preservation at proper pH?  Do any samples require Volatile  Analysis?  Samples received within holding time?  Samples received within holding time?  Samples received within holding time?  Date & time on COC match date & time on bottles?  Number of containers received match number indicated on COC?

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GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	Fax: (843) 766-1178	(Fill in the	Z < Preservative Type (6)			C6 9+8-MS	field pH = (6.13	= Hield pH =	= Held bH=	field pH =	= Held pH =	= Held pH=	= Held pH =	= Held pH=	= Hd blei	= field pH =	x Rush: Specify: (Subject to Surcharge)		[]QCSummary []level1 [x]Level2 []Level3 []Level4	,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,	Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:		we field blank	Please provide any additional details		
Laboratories LLC chemistry I Radiochemistry I Radiochemis	nager: Erin Trent	Sample Analysis Requested (5)	Should this	E K	rrds 7, TDS 7, TDS 7, TDS 7, TDS 1, 60101 1, 601	/es, please suppose info,)  The Manage of the first of th											TAT Requested: Normal:	Fax Results: [ ] Yes [x] No	100	Additional Remarks: * Metals:	ple Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central	tplicate Sample, $G = Grab$ , $C = Composite$	WQ=Water Quality Control Matrix 8.74784 - 1). Sodium Thiosulfate. If no preservative is added = lea	Other	OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	
59/88/ GEL   Laboratories LLC Series   Chain of Custody and Analytical Request	GEL Work Order Number: GEL Project Manager: Erin Trent	Phone # 404-506-7116	Fax#		Send Results To: SCS & Geosyntec Contacts	*Date Collected Collected Collected (Military) QC Field Sample (Military) Code (2) Filered (3) Matrix (4)	1055 G N WG										Chain of Custody Signatures	Received by (signed) Date Time	1 At 18 8/2/22 910	3/16-4 4/1/16		.B = Equipment Blank, .MS = Matrix Spike Sample, MSD = Matrix Spike Duras field filtered or - N - för sample was not field filtered.	er, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, 1B/7470A) and number of containers provided for each (i.e. \$260B - 3, 6010B m Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = 1	Characteristic Hazards Listed Waste	s/Ignitable	
Page: of		Client Name: GA Power	Project/Site Name: Plant Branch Ash Ponds -	Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	Collected By: Hunter Aut & Send Resi	11 17	04-24										Chain of Cusi	Relinquished By (Signed) Date Time	HALL Yeler ogen		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.	) Marrix 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. 82608, 60108/7470A) and number of containers provided for each (i.e. 82608 - 3, 60108/7470A - 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   Characteri	CO = Corrosive  RE = Reactive  RE = Reactive  RE = Reactive	

			SD	G/AR/COC/Work Order: 59   88     59   88 3   59   88 7
eceived By: MVH			1	te Received: 89-02-2622
Carrier and Tracking Number				Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
spected Hazard Information	Yes	No	*11	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation
Shipped as a DOT Hazardous?		X	Haz	tard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
Did the client designate the samples are to be reived as radioactive?		Y	CO	C notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as lioactive?		X	Ma	ximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Did the client designate samples are hazardous	?	Y		C notation or hazard labels on containers equal client designation.
Did the RSO identify possible hazards?		Y	II D	or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Ves	Y Y	No.	Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Chain of custody documents included with shipment?	X			Circle Applicable: Client contacted and provided COC COC created upon receipt
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*			X	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: IR2-21 Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?	X	13		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected:  If Preservation added, Lot#:
Do any samples require Volatile	1	U.	. /	If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)
Analysis?			X	Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
Samples received within holding time?	X		-	ID's and tests affected:
Sample ID's on COC match ID's on bottles?	X			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as	,	K	X	
GEL provided by use of GEL labels?	V			Circle Applicable: Not relinquished Other (describe)

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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
0	

January/February 2023



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March 08, 2023

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

Re: Branch CCR Groundwater Compliance APE Work Orders: 609400,608420,608819,608622 and 608423

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 25, 2023, January 26, 2023, January 27, 2023 and February 03, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

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.

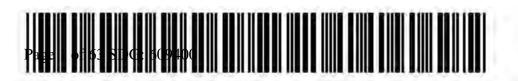
Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4504.

Sincerely,

Anna Johnson for Erin Trent Project Manager

Purchase Order: GPC82177-0006

Enclosures



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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608423 GEL Work Order: 608423

## 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.

Page 2 of 63 SDG: 609400

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## Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608622 GEL Work Order: 608622

## 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.

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# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 609400 GEL Work Order: 609400

## 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.

	Cuna Johnson	
Reviewed by		

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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608819 GEL Work Order: 608819

## 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.

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## Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608420 GEL Work Order: 608420

## 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.

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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: February 22, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

GPCC00101 GPCC001 Client Sample ID: **BRA-BRGWC-17S** Project: Client ID:

Sample ID: Matrix: 608420001 WG

Collect Date: 24-JAN-23 Receive Date: 25-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analys	Date 1	Гіте	Batch	Mtd.
Rad Gas Flow Proport GFPC Ra228, Liquid		0												
Radium-228	U	0.273	+/-0.819	1.50	+/-0.822	3.00	pCi/L			JE1	02/20/23	1210	2374674	1
Radium-226+Radium	ı-228 Calcula	tion "See Pa	rent Product	s"										
Radium-226+228 Sum	U	0.728	+/-0.909	1.50	+/-0.914		pCi/L		1	NXL1	02/22/23 (	0904	2374673	2
Rad Radium-226 Lucas Cell, Ra226, L	iquid "As Rec	eived"												
Radium-226	U	0.456	+/-0.394	0.614	+/-0.400	1.00	pCi/L			LXP1	02/19/23 (	0729	2374665	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified

Calculation EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2374674	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 **RL**: Reporting Limit Lc/LC: Critical Level

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: February 22, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

**BRA-BRGWC-33S** Client Sample ID: Project: GPCC00101 Sample ID: GPCC001 Client ID: 608420002

Matrix: WG Collect Date: 24-JAN-23 Receive Date:

25-JAN-23 Client Collector:

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0										
Radium-228	U	2.01	+/-2.07	3.44	+/-2.13	3.00	pCi/L		JE1	02/20/23 1450	2374674	1
Radium-226+Radium	-228 Calcular	tion "See Pa	rent Product	s"								
Radium-226+228 Sum	U	3.31	+/-2.11	3.44	+/-2.19		pCi/L		1 NXL1	02/22/23 0904	2374673	2
Rad Radium-226 Lucas Cell, Ra226, Li	quid "As Rece	eived"										
Radium-226		1.29	+/-0.433	0.389	+/-0.508	1.00	pCi/L		LXP1	02/19/23 0729	2374665	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2374674	68.7	(15%-125%)

#### Notes:

Method

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: February 22, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-BRGWC-34S** Project: GPCC00101 Sample ID: Client ID: GPCC001 608420003

Matrix: WG

Collect Date: 24-JAN-23 Receive Date: 25-JAN-23 Client Collector:

Parameter	Qualifier	Result U	ncertainty	MDC_	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		U										
Radium-228	U	0.828	+/-1.39	2.42	+/-1.41	3.00	pCi/L		JE1	02/20/23 1210	2374674	1
Radium-226+Radium	-228 Calculai	tion "See Pa	rent Produci	ts"								
Radium-226+228 Sum	U	2.14	+/-1.46	2.42	+/-1.49		pCi/L		1 NXL1	02/22/23 0904	2374673	2
Rad Radium-226 Lucas Cell, Ra226, Li	quid "As Rece	eived"										
Radium-226		1.31	+/-0.434	0.272	+/-0.484	1.00	pCi/L		LXP1	02/19/23 0800	2374665	3

The following Analytical Methods were performed

Method Description 1 EPA 904.0/SW846 9320 Modified 2 Calculation EPA 903.1 Modified

Batch ID Recovery% Surrogate/Tracer Recovery **Acceptable Limits** Barium-133 Tracer GFPC Ra228, Liquid "As Received" 2374674 69.9 (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: February 22, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-BRGWC-35S** Project: GPCC00101 Sample ID: GPCC001 Client ID: 608420004

Matrix: WG Collect Date: 24-JAN-23 Receive Date: 25-JAN-23

Client Collector:

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analys	t Date 1	<u> Fime</u>	Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0												
Radium-228		2.49	+/-1.13	1.50	+/-1.30	3.00	pCi/L			JE1	02/20/23 1	1210	2374674	1
Radium-226+Radium	-228 Calculat	ion "See Pa	rent Product.	s''										
Radium-226+228 Sum		3.34	+/-1.18	1.50	+/-1.35		pCi/L		1	NXL1	02/22/23 0	)904	2374673	2
Rad Radium-226 Lucas Cell, Ra226, Li	quid "As Rece	rived"												
Radium-226		0.850	+/-0.346	0.260	+/-0.379	1.00	pCi/L			LXP1	02/19/23 0	0800	2374665	3

The following Analytical Methods were performed **Description** 

	<u> </u>
1	EPA 904.0/SW846 9320 Modified
2	Calculation
•	TD 1 000 1 3 5 11 77 1

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2374674	74	(15%-125%)

#### Notes:

Method

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: March 8, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

GPCC00101 GPCC001 Client Sample ID: BRA-PZ-52D Project: Sample ID: Matrix: 609400001 Client ID:

WG

Collect Date: 02-FEB-23 Receive Date: 03-FEB-23 Collector: Client

Parameter	Qualifier	Result Un	ncertainty	MDC	TPU	RL	Units	PF	DF	Analys	Date Tin	e Batch	Mtd.
Rad Gas Flow Proportion GFPC Ra228, Liquid		U											
Radium-228		4.97	+/-1.70	2.17	+/-2.12	3.00	pCi/L			JE1	03/07/23 131	237877	7 1
Radium-226+Radium-	228 Calculat	tion "See Pa	rent Product	s"									
Radium-226+228 Sum		5.39	+/-1.73	2.17	+/-2.15		pCi/L		1	NXL1	03/08/23 093	237877	6 2
Rad Radium-226 Lucas Cell, Ra226, Lig	juid "As Rece	eived"											
Radium-226		0.427	+/-0.309	0.332	+/-0.316	1.00	pCi/L			LXP1	03/05/23 090	3 237876	2 3

The following Analytical Methods were performed

Method Description 1 EPA 904.0/SW846 9320 Modified Calculation

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2378777	61.7	(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 **RL**: Reporting Limit Lc/LC: Critical Level

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: February 23, 2023

GPCC00101 GPCC001

Project:

Client ID:

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Sample ID: Matrix: 608819001

WG

Collect Date: 26-JAN-23 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result Un	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	Batch	Mtd.
Rad Gas Flow Proportion  GFPC Ra228, Liquid		0										
Radium-228		2.88	+/-1.72	2.63	+/-1.87	3.00	pCi/L		JE1	$02/22/23 \ 1035$	2377470	1
Radium-226+Radium-	228 Calculat	ion "See Pa	rent Product	s"								
Radium-226+228 Sum		4.77	+/-1.79	2.63	+/-1.96		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Liq	juid "As Rece	eived"										
Radium-226		1.88	+/-0.494	0.368	+/-0.593	1.00	pCi/L		LXP1	02/21/23 0939	2377423	3

The following Analytical Methods were performed

Method Description 1 EPA 904.0/SW846 9320 Modified Calculation

EPA 903.1 Modified

<b>Surrogate/Tracer Recovery</b>	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	75.4	(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 **RL**: Reporting Limit Lc/LC: Critical Level

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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

BRA-PZ-70I Client Sample ID: Project: GPCC00101 Sample ID: GPCC001 Client ID: 608819002 Matrix:

WG Collect Date: 26-JAN-23 Receive Date: 27-JAN-23 Client Collector:

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Tim	e Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0										
Radium-228	U	0.834	+/-1.36	2.39	+/-1.38	3.00	pCi/L		JE1	02/22/23 1035	2377470	) 1
Radium-226+Radium-	-228 Calculai	tion "See Pa	rent Product	s"								
Radium-226+228 Sum	U	1.81	+/-1.41	2.39	+/-1.43		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Lic	quid "As Rece	eived"										
Radium-226		0.978	+/-0.362	0.250	+/-0.389	1.00	pCi/L		LXP1	02/21/23 1010	2377423	3

The following Analytical Methods were performed Description

~	 	
3	EPA 903.1 Modified	
2	Calculation	
1	EPA 904.0/SW846 9320 Modified	

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	53.5	(15%-125%)

#### Notes:

Method

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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-05 Project: GPCC00101 Sample ID: 608819003 Client ID: GPCC001

Matrix: WG

Collect Date: 26-JAN-23 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	e Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0										
Radium-228	U	2.12	+/-1.56	2.46	+/-1.65	3.00	pCi/L		JE1	02/22/23 1037	2377470	1
Radium-226+Radium	-228 Calculat	tion "See Pa	rent Produci	ts"								
Radium-226+228 Sum		2.70	+/-1.58	2.46	+/-1.68		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Li	quid "As Rece	eived"										
Radium-226		0.583	+/-0.303	0.372	+/-0.326	1.00	pCi/L		LXP1	02/21/23 1010	2377423	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%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	74	(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 FactorMtd.: MethodDL: Detection LimitPF: Prep FactorLc/LC: Critical LevelRL: 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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-APE-EB-10** Project: GPCC00101 Sample ID: GPCC001 Client ID: 608819004

Matrix: WQ Collect Date: 26-JAN-23 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	<b>Batch</b>	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0										
Radium-228		3.13	+/-1.91	2.98	+/-2.07	3.00	pCi/L		JE1	02/22/23 1039	2377470	1
Radium-226+Radium-	-228 Calculo	ation "See Pa	rent Produci	ts"								
Radium-226+228 Sum		3.17	+/-1.92	2.98	+/-2.08		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Lid	quid "As Rec	ceived"										
Radium-226	U	0.0313	+/-0.203	0.419	+/-0.203	1.00	pCi/L		LXP1	02/21/23 1010	2377423	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	69.1	(15%-125%)

#### Notes:

Method

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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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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

GPCC00101 GPCC001 Client Sample ID: **BRA-BRGWC-36S** Project: Client ID:

Sample ID: Matrix: 608622001 WG

Collect Date: 25-JAN-23 Receive Date: 26-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	<b>Batch</b>	Mtd.
Rad Gas Flow Proportion  GFPC Ra228, Liquid		U										
Radium-228		3.49	+/-1.63	2.27	+/-1.86	3.00	pCi/L		JE1	02/22/23 1036	2377470	1
Radium-226+Radium-	228 Calculat	tion "See Pa	rent Product	s"								
Radium-226+228 Sum		4.86	+/-1.68	2.27	+/-1.91		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Lid	uid "As Rece	eived"										
Radium-226		1.37	+/-0.395	0.263	+/-0.448	1.00	pCi/L		LXP1	02/21/23 0938	2377423	3

The following Analytical Methods were performed Description

1 EPA 904.0/SW846 9320 Modified

Calculation EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	71.4	(15%-125%)

### **Notes:**

Method

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 **RL**: Reporting Limit Lc/LC: Critical Level

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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-BRGWC-37S** Project: GPCC00101 Sample ID: GPCC001 Client ID: 608622002

Matrix: WG Collect Date: 25-JAN-23 Receive Date: 26-JAN-23 Client Collector:

Parameter	Qualifier	Result U	ncertainty	MDC_	TPU	RL	Units	PF	DF Analys	t Date Tim	e Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0										
Radium-228	U	0.935	+/-1.21	2.06	+/-1.23	3.00	pCi/L		JE1	02/22/23 1036	2377470	1
Radium-226+Radium	-228 Calcular	tion "See Pa	irent Produci	<i>'s''</i>								
Radium-226+228 Sum	U	1.67	+/-1.24	2.06	+/-1.28		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Li	quid "As Reco	eived"										
Radium-226		0.737	+/-0.288	0.209	+/-0.333	1.00	pCi/L		LXP1	02/21/23 0938	2377423	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	67.9	(15%-125%)

#### Notes:

Method

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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-BRGWC-38S** Project: GPCC00101 GPCC001 Sample ID: Client ID: 608622003

Matrix: WG Collect Date:

25-JAN-23 Receive Date: 26-JAN-23 Client Collector:

Qualifier Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Tim	e Batch	Mtd.
nal Counting As Received"										
3.29	+/-1.56	2.16	+/-1.77	3.00	pCi/L		JE1	02/22/23 1036	2377470	1
28 Calculation "See Pa	rent Products	,"								
3.79	+/-1.59	2.16	+/-1.80		pCi/L		NXL1	02/23/23 1039	2377469	2
uid "As Received"										
0.499	+/-0.328	0.439	+/-0.340	1.00	pCi/L		LXP1	02/21/23 0939	2377423	3
	nal Counting As Received" 3.29 28 Calculation "See Pa 3.79 aid "As Received"	nal Counting As Received" 3.29 +/-1.56 28 Calculation "See Parent Products 3.79 +/-1.59 aid "As Received"	nal Counting As Received"  3.29 +/-1.56 2.16 28 Calculation "See Parent Products" 3.79 +/-1.59 2.16 aid "As Received"	nal Counting As Received"  3.29 +/-1.56 2.16 +/-1.77  28 Calculation "See Parent Products" 3.79 +/-1.59 2.16 +/-1.80  nid "As Received"	nal Counting         As Received"       3.29 +/-1.56 2.16 +/-1.77 3.00         28 Calculation "See Parent Products"       3.79 +/-1.59 2.16 +/-1.80         aid "As Received"	nal Counting         As Received"       3.29 +/-1.56 2.16 +/-1.77 3.00 pCi/L         28 Calculation "See Parent Products"       3.79 +/-1.59 2.16 +/-1.80 pCi/L         aid "As Received"	nal Counting As Received"  3.29 +/-1.56 2.16 +/-1.77 3.00 pCi/L 28 Calculation "See Parent Products" 3.79 +/-1.59 2.16 +/-1.80 pCi/L aid "As Received"	nal Counting         As Received"       3.29 +/-1.56 2.16 +/-1.77 3.00 pCi/L       JE1         28 Calculation "See Parent Products"       3.79 +/-1.59 2.16 +/-1.80 pCi/L       NXL1         vid "As Received"       NXL1	nal Counting As Received"  3.29 +/-1.56 2.16 +/-1.77 3.00 pCi/L JE1 02/22/23 1036 28 Calculation "See Parent Products"  3.79 +/-1.59 2.16 +/-1.80 pCi/L NXL1 02/23/23 1039 aid "As Received"	nal Counting As Received"  3.29 +/-1.56 2.16 +/-1.77 3.00 pCi/L JE1 02/22/23 1036 2377470 28 Calculation "See Parent Products"  3.79 +/-1.59 2.16 +/-1.80 pCi/L NXL1 02/23/23 1039 2377469 aid "As Received"

The following Analytical Methods were performed Description

1	EPA 904.0/SW846 9320 Modified
2	Calculation

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	69.7	(15%-125%)

#### Notes:

Method

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 **RL**: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

MDC: Minimum Detectable Concentration

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## **Certificate of Analysis**

Company: Georgia Power Company, Southern

Client

Address: Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308 Report Date: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Project: GPCC00101 Sample ID: GPCC001 Client ID: 608622004 Matrix:

WG Collect Date: 25-JAN-23 Receive Date: 26-JAN-23

Collector:

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Time	<b>Batch</b>	Mtd.
Rad Gas Flow Proportion GFPC Ra228, Liquid		0										
Radium-228	U	1.45	+/-1.50	2.49	+/-1.54	3.00	pCi/L		JE1	02/22/23 1037	2377470	1
Radium-226+Radium-	-228 Calcular	tion "See Pa	rent Produci	<i>'s''</i>								
Radium-226+228 Sum	U	2.10	+/-1.54	2.49	+/-1.59		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Lic	quid "As Reco	eived"										
Radium-226		0.651	+/-0.346	0.457	+/-0.373	1.00	pCi/L		LXP1	02/21/23 0939	2377423	3

The following Analytical Methods were performed Description

1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	73	(15%-125%)

#### Notes:

Method

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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-APE-EB-09** Project: GPCC00101 Sample ID: GPCC001 Client ID: 608622005

Matrix: WQ Collect Date: 25-JAN-23

Receive Date: 26-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC_	TPU	RL	Units	PF	DF Analys	t Date Tim	e Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		0										
Radium-228	U	1.16	+/-1.25	2.07	+/-1.28	3.00	pCi/L		JE1	02/22/23 1037	2377470	1
Radium-226+Radium	-228 Calculo	ation "See Pa	rent Produc	ts"								
Radium-226+228 Sum	U	1.22	+/-1.26	2.07	+/-1.29		pCi/L		NXL1	02/23/23 1039	2377469	2
Rad Radium-226 Lucas Cell, Ra226, Li	quid "As Red	ceived"										
Radium-226	U	0.0571	+/-0.177	0.351	+/-0.177	1.00	pCi/L		LXP1	02/21/23 0939	2377423	3

The following Analytical Methods were performed **Description** 

1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903 1 Modified	

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	66.7	(15%-125%)

#### Notes:

Method

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: February 23, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: **BRA-APE-FB-08** Project: GPCC00101 Sample ID: GPCC001 Client ID: 608622006

Matrix: WQ Collect Date: 25-JAN-23

Receive Date: 26-JAN-23 Collector: Client

Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date Ti	ne Bate	h Mtd
	0										
U	1.99	+/-1.37	2.08	+/-1.47	3.00	pCi/L		JE1	02/22/23 103	7 2377	470 1
228 Calculo	ation "See Pa	rent Produci	ts"								
	2.11	+/-1.38	2.08	+/-1.47		pCi/L		NXL1	02/23/23 103	9 2377	169 2
quid "As Rec	ceived"										
U	0.119	+/-0.165	0.286	+/-0.166	1.00	pCi/L		LXP1	02/21/23 093	9 2377	123 3
	"As Received U 228 Calculd	onal Counting "As Received" U 1.99 228 Calculation "See Pa 2.11 quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 228 Calculation "See Parent Product 2.11 +/-1.38 quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 2.08 228 Calculation "See Parent Products" 2.11 +/-1.38 2.08 quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 2.08 +/-1.47  228 Calculation "See Parent Products"  2.11 +/-1.38 2.08 +/-1.47  quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 2.08 +/-1.47 3.00 228 Calculation "See Parent Products" 2.11 +/-1.38 2.08 +/-1.47  quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 2.08 +/-1.47 3.00 pCi/L 228 Calculation "See Parent Products" 2.11 +/-1.38 2.08 +/-1.47 pCi/L quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 2.08 +/-1.47 3.00 pCi/L 228 Calculation "See Parent Products"  2.11 +/-1.38 2.08 +/-1.47 pCi/L  quid "As Received"	Dinal Counting   Parallel Counting   Paralle	onal Counting "As Received"  U 1.99 +/-1.37 2.08 +/-1.47 3.00 pCi/L JE1 02/22/23 103 228 Calculation "See Parent Products"  2.11 +/-1.38 2.08 +/-1.47 pCi/L NXL1 02/23/23 103 quid "As Received"	onal Counting "As Received"  U 1.99 +/-1.37 2.08 +/-1.47 3.00 pCi/L JE1 02/22/23 1037 23774 228 Calculation "See Parent Products" 2.11 +/-1.38 2.08 +/-1.47 pCi/L NXL1 02/23/23 1039 23774 quid "As Received"

The following Analytical Methods were performed Description

1	EPA 904.0/SW846 9320 Modified
2	Calculation

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2377470	63.7	(15%-125%)

#### Notes:

Method

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: February 22, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

GPCC00101 GPCC001 Client Sample ID: BRA-APE-FD-04 Project: Client ID:

Sample ID: Matrix: 608423001 WG

Collect Date: 24-JAN-23 Receive Date: 25-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date Ti	me	Batch 1	Mtd.
Rad Gas Flow Proportion		0												
GFPC Ra228, Liquid	"As Received	"												
Radium-228	U	0.124	+/-1.54	2.84	+/-1.54	3.00	pCi/L			JE1	02/20/23 12	10	2374674	1
Radium-226+Radium-	-228 Calculat	ion "See Pa	rent Product	s"										
Radium-226+228 Sum	U	0.600	+/-1.57	2.84	+/-1.58		pCi/L		1	NXL1	02/22/23 09	04	2374673	2
Rad Radium-226														
Lucas Cell, Ra226, Lie	quid "As Rece	eived"												
Radium-226	U	0.476	+/-0.347	0.513	+/-0.363	1.00	pCi/L			LXP1	02/19/23 08	00	2374665	3

The following Analytical Methods were performed Description

1 EPA 904.0/SW846 9320 Modified

Calculation EPA 903.1 Modified

<b>Surrogate/Tracer Recovery</b>	Test	Batch ID	Recovery%	<b>Acceptable Limits</b>
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2374674	54.3	(15%-125%)

### **Notes:**

Method

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 **RL**: Reporting Limit Lc/LC: Critical Level

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: February 22, 2023

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-07 Project: GPCC00101 Sample ID: GPCC001 Client ID: 608423002

Matrix: WQ Collect Date: 24-JAN-23 Receive Date: 25-JAN-23 Collector: Client

Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF	DF	Analys	t Date Tin	e Batch	Mtd.
Rad Gas Flow Proporti GFPC Ra228, Liquid		U											
Radium-228	U	0.329	+/-1.07	1.93	+/-1.07	3.00	pCi/L			JE1	02/20/23 121	1 237467	4 1
Radium-226+Radium-	-228 Calcula	ition "See Pa	rent Produc	ts"									
Radium-226+228 Sum	U	0.570	+/-1.11	1.93	+/-1.11		pCi/L		1	NXL1	02/22/23 090	4 237467	3 2
Rad Radium-226 Lucas Cell, Ra226, Lic	quid "As Rec	ceived"											
Radium-226	U	0.241	+/-0.294	0.494	+/-0.298	1.00	pCi/L			LXP1	02/19/23 080	237466	5 3

The following Analytical Methods were performed 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"	2374674	74.9	(15%-125%)

#### Notes:

Method

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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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 608420

**Product:** Radium-226+Radium-228 Calculation

**Analytical Method:** Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

**Analytical Batch:** 2374673

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608420001	BRA-BRGWC-17S
608420002	BRA-BRGWC-33S
608420003	BRA-BRGWC-34S
608420004	BRA-BRGWC-35S

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:** 2374674

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608420001	BRA-BRGWC-17S
608420002	BRA-BRGWC-33S
608420003	BRA-BRGWC-34S
608420004	BRA-BRGWC-35S
1205305251	Method Blank (MB)
1205305252	608353001(NonSDG) Sample Duplicate (DUP)
1205305253	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.

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## **Quality Control (QC) Information**

## **RDL Met**

The following RDL was met with rounding.

Sample	Analyte	Value
608420002 (BRA-BRGWC-33S)	Radium-228	Result 2.01 < MDA 3.44 > RDL 3 pCi/L

## **Technical Information**

#### **Recounts**

Sample 608420002 (BRA-BRGWC-33S) was recounted to verify sample results. Recount is reported.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

**Analytical Batch:** 2374665

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608420001	BRA-BRGWC-17S
608420002	BRA-BRGWC-33S
608420003	BRA-BRGWC-34S
608420004	BRA-BRGWC-35S
1205305234	Method Blank (MB)
1205305235	608353001(NonSDG) Sample Duplicate (DUP)
1205305236	608353001(NonSDG) Matrix Spike (MS)
1205305237	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, 1205305236 (Non SDG 608353001MS), 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

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requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 608819

**Product:** Radium-226+Radium-228 Calculation

**Analytical Method:** Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

**Analytical Batch:** 2377469

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608819001 BRA-PZ-13S 608819002 BRA-PZ-70I 608819003 BRA-APE-FD-05 608819004 BRA-APE-EB-10

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

<u>Analytical Method:</u> EPA 904.0/SW846 9320 Modified <u>Analytical Procedure:</u> GL-RAD-A-063 REV# 5

**Analytical Batch: 2377470** 

The following samples were analyzed using the above methods and analytical procedure(s).

 GEL Sample ID#
 Client Sample Identification

 608819001
 BRA-PZ-13S

 608819002
 BRA-PZ-70I

 608819003
 BRA-APE-FD-05

 608819004
 BRA-APE-EB-10

 1205310026
 Method Blank (MB)

1205310027 608549001(NonSDG) Sample Duplicate (DUP)

1205310028 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.

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# **Quality Control (QC) Information**

## **Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value					
1205310027 (Non SDG 608549001DUP)	Radium-228	RPD 205* (0.0%-100.0%) RER 1.98 (0-3)					

#### **Technical Information**

#### **Recounts**

Sample 1205310026 (MB) was recounted due to a suspected blank false positive. The recount is reported.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

**Analytical Procedure:** GL-RAD-A-008 REV# 15

**Analytical Batch:** 2377423

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608819001	BRA-PZ-13S
608819002	BRA-PZ-70I
608819003	BRA-APE-FD-05
608819004	BRA-APE-EB-10
1205309901	Method Blank (MB)
1205309902	608549001(NonSDG) Sample Duplicate (DUP)
1205309903	608549001(NonSDG) Matrix Spike (MS)
1205309904	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.

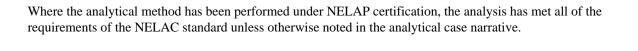
## **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1205309903 (Non SDG 608549001MS), aliquot was reduced to conserve sample volume.

## **Certification Statement**

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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 609400

**Product:** Radium-226+Radium-228 Calculation

**Analytical Method:** Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

**Analytical Batch:** 2378776

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

609400001 BRA-PZ-52D

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:** 2378777

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

609400001 BRA-PZ-52D 1205311817 Method Blank (MB)

1205311818 609368001(NonSDG) Sample Duplicate (DUP)

1205311819 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 re-eluted and recounted to verify sample results. The recounts are reported.

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<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

**Analytical Procedure:** GL-RAD-A-008 REV# 15

**Analytical Batch:** 2378762

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
609400001	BRA-PZ-52D
1205311793	Method Blank (MB)
1205311794	609368001(NonSDG) Sample Duplicate (DUP)
1205311795	609368001(NonSDG) Matrix Spike (MS)
1205311796	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.

#### **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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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 608622

**Product:** Radium-226+Radium-228 Calculation

**Analytical Method:** Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

**Analytical Batch:** 2377469

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608622001	BRA-BRGWC-36S
608622002	BRA-BRGWC-37S
608622003	BRA-BRGWC-38S
608622004	BRA-PZ-53D
608622005	BRA-APE-EB-09
608622006	BRA-APE-FB-08

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:** 2377470

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608622001	BRA-BRGWC-36S
608622002	BRA-BRGWC-37S
608622003	BRA-BRGWC-38S
608622004	BRA-PZ-53D
608622005	BRA-APE-EB-09
608622006	BRA-APE-FB-08
1205310026	Method Blank (MB)
1205310027	608549001(NonSDG) Sample Duplicate (DUP)
1205310028	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

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# **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**

### **Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value					
1205310027 (Non SDG 608549001DUP)	Radium-228	RPD 205* (0.0%-100.0%) RER 1.98 (0-3)					

#### **Technical Information**

#### **Recounts**

Sample 1205310026 (MB) was recounted due to a suspected blank false positive. The recount is reported.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

**Analytical Procedure:** GL-RAD-A-008 REV# 15

**Analytical Batch:** 2377423

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608622001	BRA-BRGWC-36S
608622002	BRA-BRGWC-37S
608622003	BRA-BRGWC-38S
608622004	BRA-PZ-53D
608622005	BRA-APE-EB-09
608622006	BRA-APE-FB-08
1205309901	Method Blank (MB)
1205309902	608549001(NonSDG) Sample Duplicate (DUP)
1205309903	608549001(NonSDG) Matrix Spike (MS)
1205309904	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**

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The matrix spike, 1205309903 (Non SDG 608549001MS), 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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# Radiochemistry Technical Case Narrative Georgia Power Company SDG #: 608423

**Product:** Radium-226+Radium-228 Calculation

**Analytical Method:** Calculation

Analytical Procedure: GL-RAD-D-003 REV# 45

**Analytical Batch:** 2374673

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608423001 BRA-APE-FD-04 608423002 BRA-APE-FB-07

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:** 2374674

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608423001 BRA-APE-FD-04 608423002 BRA-APE-FB-07 1205305251 Method Blank (MB)

1205305252 608353001(NonSDG) Sample Duplicate (DUP)

1205305253 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.

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<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

**Analytical Procedure:** GL-RAD-A-008 REV# 15

**Analytical Batch:** 2374665

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608423001	BRA-APE-FD-04
608423002	BRA-APE-FB-07
1205305234	Method Blank (MB)
1205305235	608353001(NonSDG) Sample Duplicate (DUP)
1205305236	608353001(NonSDG) Matrix Spike (MS)
1205305237	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, 1205305236 (Non SDG 608353001MS), 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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Report Date: February 22, 2023

Page 1 of 2

**QC** Summary

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 608420

Parmname		NOM	Sample (	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow										
Batch	2374674									
QC1205305252	608353001 DUP									
Radium-228		U	0.970	U	2.08	pCi/L	0		N/A JE1	02/20/2312:09
		Uncert:	+/-0.825		+/-1.56					
		TPU:	+/-0.861		+/-1.65					
QC1205305253	LCS									
Radium-228		63.2			59.4	pCi/L		94.1	(75%-125%) JE1	02/20/2312:09
		Uncert:			+/-4.09					
0.61205205251	) (D	TPU:			+/-15.6					
QC1205305251	MB			T.T.	0.042	С:/Т			ID1	02/20/2212.00
Radium-228		Uncert:		U	0.943 +/-1.15	pCi/L			JE1	02/20/2312:08
		TPU:			+/-1.17					
Rad Ra-226		IFU.			T/-1.1/					
Batch	2374665									
QC1205305235	608353001 DUP									
Radium-226	008333001 DOF	U	0.421		0.410	pCi/L	2.66		(0% - 100%) LXP1	02/19/2308:00
Radium-220		Uncert:	+/-0.327		+/-0.284	pCI/L	2.00		(0/0 - 100/0) LAI I	02/17/2308.00
		TPU:	+/-0.333		+/-0.300					
QC1205305237	LCS	11 0.	., 5.555		.,					
Radium-226		26.5			25.7	pCi/L		97	(75%-125%) LXP1	02/19/2308:00
		Uncert:			+/-1.78	•				
		TPU:			+/-6.47					
QC1205305234	MB									
Radium-226				U	0.365	pCi/L			LXP1	02/19/2308:00
		Uncert:			+/-0.325					
		TPU:			+/-0.331					
•	608353001 MS									
Radium-226		130 U	0.421		110	pCi/L		84.4	(75%-125%) LXP1	02/19/2308:00
		Uncert:	+/-0.327		+/-8.72					
		TPU:	+/-0.333		+/-26.5					

#### **Notes:**

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported

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

# **QC** Summary

Workorder: 608420 Page 2 of 2 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time UI Gamma Spectroscopy--Uncertain identification BDResults are either below the MDC or tracer recovery is low Preparation or preservation holding time was exceeded h R Sample results are rejected RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. N/A RPD or %Recovery limits do not apply. Analyte concentration is not detected above the detection limit ND M M if above MDC and less than LLD Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ

- UJ Gamma Spectroscopy--Uncertain identification
- One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- N1 See case narrative

Failed analysis.

FA

- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- \*\* Analyte is a Tracer compound
- M REMP Result > MDC/CL and < RDL
- J See case narrative for an explanation

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

**QC** Summary

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 609400

Parmname		NOM	Sample (	Qual	QC	Units	RPD%	REC%	Range A	Anlst	Date Time
Rad Gas Flow											
Batch	2378777										
QC1205311818	609368001 DUP										
Radium-228			2.89	U	1.27	pCi/L	78.2		(0% - 100%)	JE1	03/07/2313:09
		Uncert:	+/-1.80		+/-0.956						
		TPU:	+/-1.94		+/-1.01						
QC1205311819	LCS										
Radium-228		63.1			67.0	pCi/L		106	(75%-125%)	JE1	03/07/2313:09
		Uncert:			+/-4.20						
0.01205211015	) (D	TPU:			+/-17.5						
QC1205311817	MB			U	1.00	nC:/I				JE1	03/07/2313:09
Radium-228		Uncert:		U	1.00 +/-1.08	pCi/L				JEI	03/07/2313:09
		TPU:			+/-1.11						
Rad Ra-226		110.			1/ 1.11						
Batch	2378762										
QC1205311794	609368001 DUP										
Radium-226	009308001 DCI		0.689		0.778	pCi/L	12.1		(0% - 100%)	I XP1	03/05/2309:29
Radium-220		Uncert:	+/-0.427		+/-0.461	pci/L	12.1		(070 - 10070)	LZXII	03/03/2307.27
		TPU:	+/-0.446		+/-0.479						
QC1205311796	LCS										
Radium-226		25.0			23.0	pCi/L		92.2	(75%-125%)	LXP1	03/05/2309:29
		Uncert:			+/-1.99						
		TPU:			+/-5.09						
QC1205311793	MB										
Radium-226				U	0.443	pCi/L				LXP1	03/05/2309:29
		Uncert:			+/-0.416						
		TPU:			+/-0.421						
-	609368001 MS	25.0	0.600		21.0	C' T		0.5.1	(550) 1050()	LIDI	02/05/2200 20
Radium-226		25.0	0.689		21.9	pCi/L		85.1	(75%-125%)	LXPI	03/05/2309:29
		Uncert: TPU:	+/-0.427 +/-0.446		+/-2.19 +/-4.25						
		IPU:	+/-0.446		+/-4.25						

#### **Notes:**

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Н Analytical holding time was exceeded
- Result is less than value reported
- Result is greater than value reported

Page 39 of 63 SDG: 609400

Report Date: March 8, 2023

Page 1 of 2

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

# **QC** Summary

Workorder: 609400 Page 2 of 2 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time UI Gamma Spectroscopy--Uncertain identification BD Results are either below the MDC or tracer recovery is low Preparation or preservation holding time was exceeded h R Sample results are rejected RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. N/A RPD or %Recovery limits do not apply. Analyte concentration is not detected above the detection limit ND M M if above MDC and less than LLD Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ FA Failed analysis. UJ Gamma Spectroscopy--Uncertain identification 0 One or more quality control criteria have not been met. Refer to the applicable narrative or DER. Analyte present. Reported value may be biased high. Actual value is expected to be lower. K UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias. Analyte present. Reported value may be biased low. Actual value is expected to be higher.

- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- \*\* Analyte is a Tracer compound
- M REMP Result > MDC/CL and < RDL
- J See case narrative for an explanation

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

Report Date: February 22, 2023

Page 1 of 2

**QC** Summary

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 608423

Parmname		NOM	Sample (	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow										
Batch	2374674 —									
QC1205305252	608353001 DUP									
Radium-228		U	0.970	U	2.08	pCi/L	0		N/A JE1	02/20/2312:09
		Uncert:	+/-0.825		+/-1.56					
		TPU:	+/-0.861		+/-1.65					
QC1205305253	LCS									
Radium-228		63.2			59.4	pCi/L		94.1	(75%-125%) JE1	02/20/2312:09
		Uncert:			+/-4.09					
		TPU:			+/-15.6					
QC1205305251	MB									
Radium-228				U	0.943	pCi/L			JE1	02/20/2312:08
		Uncert:			+/-1.15					
		TPU:			+/-1.17					
Rad Ra-226	2274665 —									
Batch	2374665									
QC1205305235	608353001 DUP									
Radium-226		U	0.421		0.410	pCi/L	2.66		(0% - 100%) LXP1	02/19/2308:00
		Uncert:	+/-0.327		+/-0.284					
		TPU:	+/-0.333		+/-0.300					
QC1205305237	LCS									
Radium-226		26.5			25.7	pCi/L		97	(75%-125%) LXP1	02/19/2308:00
		Uncert:			+/-1.78					
		TPU:			+/-6.47					
QC1205305234	MB				0.245	C) I			LVD	02/10/2200 00
Radium-226		<b>T</b> T .		U	0.365	pCi/L			LXP1	02/19/2308:00
		Uncert:			+/-0.325					
0.01205205226	600252001 <b>M</b> G	TPU:			+/-0.331					
QC1205305236	608353001 MS	130 U	0.421		110	C: /I		04.4	(750/ 1050/) I VD1	02/10/2209.00
Radium-226		130 U Uncert:	0.421 +/-0.327		110 +/-8.72	pCi/L		84.4	(75%-125%) LXP1	02/19/2308:00
		TPU:	+/-0.327		+/-8.72					
		IPU:	+/-0.333		+/-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:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported

Page 41 of 63 SDG: 609400

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

# **QC** Summary

Workorder: 608423 Page 2 of 2 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time UI Gamma Spectroscopy--Uncertain identification BD Results are either below the MDC or tracer recovery is low Preparation or preservation holding time was exceeded h R Sample results are rejected RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. N/A RPD or %Recovery limits do not apply. Analyte concentration is not detected above the detection limit ND M M if above MDC and less than LLD Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ

- FA Failed analysis.
- UJ Gamma Spectroscopy--Uncertain identification
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- \*\* Analyte is a Tracer compound
- M REMP Result > MDC/CL and < RDL
- J See case narrative for an explanation

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

Report Date: February 23, 2023

Page 1 of 2

**QC** Summary

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 608622

Parmname		NOM	Sample (	Qual	QC	Units	RPD%	REC%	Range A	Anlst	Date Time
Rad Gas Flow											
Batch	2377470										
QC1205310027	608549001 DUP										
Radium-228			2.25	U	-0.0281	pCi/L	205*		(0% - 100%)	JE1	02/22/2310:41
		Uncert:	+/-1.46		+/-1.61						
		TPU:	+/-1.57		+/-1.61						
QC1205310028	LCS										
Radium-228		63.8			76.5	pCi/L		120	(75%-125%)	JE1	02/22/2310:41
		Uncert:			+/-5.01						
0.01205210026	MD	TPU:			+/-20.0						
QC1205310026	MB			U	2.27	ъC:/I				JE1	02/22/2313:25
Radium-228		Uncert:		U	2.27 +/-1.59	pCi/L				JEI	02/22/2313:23
		TPU:			+/-1.69						
Rad Ra-226		110.			17 1.02						
Batch	2377423										
QC1205309902	608549001 DUP										
Radium-226	008549001 DCI		0.455		0.794	pCi/L	54.3		(0% - 100%)	I XP1	02/21/2310:10
Radium-220		Uncert:	+/-0.309		+/-0.287	pci/L	54.5		(070 - 10070)	LZXII	02/21/2310.10
		TPU:	+/-0.325		+/-0.319						
QC1205309904	LCS										
Radium-226		26.6			26.4	pCi/L		99.2	(75%-125%)	LXP1	02/21/2310:10
		Uncert:			+/-1.82						
		TPU:			+/-4.75						
QC1205309901	MB										
Radium-226				U	0.272	pCi/L				LXP1	02/21/2310:10
		Uncert:			+/-0.283						
		TPU:			+/-0.287						
QC1205309903	608549001 MS	122	0.455		102	C) I		4	(550) 1050()	LIDI	02/21/2210 10
Radium-226		133	0.455		103	pCi/L		77.4	(75%-125%)	LXPI	02/21/2310:10
		Uncert: TPU:	+/-0.309 +/-0.325		+/-7.53 +/-21.0						
		IPU:	+/-0.323		+/-21.0						

#### **Notes:**

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported

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

# **QC** Summary

Workorder: 608622 Page 2 of 2 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time UI Gamma Spectroscopy--Uncertain identification BD Results are either below the MDC or tracer recovery is low Preparation or preservation holding time was exceeded h R Sample results are rejected RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. N/A RPD or %Recovery limits do not apply. Analyte concentration is not detected above the detection limit ND M M if above MDC and less than LLD Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ

- FA Failed analysis.
- UJ Gamma Spectroscopy--Uncertain identification
- One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- \*\* Analyte is a Tracer compound
- M REMP Result > MDC/CL and < RDL
- J See case narrative for an explanation

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

Report Date: February 23, 2023

Page 1 of 2

**QC** Summary

Client: Georgia Power Company, Southern Company

241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia

Contact: Joju Abraham

Workorder: 608819

Parmname		NOM	Sample (	Qual	QC	Units	RPD%	REC%	Range A	Anlst	Date Time
Rad Gas Flow											
Batch	2377470 -										
QC1205310027	608549001 DUP										
Radium-228			2.25	U	-0.0281	pCi/L	205*		(0% - 100%)	JE1	02/22/2310:41
		Uncert:	+/-1.46		+/-1.61						
		TPU:	+/-1.57		+/-1.61						
QC1205310028	LCS										
Radium-228		63.8			76.5	pCi/L		120	(75%-125%)	JE1	02/22/2310:41
		Uncert:			+/-5.01						
		TPU:			+/-20.0						
QC1205310026	MB										
Radium-228				U	2.27	pCi/L				JE1	02/22/2313:25
		Uncert:			+/-1.59						
		TPU:			+/-1.69						
Rad Ra-226	2277422 =										
Batch	2377423										
QC1205309902	608549001 DUP										
Radium-226			0.455		0.794	pCi/L	54.3		(0% - 100%)	LXP1	02/21/2310:10
		Uncert:	+/-0.309		+/-0.287						
		TPU:	+/-0.325		+/-0.319						
QC1205309904	LCS										
Radium-226		26.6			26.4	pCi/L		99.2	(75%-125%)	LXP1	02/21/2310:10
		Uncert:			+/-1.82						
0.61205200001	140	TPU:			+/-4.75						
QC1205309901 Radium-226	MB			U	0.272	C:/I				LXP1	02/21/2310:10
Radium-226		Uncert:		U	0.272 +/-0.283	pCi/L				LAPI	02/21/2310:10
		TPU:			+/-0.283						
QC1205309903	608549001 MS	IPU:			+/-0.267						
Radium-226	000349001 MIS	133	0.455		103	pCi/L		77 /	(75%-125%)	I XD1	02/21/2310:10
Radium-220		Uncert:	+/-0.309		+/-7.53	pCI/L		77.4	(13/0-12370)	L/XI I	02/21/2310.10
		TPU:	+/-0.309		+/-7.55						
		11 0.	17 0.323		1/ 21.0						

# **Notes:**

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported

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

# **QC** Summary

Workorder: 608819 Page 2 of 2 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time UI Gamma Spectroscopy--Uncertain identification BD Results are either below the MDC or tracer recovery is low Preparation or preservation holding time was exceeded h R Sample results are rejected RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. N/A RPD or %Recovery limits do not apply. Analyte concentration is not detected above the detection limit ND M M if above MDC and less than LLD Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier NJ FA Failed analysis. UJ Gamma Spectroscopy--Uncertain identification 0 One or more quality control criteria have not been met. Refer to the applicable narrative or DER. Analyte present. Reported value may be biased high. Actual value is expected to be lower. K UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.

- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.

Analyte present. Reported value may be biased low. Actual value is expected to be higher.

- \*\* Analyte is a Tracer compound
- M REMP Result > MDC/CL and < RDL
- J See case narrative for an explanation

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 acceptence 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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age: of A	608418 GE	81	THE Gelcom		Laboratories LLC Chemistry I Radiochemistry I Radiobioassay I Specialty Analytics	atol	16S L	LC	Specialty	Analytics			GEL Laboratories, 2040 Savage Road Charleston, SC 294	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	
COC Number (!).	0004	2	Chain	in of C	of Custody and Analytical Request	and A	nalytica	al Req	rest				Phone: (84	Phone: (843) 556-8171	
O Number:	GEL Work Order Number:	er Ivumber	H care	F 202 1	GEL PI	oyect M	GEL Project Manager: Erin Trent	Erin I	ent.		100	9	Fax: (843) 766-1178	766-1178	
The state of the s			#	404-200-/110	0			Sal	Sample Analysis Requested	alysis F	ednest	0	the number	(Fill in the number of containers for each test)	test)
roject/Site Name: Plant Branch Ash Ponds - E			Fax #				Should this	this	S.I.2		IN IN			< Pres	< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	A 30308						considered:	red:	EO			07		0	Comments
Sollected By: 1: (505/12) ACC	Send Results To: SCS & Geosyntec	SCS & G		Contacts		25.200			TDS, N	A dassi	L '0109	əpi		Note:	Note: extra sample is
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field (9) N	Sample Matrix (4)	Radioactive yes, please sup isotopic info.)	(7) Known or possible Haza	Total number	EPA 300, S Total & Bi	Meta EPA 6020, 6 Radium 22	# MS UINS E6 9#8-MS		Task_Co ASS	Task_Code: BRA-CCR- ASSMT-2023S1
BRA- BAGWC-17S	01/2	01/24123	1618	Ð	Z	DM	2	Z	8	1	>	1		field pH = (G o C	6.37
BRA- BRGWC-335	100	01/24/23	1340	5	N	P/G MG	'Z	Z	8	)	1	)		field pH = Ll.	200
ira- Bacmc-345	/10	01/24/23 [253	1253	5	7	MG	Z	2	00	)	/	1		field pH = 5	2
BRA- BAGNEC - 35S	110	01/24/23	一十二	9	2	NG.	2	7	8	1	2	1		field ferrons from =	8
.RA-														field pH =	
D	Chain of Custody Signatures	gnatures				1		TAT	TAT Requested:		Normal:	x Rush:	Specify	fiel	d ferrous iron =
Relinquished By (Signed) Date Time		Received by (signed)	,	Date	Time		T.	ax Resu	Fax Results: [ ] Yes		1 1				to Surcharge)
194/00 Jely 1-15-23/ 67	11 0529	ling	all.	13	2/1/2	6/2	200	elect De	Seject Deliverable: [ ] C of A	1100	. A [ ]	[ ] QC Summary	[ ] level 1	[x] Level 2 [ ] Level 3	3 [ ] Level 4
and the second		7	}		0	12	XOX	or Lah	For Lah Receiving 1	Odst	Metals:	Additional Kemarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,C	i,Be,Cd,Cr,Co	* Metals: B.Ca.Sb.As, Ba.Be,Cd,Cr,Co,Pb,Li,Mo,Se,Ti,Fe,Mg,Mn,K,Na,Hg nhi: Cuetoch, Soal Intact? [ 1 Voc. [ 1 N/o Coolar Truent.	n,K,Na,Hg
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Receipt & Ro	eview form	(SRR.)			S	ımple Co	llection	Time Zo	ne: [x]	Sastern	[ ] Pacific	Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central	[ ] Mo	
) 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	ield Duplicate, EB = Equip	oment Blank, 1	MS = Matrix S	pike Sample	e, MSD = Ma	atrix Spike	Duplicate S	ample, G	= Grab, C=	Composit					
) Field Fillered: For inquid matrices, indicate with a - Y - For yes the sample was held hiltered or - N - For sample was not field hiltered.  Matrix Codes: WD=Drinking Water, WG=Groundwater, WS=Surface Water, WW=Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Studge, WQ=Water Quality Control Matrix	yes the sample was held fill VS=Surface Water, WW=	Waste Water,	or sample was NL=Leachate,	SO=Soil, S	tered. E=Sediment	, SL=Slud	ze, WQ=Wa	ater Qualit	Control N	latrix					
Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers	i.e. 8260B, 6010B/7470A)	and number o	f containers pr	ovided for e	provided for each (i.e. 8260B - 3, 6010B/7470A - 1).	0B - 3, 60	10B/7470A	- 1).							
Preservative Type: HA = Hydrochloric Acid, SH = 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 POSCIRI F HAZA BDS	cid, SH = Sodium Hydroxide, SA	de, SA = Sulfi	iric Acid, AA = Ascorb	- Ascorbic	Acid, HX = I	lexane, ST	= Sodium	Phiosulfate	. If no prese	rvative is	dded = lea	re field blank			
CRA Metals  s = Arsenic Hg= Mercury a = Barium Se= Selenium	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	gnitable	LW= Listed W (F,K,P and U-l Waste code(s):	LNSted Waste  LW= Listed Waste  (F,K,P and U-listed  Waste code(s):	Listed Waste LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):	7	0 0 0 0 0	Other OT= Other / (i.e.: High/lo misc. health Description:	Orner  OT= Other / Unknown  (i.e.: High/low pH, asbest misc. health hazards, etc.)  Description:	own asbesto. ts, etc.)	, berylli	Orner  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	tional details ng and/or Origin of
<pre>d = Cadmium Ag= Silver r = Chromium MR= Misc. RCRA metals b = Lead</pre>	TSCA Regulated PCB = Polychlorinated biphenyls	ated				П	111							(an transfer	

<b>GEL</b>	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

Client: 12 PC C			SD	G/AR/COC/Work Order: 608418 608420
Received By: PG			Da	te Received: 175/73
Carrier and Tracking Number				Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	ž	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Haz	ard Class Shipped:  If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
B) Did the client designate the samples are to be received as radioactive?		У	co	C notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Max	ximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM/ mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		イメ		C notation or hazard labels on containers equal client designation.  Or E is yes, select Hazards below, PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other;
E) Did the RSO identify possible hazards?	S.	-		
Sample Receipt Criteria Shipping containers received intact and	Yes	NA	ž	Comments/Qualifiers (Required for Non-Conforming Items)  Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
scaled?	X			· · · · · · · · · · · · · · · · · · ·
2 Chain of custody documents included with shipment?	<u>Z</u>			Circle Applicable: Client contacted and provided COC COC created upon receipt  Preservation Method: Wet Ice Ice Packs Dry ice None Other:
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	人	<b>-</b>		*all temperatures are recorded in Celsius TEMP:
4 Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable): Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Sample containers intact and sealed?	X			Calcie Applicable: Scale broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	χ			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?			X	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?	X			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers  No times on containers  COC missing info  Other (describe)
Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?	χ			
COC form is properly signed in relinquished/received sections?	$\checkmark$			Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):				
PM (or PMA)	) rev	iew:	Initia	als Page of

Page 48 of 63 SDG: 609400

age: 2 of 2 roject #	608422 G		in of Cu	Chain of Custody and Analytical Request	torie	S LLC	ay I Speci	ialty Analyl	S		GEL La 2040 Sc Charles Phone:	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	
O Number:	GEL Work Order Number:	3		GEL Pro	GEL Project Manager: Erin Trent	ger: Erin	Trent				Fax: (84	Fax: (843) 766-1178	
lient Name: GA Power		Phone # 4(	404-506-7116	16			Sample	Sample Analysis Requested (5)	is Requ		fill in the num	ber of contain	(Fill in the number of containers for each test)
roject/Site Name: Plant Branch Ash Ponds - E		Fax#			Sh	Should this	S.		IN	IN			< Preservative Type (6)
ddress: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308				S2	sample be considered:	enist	OC	0//				Comments
Collected By: J. ACC	Send Results To: SCS & Geosyntec		Contacts		H)			PSZ WS	* slr	315, 93;			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time	*Date Collected (time (mm/dd/yz)	*Time Collected (Military) (hhmm)	QC Code (2) F	Field Sa Filtered (3) Mat	Sample Matrixy 4	isotopic info.) (7) Known or possible Haza	Total numbe	Cl, F, SO4, Total & B	EPA 6020, 23	2 muibsA 9 248-W2 Hu2 4 MS			QC Task_Code: BRA-CCR- ASSMT-2023S1
BRA- APE - FD - OH	01/24123	1	ŋ	z z	2 April	3	00	>	>	1			field pH = field ferrous iron =
184- APE -FB-07	01/24/23	1400	5	34	2	7	X	1	>	>			field pH = field ferrous iron =
SRA-													field pH = field ferrons fron =
RA-							V.					Y T	
SRA-													field ierrous iron = field pH =
Ch.	Chain of Custody Signatures				$\frac{1}{1}$		AT Rec	TAT Requested:	Normal:	×	Rush: Sp	Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time	e Received by (signed)		Date	Time		Fax B	Fax Results: [ ] Yes	[ ] Yes	[x] No				
Tay Jall 1-25-23/ 08	329 1 May	M	1	1861	0	& Zelect Deliverable: [ ] C of A	Deliver	able: [ ]		[ ] QC Sur	[ ] QC Summary [ ] level 1	el 1 [x] Level 2	2 [ ] Level 3 [ ] Level 4
1884 Mach	193 127 2 M. A.	1	ٺ	25.5%	5 133	Addit	Additional Remarks:	marks:	* Me	als: B,Ca,S	,As,Ba,Be,Cd,C	r,Co,Pb,Li,Mo,S	* Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,T1,Fe,Mg,Mn,K,Na,Hg
3 For sample shinning and delivery details, see Sample Receipt & Review form (SRR.)	3 Sample Receipt & Review form	(SRR.)			Samp	le Colleca	ab Rece ion Tim	e Zone:	[x] East	Custody Se	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes [ ] No ollection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] M		Cooler Temp: °C
) 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	eld Duplicate, EB = Equipment Blank,	MS = Matrix	Spike Sample	, MSD = Mat	rix Spike Dup	licate Sampl	e, G = Gra	b, C = Con	posite				
) 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	yes the sample was field filtered or - N · NS=Surface Water, WW=Waste Water.	<ul> <li>for sample wa</li> <li>WL=Leachate</li> </ul>	s not field filt , SO=Soil, S	ered. E=Sediment,	SL=Sludge, V	VQ=Water (	uality Con	itrol 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	i.e. <b>8260B</b> , <b>6010B/7470A</b> ) and number sid, <b>SH</b> = Sodium Hydroxide, <b>SA</b> = Sul	of containers p	ovided for e	ach (i.e. 8260), cid, HX = He	B - 3, 6010B/ exane, ST = So	74704 - 1).	ılfate, If no	o preservati	ve is added	= leave field	lank		
KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	Listed Waste	Waste		h	Other			П			Please prov	Please provide any additional details
icRA Metals s.s = Arsenic Hg= Mercury ia = Barium Se= Selenium	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW=L (F,K,P Waste	LW= Listed Waste (F,K,P and U-listee Waste code(s):	LW= Listed waste (F.K.P and U-listed wastes.) Waste code(s):		(i.e.: ) misc. Descr	OI = Other / U (i.e.: High/low misc. health h Description:	O1= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	estos, be	ryllium, iri	OI = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	below regard disposal conc sample(s), typ matrices, etc.)	below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
d = Cadmium Ag= Silver r = Chromium MR= Misc. RCRA metals b = Lead	TSCA Regulated PCB = Polychlorinated biphenyls				1			Ш					
			Ĭ,		Ĭ								

GEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

Client: PCC			SD	G/AR/COC/Work Order: , 605422 608423
Received By: PG			1	te Received: 175/73
Carrier and Tracking Number				Circle Applicable: PedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	ž	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		Х	Haz	ard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
B) Did the client designate the samples are to be received as radioactive?	L	X	ļ.	C notation or radicactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Ma	ximum Net Counts Observed* (Observed Counts - Area Background Counts): CPMO mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		X	I	C notation or bazard labels on containers equal client designation.  or E is yes, select Hazards below.
E) Did the RSO identify possible hazards?		_	<u></u>	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	NA	ž	Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	K	·	_	Circle Applicable: Client contacted and provided COC COC created upon receipt  Preservation Method: Wet Ice   Ice Packs   Dry ice   None   Other:
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	7			*all temperatures are recorded in Celsius  TEMP:  Temperature Device Serial #: IR1-23
Daily check performed and passed on IR temperature gun?	X			Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	χ			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?			Х	If Yes, are Encores or Soil Kits present for solids? YesNoNA (If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA (If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
8 Samples received within holding time?	X			ID's and tests affected:
Sample ID's on COC match ID's on bottles?	Х			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?  COC form is properly signed in	X,		.	Circle Applicable: Not relinquished Other (describe)
relinquished/received sections? Comments (Use Continuation Form if needed):	Χ,			
PM (or PMA				ls AM Date

Page 50 of 63 SDG: 609400

Page: Of Z Over #: COC Number (1):	608622 GE	SELECTION Chain		DOC histry   Rad	atori ochemistry and Ana	Chain of Custody and Analytical Request	C ssay   Spe	Laboratories LLC (COSC) A chemistry I Radiochemistry I Radiobioassay I Specialty Analytics f Custody and Analytical Request	30 E	4	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	ies, LLC oad 29407 56-8171	
	GEL Work Order Number:			GEL Pr	yect Man	GEL Project Manager: Erin Trent	in Tren	t			Fax: (843) 766-1178	-1178	
Client Name: GA Power		Phone # 40	404-506-7116	91			Sampl	Sample Analysis Requested (5)	s Requ	sted (5) (Fill i	the number of	(Fill in the number of containers for each test)	
Project/Site Name: Plant Branch Ash Ponds - E		Fax#				Should this			IN	IN		< Preservative Type (6)	(9
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308						sample be considered:		20	0 <i>L</i> t			Comments	100
Collected By: T. Collected By:	Send Results To: SCS & Geosyntec		Contacts			(		SM 254	975 4 197 4 197 4 197 4 197 197 197 197 197 197 197 197 197 197			Note: extra sample is required for sample specific	s cific
$\operatorname{Sample} \operatorname{D}$ * For composites - indicate start and stop date/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2) F	Field S Filtered (3) M	Sample Matrix (4)	yes, please su (7) Known o	zsH əldizəoq Total numbe	CI, F, SO4, Total & F	Total Control	22,000,00		QC Task_Code: BRA-CCR- ASSMT-2023S1	- <del>K</del>
BRA- BAGWC-365	01/25/23	1553	Ŋ	z	DM	3		7	1	1		field pH = $5.6  \text{H}$ field ferrous iron = $0.6$	0
BRA- Bagwc-375	61/25/23	1320	5	2	MG N	2	8	,	1	1		-	0
BRA-BAGWC-34S	01/25/23	1353	5	2	NG N	2	8	7	1	1		field pH = $\frac{1}{4}$ $\frac{15}{15}$ field ferrous iron = $\frac{1}{3}$	0
BRA- P2 -53D	01/25/23	65	5	7	NG NG	2	00	7	7	1		field pH = $7$ , $1$ $O$ field ferrous iron = $O$ , $C$	0
BRA- APE - EB - 09	01/25/23 1245	1245	6	2	N N	2	20	7	2	1		field pH = field ferrous iron =	
Chain of C	Chain of Custody Signatures						TATR	TAT Requested:	Normal:	I: x Rush:	Specify:	(Subject to Surcharge)	
Relinquished By (Signed) Date Time	Received by (signed)		Date	Time		Fax	Results:	Fax Results: [ ] Yes	[x] No				
1 Taylo Sell 1-26-23/ 0827	in the	10	1	66 /33	16.9	Sele	ct Delive	Select Deliverable: [ ] C of A		[ ] QC Summary	[ ] level 1	[x] Level 2 [ ] Level 3 [ ] Level 4	4
1/21/23 115	12	200	1/2	6/23	1	S	itional R	Additional Remarks:	* Met	als: B,Ca,Sb,As,l	a,Be,Cd,Cr,Co,Pb	* Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg	
	3	1 443)			San	For ante Colle	Lab Rec	For Lab Receiving Use Only: Cu.	e Only:	2	act? [ ] Yes [	ody Seal Intact? [] Yes [] No Cooler Temp: °C [] Pacific [] Central [] Mountain [] Other	1
Services of the standard of th	ecepp & Aeview Joint te, EB = Equipment Blank,	MS = Matrix S	pike Sample	, MSD = M	atrix Spike D	uplicate Sam	ple, G = G	rab, C = Con	posite	13.			
<ol> <li>Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not held Filtered.</li> <li>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</li> </ol>	ole was field filtered or - N - Water, WW=Waste Water,	for sample was WL=Leachate,	SO=Soil, S	tered. E=Sediment	, SL=Sludge.	. WQ=Water	Quality Co	ontrol 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).	5010B/7470A) and number odium Hydroxide, SA = Sul	of containers pr	ovided for e	ach (i.e. 826 Acid, HX = 1	0B - 3, 6010 Texane, ST =	B/7470A - 1) Sodium Thio	). osulfate, If	no preservati	ve is added	= leave field blank			
7.) KNOWN OR POSSIBLE HAZARDS   Charac	Characteristic Hazards	Listed Waste	Waste			Other	er		-		Ple	Please provide any additional details	
7, 91, 1	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW= Listed W (F,K,P and U-I) Waste code(s):	LW= Listed Waste (F,K,P and U-listed Waste code(s):	LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):	2	OT= (i.e., misc Des	OT= Other / (i.e.: High/lc misc. health Description:	OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	estos, be tc.)	OT=Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)	odd
Cd = Cadmium Ag= Silver  Cr = Chromium MR= Misc. RCRA metals PCB = Pb = Lead	TSCA Regulated PCB = Polychlorinated biphenyls				1				Ш				

Page: Z of Z			-	.070	ייייייייייייייייייייייייייייייייייייייי	-				0 (	GEL Laboratories, LLC	s, LLC	
Project #			_	الالالالالالالالالالالالالالالالالالال		LLC	S. Marione	o di		21 (	2040 Savage Road	ad 9407	
COC Number (1):		Chain	n of Cus	tody an	geloom Constitution Haddochemistry Radiobloassay Specially Allayings Chain of Custody and Analytical Request	cal Red	uest	nalytics		, E	Phone: (843) 556-8171	5-8171	
	GEL Work Order Number:		9	EL Proje	GEL Project Manager: Erin Trent	r: Erin 1	rent			H	Fax: (843) 766-1178	178	
Client Name: GA Power		Phone # 404	404-506-7116	14		Sa	mple Ans	lysis Rec	nested (	6 (Fill in th	e number of co	Sample Analysis Requested (5) (Fill in the number of containers for each test)	
Project/Site Name: Plant Branch Ash Ponds -TW E		Fax#			Shou	Should this	S	IN	IN O IN			< Preservative Type (6)	e Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	308				sam	sample be considered:	103	s * عالم	*	4		Comments	ents
Collected By: [ (50) 6 ACC Se	Send Results To: SCS & Geosyntec	eosyntec Cc	Contacts				TDS, N	A dassi 320B + Metal	z listoly			Note: extra sample is required for sample specific	ample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Filte	Field Sample Filtered (3) Matrix (4)	Radioactive yes, please sur isotopic info.)	(7) Known or	Total number Cl, F, SO4,	Total & B	Eb¥ 605	WC POY		QC Task Code: BRA-CCR- ASSMT-2023S1	RA-CCR-
BRA- APE - FB-08	Ø	10	Ö	29 dy	7	3	>	1	5×	1		field pH =	(
BRA-												field pH =	
BRA-												field pH =	
BRA-												field pH =	
BRA-												field pH =	
Chair	Chain of Custody Signatures					TA.	TAT Requested:	ed: Normal:	nal: x	Rush:	Specify:	(Subject to Surcharge)	rcharge)
Relinquished By (Signed) Date Time	Received by (signed)	ned) Date		Time		Fax Res	Fax Results: [ ] Yes	es [x] No					
Willy Half 126-73/ 082	i Sulli	ca	10	123	50.8	Select D	Select Deliverable: [ ] C of A [ ] QC Summary	[]CofA	[]00		[ ] level 1 [x]	[x] Level 2 [ ] Level 3 [	[ ] Level 4
1 1 Jan 1 124 63 21:18	5 2 /th	8	26/2	8	7	Addition	Additional Remarks:		letals: B,	* Metals: B,Ca,Fe,Mg,Mn,K,Na	K,Na		
	3					For Lat	Receiving	Use Only	: Custod	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes		Vo Cooler Temp:	ے د
Sample collection Time Lone: [X] E  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	<i>tple Receipt &amp; Review form</i> Juplicate, EB = Equipment Blank, L	(SRR.)  MS = Matrix Sp	iike Sample, N	ISD = Matrix	Spike Duplica	Contection te Sample, C	Sample Collection Time Zone: [X] Eastern ke Duplicate Sample, G = Grab, C = Composite	Composite	l uais	L J Facilic	100	l i Mountain	
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, WQ=Water Quality Control Matrix	he sample was field filtered or - N - surface Water, 'WW=Waste Water,'	for sample was WL=Leachate,	not field filter SO=Soil, SE=	ed. Sediment, SI	,=Sludge, WQ:	=Water Qual	ity Control M	latrix					
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: IA = 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	(260B, 6010B/7470A) and number of the Sodium Hydroxide, SA = Sulfi	of containers pro	wided for each	1, HX = Hexa	provided for each (i.e. \$260B - 3, 6010B/74704 - 1).  A = Ascorbic Acid, HX = Hexane, ST = Sodium Thio	70A - 1). Jm Thiosulfa	te, If no prese	rvative is ado	ed = leave	ield blank			
7.) KNOWN OR POSSIBLE HAZARDS   CI	Characteristic Hazards	Listed Waste	Vaste			Other					Pleas	Please provide any additional details	l details
	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated	LW= Listed W (F,K,P and U-l.) Waste code(s):	LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	t wastes.)	] Í	OT= Other / (i.e.: High/lo misc. health Description:	OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	own asbestos, ds, etc.)	beryllium	OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regarding handling and/or disposal concerns, (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)	dor in of id from, odd
Ag= Silver MR= Misc, RCRA metals	PCB = Polychlorinated biphenyls				I								
													W

GED Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM SDG/AR/COC/Work Order: 608622. GPCC Client: Date Received: JAN 26, 2023 Received By: Stacy Boone Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other Carrier and Tracking Number \*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Kc Suspected Hazard Information If UN2910, Is the Radioactive Shipment Survey Compliant? Yes\_\_\_No\_\_ A)Shipped as a DOT Hazardous? COC notation or radioactive stickers on containers equal client designation. B) Did the client designate the samples are to be Maximum Not Counts Observed\* (Observed Counts - Area Background Counts): \_\_\_\_\_\_CPM / mR/Hr received as radioactive? Classified as: Rad I Rad 2 Rad 3 C) Did the RSO classify the samples as radioactive? COC notation or hazard tabels on containers equal client designation. D) Did the client designate samples are hazardous? If D or E is yes, select Hazards below. RCRA Asbestos Beryllium Foreign Soil Flammable E) Did the RSO identify possible hazards? Comments/Qualifiers (Required for Non-Conforming Items) Z Z Sample Receipt Criteria Circle Applicable: Scals broken Damaged container Leaking container Other (describe) Shipping containers received intact and Circle Applicable: Client contacted and provided COC COC created upon receipt sealed? Chain of custody documents included Preservation Method: Wet Ice lce Packs Dry ice None Other: TEMP: 1 6 x 5 with shipment? \*all temperatures are recorded in Celsius Samples requiring cold preservation within  $(0 \le 6 \text{ deg. C})$ ?\* Temperature Device Serial #: IR3-22 Daily check performed and passed on IR Secondary Temperature Device Serial # (If Applicable): Circle Applicable: Scals broken Damuged container Leaking container Other (describe) temperature gun? 5 |Sample containers intact and sealed? Sample ID's and Containers Affected: Samples requiring chemical preservation If Yes, are Encores or Soil Kits present for solids? Yes\_\_No\_\_NA\_\_(If yes, take to VOA Freezer) at proper pH? Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes\_\_\_No\_\_\_NA\_\_\_ Do any samples require Volatile 7 Sample ID's and containers affected: Analysis? ID's and tests affected: 8 Samples received within holding time? ID's and containers affected: Sample ID's on COC match ID's on Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) bottles? Date & time on COC match date & time Circle Applicable: No container count on COC Other (describe) on bottles? Number of containers received match number indicated on COC? Are sample containers identifiable as GEL provided by use of GEL labeis? Circle Applicable: Not relinquished Other (describe) COC form is properly signed in relinquished/received sections? Comments (Use Continuation Form if needed):

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Page: 1 of 1  Project #  GEL Quote #:  COC Number (0):	8	609 400	GELCOM Chain		DOC Mistry   Radi	Atori inchemistry and Ana	Chain of Custody and Analytical Request	Ssay I Spe	cialty Analy	ics		GEL La 2040 Sa Charlest	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	
PO Number:	GEL Wor	GEL Work Order Number:			GEL Pro	yect Ma	GEL Project Manager: Erin Trent	in Tren				Fax: (84	Fax: (843) 766-1178	
Client Name: GA Power			Phone # 40	404-506-7116	91			Samp	Sample Analysis Requested (5)	is Reque		Il in the numb	er of containe	(Fill in the number of containers for each test)
Project/Site Name: Plant Branch Ash Ponds - E			Fax#				Should this			IN	IN			< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308						sample be considered:		OC					Comments
Collected By: ACC	Send Resu	Send Results To: SCS & Geosyntec	eosyntec Co	Contacts		H)	hbjà	THOUSE	52 MS	350B	315, 93			Note: extra sample is required for sample specific
Sample ID  * For composites - indicate start and stop date/time	e/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2) F	Field S Filtered <sup>(3)</sup> M	Sample Matrix (4)	yes, please sur isotopic info.)	szaH əldizeoq Total numbe	Cl, F, SO4, EPA 300, 9 Total & B	EBY 9050° Weft	Z muibay 2 W2-846 9 2 MS			QC Task_Code: BRA-CCR- ASSMT-2023S1
BRA- PZ-52D		02/02/23	1030	Ö	z	DM DM	2	<u>m</u>			,			field pH =
BRA-														field pH =
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BRA-														field pH =
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Ch	hain of Cust	Chain of Custody Signatures				-		TATR	TAT Requested:	Normal:	×	Rush: Spe	Specify:	field ferrous iron = (Subject to Surcharge)
Relinquished By (Signed) Date Time	a a	Received by (signed)		Date	Time		Fax	Results:	Fax Results: [ ] Yes	[x] No				
14 1 2 3 - 23 / C	0836	Charles of the Contract of the	1	96	3 8	36	Sele	Select Deliverable:	erable: [ ]	CofA	1QC Sum	Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1	ol 1 [x] Level 2	2 [ ] Level 3 [ ] Level 4
1	200	3		1	000	6	For	Lab Rec	eiving Us	e Only: (	ustody Sea	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	es [ ] No C	Therans: D.C.a., D.C.a., D.C., C.L. C., C., C., C., C., C., C., C., C., C.
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Recei	ot & Review form	(SRR.)			Sai	mple Colle	ction Ti	ne Zone:	[x] Easte	n []Pa	Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central		[ ] Mountain = [ ] Other:
.) 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.	ield Duplicate, E)	3 = Equipment Blank,	MS = Matrix S for sample was	pike Sample not field fill	, MSD = Me	ıtrix Spike I	Ouplicate Sam	ple, G = G	rab, C = Con	posite				
.) 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	VS=Surface Wate	r, WW=Waste Water,	WL=Leachate,	SO=Soil, S	E=Sediment,	SL=Sludge	e, WQ=Water	· Quality C	ontrol Matrix					
.) Sample Affailysis Requested: Antalytical mention requested (1c. s.zovos, volos) (4/0A) and infinite of containers provided for each (1c. zovos - s., ordon + 1).  1.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfaric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	cid, SH = Sodium	Hydroxide, SA = Sulf	uric Acid, AA =	Ascorbic	cid, HX = F	lexane, ST	= Sodium Thi	). osulfate, If	no preservat	ve is added	leave field bl	참		
KNOWN OR POSSIBLE HAZARDS	Characteri	Characteristic Hazards	Listed Waste	Vaste			Other	er		h			Please prov	Please provide any additional details
RCRA Metals  As = Arsenic Hg= Mercury  Ba = Barium Se= Selenium	FL = Flammable CO = Corrosive RE = Reactive	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW= Listed W (F,K,P and U-I) Waste code(s):	LW= Listed Waste (F,K,P and U-listed Waste code(s):	LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	2	OT= (i.e., misc Dess	OT= Other / fi.e.: High/lo misc. health Description:	OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	estos, ber tc.)	OT=Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	ants, other	below regard disposal conc sample(s), typ matrices, etc.,	below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
Cd = Cadmium Ag= Silver Cr = Chromium MR= Misc. RCRA metals Pb = Lead	TSCA Regulated PCB = Polychlorinated biphenyls	kegulated Polychlorinated biphenyls				I			Ш					
								Ì						



SAMPLE RECEIPT & REVIEW FORM

Cli	ent: (TIPCC			SD	G/AR/COC/Work Order: 609 400
Rec	reived By: MUS				te Received: 2.3.23
	Carrier and Tracking Number				FedEx Express FedEx Ground UPS Field Services Courier Other  Client drop off
Sus	pected Hazard Information	Yes	No.	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)S	hipped as a DOT Hazardous?		/		ard Class Shipped:  UN#:  If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
B) I	Did the client designate the samples are to be		,	CO	C notation or radioactive stickers on containers equal client designation.
C) I	ived as radioactive?  Did the RSO classify the samples as pactive?		1	Max	ctimum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) I	Did the client designate samples are hazardous?		1	cod	C notation or hazard labels on containers equal client designation.
E) [	Did the RSO identify possible hazards?		1	If D	or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
	Sample Receipt Criteria	Yes	NA	°N.	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	1			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	1	V		Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	1			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
4	Daily check performed and passed on IR temperature gun?	V			Temperature Device Serial #: <u>IR2-21</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	1	H		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	/			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? YesNoNA(If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
8	Samples received within holding time?	1	W		ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	1	H		ID's and containers affected:
10	Date & time on COC match date & time on bottles?	/			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?	1	N		Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	1	ľ		
13	COC form is properly signed in relinquished/received sections?	/	T)		Circle Applicable: Not relinquished Other (describe)
Соп	nments (Use Continuation Form if needed):				1. /

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Page: 0f 2  Project #  GEL Quote #:		0	gel.com		abor mistry   Ra	ator	Laboratories LLC	LC loassay l	att	(Analytic	8	608815	GEL Lal 2040 Sa Charlest	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	
PO Number:	GEL Work Order Number:	Number:		5	GEL P	roject M	GEL Project Manager: Erin Trent	Erin T	rent	h	ľ		Fax: (84	Phone: (843) 256-8171 Fax: (843) 766-1178	
Client Name; GA Power		14	"hone #	404-506-7116	911			Sar	nple A	nalysis	Reque	sted (5) (F	Il in the numb	oer of container	Sample Analysis Requested (5) (Fill in the number of containers for each test)
Project/Site Name: Plant Branch Ash Ponds - E		ш.	Fax#				Should this	1000	S		IN	IN			< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	A 30308						sample be considered:	be ed:		ЭС	OLt				Comments
Collected By: A Schaifthu ACC	Send Results To: SCS & Geosyntec	CS & Ge	osyntec Co	Contacts			)I)	r.qz	of Its	SM 2540 IA disəi	* sli	315, 932 ide			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field (3) N	Sample Matrix (4)	Radioactive yes, please sup isotopic info.)	(7) Known or possible Haza	Total number	EPA 300, 2 Total & B	EPA 6020, 6	S muibsA 6 948-WS Hu2 A MS			QC Task_Code: BRA-CCR- ASSMT-2023S1
BRA- PZ-135	21/97/10	22/0	1120	Ð	z	MG	7	2	80	>	>	>			field pH = $5.56$ field ferrous iron = $0.0_{\text{phy}}/L$
BRA- PZ-70I	52/92/10		220	0	3	MG	Z	2	00	>	>	>			
BRA-APE-FD-05	01/2	01/26/23	/	9	2	9	Z	2	50	>	>	>			1 1
BRA- APE-EB-10	2/10	21/20/13	0011	9	7	MA	2	Z	00	>	, >	>			field pH = $NA$ field ferrous iron = $NA$
BRA-								M.						#1 4	field pH =
D	Chain of Custody Signatures	natures						TAT	Reque	TAT Requested: Normal:	Norma	x Rush:		Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time	(	Received by (signed)	1	Date	Time		F	Fax Results: [ ] Yes	lts: [ ]		[x] No				
1/21/23	952	Contract of the second	126	187	138 1	031		elect De	liverab	Select Deliverable: [ ] C of A		[ ] QC Summary	nary [ ] level 1	11 [x] Level 2	[ ] Level 3 [ ] Level 4
JANG 1127183 X	7, 22	1	d	177	123	7	<b>Y</b>	Additional Remarks: For Lab Receiving 1	Il Rema	rks:	* Mets	Is: B,Ca,Sb,	Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,C	Co,Pb,Li,Mo,Se	* Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg
- For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Receipt & Revi	iew form (	SRR.)			S	ample Co	llection	Time Z	one: [>	[] Easter	n [ ] Pac	ific [ ] Cent	ral [ ] Mount	ther:
.) 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.	rield Duplicate, <b>EB</b> = Equipm yes the sample was field filter	ent Blank, M	S = Matrix S	oike Sampl not field fil	e, MSD = N	fatrix Spike	Duplicate S	iample, G	= Grab, C	= Compo	site				
[] 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).	WS=Surface Water, WW=Wa (i.e. 8260B, 6010B/7470A) ar	iste Water, W	'L=Leachate, containers pro	SO=Soil, 3	SE=Sedimen each (i.e. 820	rt, SL=Slud 60B - 3, 60	ge, WQ=W2	ater Qualit	y Control	Matrix					
1.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, SI = Sodium Thiosuliate, If no preservative is added = leave field blank NY ENDIAN OR POSCIBLE HAZABDS	Characteristic Uses	, SA = Sulfur	Ic Acid, AA = Ascorb	Ascorbic	Acid, HX =	Hexane, S.	mnipos = 1	n Thiosulfat	e, If no pr	eservative	is added	leave field bla	JK	DI.	J 1. 1 1. 1 1
ACRA Metals  As = Arsenic Hg= Mercury  Se = Selenium Ag= Silver  Cr = Chromium MR= Misc. RCRA metals  Db = Lead	Claracter factors of the Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated PCB = Polychlorinated biphenyls	itable ed	Listed waste LW= Listed W (F, K, P and U-l Waste code(s):	Listed waste LW= Listed Waste (F,K,P and U-liste Waste code(s):	Listed waste LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):	88.)		Other / Unknown  OT= Other / Unknown  Misc. High/low pH, asb  misc. health hazards, e  Description:	er / Unk h/low pı lth hazc	Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	tos, ber	Other / Unknown  OT= Other / Unknown  (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  Description:	ints, other	rieuse proviu below regardi disposal conc sample (s), typ matrices, etc.)	rease provue any avantona aetans below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Page: 2 of 2.  Project #	0	GEL gel.com		DOF	CC Chain of Custody and Analytical Request	SS LLC Radiobioass ytical Re	ay I Specie	(C)	Ø	318	GEL 2040 Char Phon	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	LLC 07 171	
	GEL Work Order Number:	H		GEL Pro	GEL Project Manager: Erin Trent	ıger: Erin					Fax:	Fax: (843) 766-1178	8	
Client Name: GA Power		Phone # 40	404-506-7116	91			Sample	Analysis Requested (5)	Reque		I in the m	mber of cont	(Fill in the number of containers for each test)	
Project/Site Name: Plant Branch Ash Ponds - E		Fax#			S	Should this	W-2	Œ	IN		(H)		< Preservative Type (6)	
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	801				» 5	sample be considered:	nənis)	(d)		07	40		Comments	
Collected By: A Sulm Heev ACC Se	Send Results To: SCS & Geosyntec	eosyntec Co	Contacts		л)			IA dasəl	10109 کے ااد	905 12, 932	Ni h		Note: extra sample is required for sample specific	fic
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2) Fi	Field S Filtered <sup>(3)</sup> Mi	Sample Matrix (4)	isotopic info.) (7) Known or	Total numbe	CI, F, SO4, EPA 300, : Total & B	Eby 6020,	NS	CI, F, SC EPA 300,		QC Task_Code: BRA-CCR- ASSMT-2023S1	. <del>.</del>
BRA- PZ-52D	51/25/10	1424	Ŋ	z	NG DM	3	7	>	>				field pH = $7$ i 4	14
BRA- PZ-520	01/26/23 1240	0771	0	Z	NG )	2	W	>		>	>		field pH = 7 + 1900	1 2
BRA-				r i									field pH =	
BRA-							Ten -				E ==		field pH = field ferrous iron =	
BRA-														
Chain	Chain of Custody Signatures				-	T	TAT Requested:	nested:	Normal:	x Rush:		Specify:	(Subject to Surcharge)	
Relinquished By (Signed) Date Time	Received by (signed)	) pg(	Date	Time		Fax R	Fax Results: [ ] Yes		[x] No					
1 ha with 01/27/23 00	150 1991	Jan	167	123	086	Select	Delivera	ble: [ ] C	of A	Select Deliverable: [ ] C of A [ ] QC Summary		[ ] level 1 [x] Level 2	wel 2 [ ] Level 3 [ ] Level 4	
24 Man 1/21/83 D	13 2 1/2	Z Z	127	123	213	Additi	Additional Remarks:	iarks:	* Meta	s: B,Ca,Sb,	s,Ba,Be,Co	,Cr,Co,Pb,Li,N	* Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg	
3   1	3	(SRR.)		=	Sam	For Lab Receiving Use Only: Cus Sample Collection Time Zone: [x] Eastern	ab Recei	ving Use Zone:	Only: C	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes ollection Time Zone: [x] Eastern [ ] Pacific [ ] Centra	Intact? [ fic [ ] (	-	[ ] No Cooler Temp: °C	176
1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, RD = 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.	uplicate, $EB = Equipment Blank$ , e sample was field filtered or - $N -$	MS = Matrix S for sample was	oike Sample, not field filts	MSD = Ma	rrix Spike Du	licate Sample	, G = Grab	, C = Comp	osite			0		
4.) 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 5.) Sample Analysis Requested. Analytical method requested (i.e. 82608, 60108/7470A) and number of containers provided for each (i.e. 82608 - 3, 60108/74704 - 1).	urface Water, WW=Waste Water, 60B, 6010B/7470A) and number of	WL=Leachate,	SO=Soil, SI	E=Sediment, ich (i.e. 8260	SL=Sludge, 1	WQ=Water Q	uality Cont	ol Matrix						_
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	H = Sodium Hydroxide, SA = Sulf	inric Acid, AA =	Ascorbic A	cid, HX = H	exane, ST = S	odium Thiosu	ılfate, If no	preservative	is added =	leave field bla	ᅺ			-
R POSSIBLE HAZARDS  Hg= Mercury See Selenium	Characteristic Hazards FL = Flammable/Ignitable CO = Corrosive RE = Reactive	Listed Waste LW= Listed W (F,K,P and U-Waste code(s))	Listed Waste LW= Listed Waste (F,K,P and U-listea Waste code(s):	Listed Waste LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):		Other OT= C (i.e.: H misc. h Descrip	Other OT= Other / Unknown (i.e.: High/low pH, asb misc. health hazards, e Description:	Other OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	stos, bery	Other OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	ınts, other	Please provid below regard disposal conc sample(s), typ matrices, 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 matrices, etc.)	ą,
Cd = Cadmum Ag= Silvet  Cr = Chromium MR= Misc. RCRA metals PC  Pb = Lead	PCB = Polychlorinated , biphenyls				Í									
							Ì							

Client: PC				sn	SAMPLE RECEIPT & REVIEW FORM  G/AR/COC/Work Order:
Da	ceived By: Thyasia Tatum			1-	
Carrier and Tracking Number		Da	Date Received:  Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other		
Sus	pected Hazard Information	Kg.	Š	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)S	hipped as a DOT Hazardous?		$\vee$	Hai	zard Class Shipped:  If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
	Did the client designate the samples are to be sived as radioactive?		/	1	C notation or radioactive stickers on containers equal client designation.
	Did the RSO classify the samples as oactive?	4	/	Ma /	ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
	Did the client designate samples are hazardous?		/	1 /	Constation or hazard labels on containers equal client designation.  For E is yes, select Hazards below.  PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other;
E) I	Did the RSO identify possible hazards?	1 6	V		White Address
1	Sample Receipt Criteria Shipping containers received intact and scaled?	\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	×	ž	Comments/Qualifiers (Required for Non-Conforming Items)  Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	V	7		Preservation Method: Wet Ice Ide Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:
4	Daily check performed and passed on IR temperature gun?			•	Temperature Device Serial #: IR2-20 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?				Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	V			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			レ	If Y.s., 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?	V			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	レ			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	V			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?				Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?  COC form is properly signed in	~		/	Circle Applicable: Not relinquished Other (describe)
13 COC form is properly signed in relinquished/received sections?  Comments (Use Continuation Form if needed):					

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 22 February 2023

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	SC000122023-4
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
	1 2,00

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Utah NELAP	SC000122022-37
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



a member of The GEL Group INC



gel.com

February 10, 2023

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

Re: Branch CCR Groundwater Compliance APE Work Orders: 608815,608614,608422 and 608418

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 25, 2023, January 26, 2023 and January 27, 2023. 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: GPC82177-0006

Enclosures



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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608614 GEL Work Order: 608614

#### The Qualifiers in this report are defined as follows:

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

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

Page 2 of 130 SDG: 608815

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# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608422 GEL Work Order: 608422

#### The Qualifiers in this report are defined as follows:

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

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

Page 3 of 130 SDG: 608815

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# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608815 GEL Work Order: 608815

#### The Qualifiers in this report are defined as follows:

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

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

Page 4 of 130 SDG: 608815

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

# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608418 GEL Work Order: 608418

#### The Qualifiers in this report are defined as follows:

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

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

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

# Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-04

Sample ID: 608422001

Matrix: WG

Collect Date: 24-JAN-23 12:00 Receive Date: 25-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liqu	iid "As Recei	ived"									
Fluoride		0.204	0.0330	0.100	mg/L		1	HXC1	01/25/23	1827 2374002	1
Chloride		28.7	2.68	8.00	mg/L		40	HXC1	01/26/23	0210 2374002	2
Sulfate		375	5.32	16.0	mg/L		40				
Nitrate-N	U	ND	0.0660	0.200	mg/L		2	HXC1	01/26/23	0241 2374002	3
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu	ary, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/27/23	1057 2374419	4
Metals Analysis-ICP-M	S										
SW846 3005A/6020B ".		"									
Calcium		116	0.800	2.00	mg/L	1.00	10	SKJ	02/02/23	1226 2374301	5
Manganese		2.63	0.0100	0.0500	mg/L	1.00					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00		SKJ	02/01/23	1941 2374301	6
Barium		0.0375	0.000670	0.00400	mg/L	1.00					
Cadmium	J	0.000505	0.000300	0.00100	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.0577	0.000300	0.00100	mg/L	1.00	1				
Iron	U	ND	0.0330	0.100	mg/L	1.00	1				
Potassium		14.3	0.0800	0.300	mg/L	1.00	1				
Selenium	J	0.00468	0.00150	0.00500	mg/L	1.00	1				
Sodium		36.5	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00		SKJ	02/03/23	1550 2374301	7
Beryllium		0.00236	0.000200	0.000500	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Lithium		0.0120	0.00300	0.0100	mg/L	1.00					
Magnesium		15.2	0.0100	0.0300	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00			00/00/00	1104 0071001	0
Boron		1.17	0.0520	0.150	mg/L	1.00	10	SKJ	02/03/23	1436 2374301	8
Solids Analysis											
SM2540C Dissolved So	olids "As Rec	eived"									
Total Dissolved Solids		611	2.38	10.0	mg/L			CH6	01/31/23	1235 2376170	9
Spectrometric Analysis											
SM 4500-S(2-) D Sulfid	de "As Recei	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	JW2	01/30/23	1543 2374521	10

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

### Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-04 Project: GPCC00101 Sample ID: 608422001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Analys	sis									
SM 2320B Total Alkalir	nity "As Rece	eived"								
Alkalinity, Total as CaCO3	J	3.40	1.45	4.00	mg/L		MS3	01/28/23	1258 2375518	11
Bicarbonate alkalinity (CaCO3	3) J	3.40	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L					
The following Prep Met	hods were pe	erformed:								
Method	Description	1		Analyst	Date	,	Time	Prep Batch		
SW846 3005A	ICP-MS 3005	A PREP	]	LG2	01/26/23	(	0815	2374300		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid	j	RM4	01/26/23		1222	2374418		

#### 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 4500-S (2-) D	
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

Page 7 of 130 SDG: 608815

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

### Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-07

Sample ID: 608422002

Matrix: WQ

Collect Date: 24-JAN-23 14:00 Receive Date: 25-JAN-23 Collector: Client

Parameter **Oualifier** DL RL Units PF DF Analyst Date Time Batch Method Result Ion Chromatography EPA 300.0 Anions Liquid "As Received" Chloride ND 0.0670 0.200 mg/L HXC1 01/25/23 1858 2374002 1 ND Fluoride U 0.0330 0.100 mg/L 1 Nitrate-N U ND 0.0330 0.100 mg/L 1 Sulfate U ND 0.133 0.400mg/L1 Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury 0.0000670 0.000200 mg/L 1.00 1 JP2 01/27/23 1059 2374419 2 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received" Antimony ND 0.00100 0.00300 mg/L 1.00 1 SKJ 02/01/23 1944 2374301 3 Barium U ND 0.0006700.00400mg/L 1.00 1 U 0.000300 0.00100 Cadmium ND mg/L 1.00 1 Calcium U ND 0.0800 0.200 mg/L1.00 1 Chromium U ND 0.00300 0.0100 mg/L1.00 1 mg/L Cobalt U ND 0.000300 0.001001.00 1 U 0.100 1.00 Iron ND 0.0330 mg/L U ND 0.00100 0.00500mg/L 1.00 1 Manganese U Potassium ND 0.08000.300 mg/L 1.00 1 U ND 0.00150 0.00500 1.00 Selenium mg/L 1 U 0.250 ND mg/L1.00 1 Sodium 0.0800 mg/L Thallium U ND 0.000600 0.002001.00 1 0.00500 02/03/23 1456 2374301 Arsenic U ND 0.00200 mg/L 1.00 1 SKJ U ND 0.000200 0.000500 1.00 Beryllium mg/L 1 Boron U ND 0.00520 0.0150 mg/L1.00 1 U ND 0.002001.00 Lead 0.000500 mg/L 1 U 1.00 Lithium ND 0.00300 0.0100 mg/L1 Magnesium U ND 0.0100 0.0300 1.00 1 mg/L 0.00100 Molybdenum ND 0.000200mg/L 1.00 Solids Analysis SM2540C Dissolved Solids "As Received" Total Dissolved Solids ND 2.38 10.0 CH6 01/31/23 1235 2376170 5 mg/L Spectrometric Analysis SM 4500-S(2-) D Sulfide "As Received" 0.0330 Total Sulfide ND 0.100 mg/L JW2 01/30/23 1543 2374521

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

### Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-07 Project: GPCC00101 Sample ID: 608422002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Anal	ysis									
SM 2320B Total Alkal	linity "As Rec	eived"								
Alkalinity, Total as CaCO3	J	2.20	1.45	4.00	mg/L		MS3	01/28/23	1301 2375518	7
Bicarbonate alkalinity (CaC	O3) J	2.20	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO	3) U	ND	1.45	4.00	mg/L					
The following Prep Me	ethods were pe	erformed:								
Method	Description	n		Analyst	Date		Time F	rep Batch		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23		1222 2	374418		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23		0815 2	374300		
The following Analyti	ical Methods v	were performed:								
Method	Description				F	Analy	st Commen	its		

Method	Description
1	EPA 300.0
2	SW846 7470A
3	SW846 3005A/6020B
4	SW846 3005A/6020B
5	SM 2540C
6	SM 4500-S (2-) D
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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

# Certificate of Analysis

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Sample ID: 608815001

Matrix: WG

Collect Date: 26-JAN-23 11:20 Receive Date: 27-JAN-23 Collector: Client

Field Data   Client collected Field pH "As Received"   S56	Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Perrous Iron "As Reciver   Field Perrous Iron "As Reciver   Field Perrous Iron   Role   Role	Field Data											
Field Perrous Iron "As Reciver   Field Perrous Iron "As Reciver   Field Perrous Iron   Role   Role	Client collected Field	d pH "As Recei	ved"									
Field Ferrous Iron		1				SU			EOS1	01/26/23	1120 2375357	1
Field Ferrous Iron	GEL Field Ferrous Ir	on "As Receive	ed"									
Chloride						mg/L			EOS1	01/26/23	1120 2375357	2
Page	Ion Chromatography					Ü						
Chloride			ived"									
Fluoride		14010 11511000		0.0670	0.200	mg/L		1	JLD1	01/27/23	1640 2375453	3
Nitrate-N		U				_		1				
Sulfate   75.3   1.33   4.00   mg/L   1.00	Nitrate-N	J	0.0655	0.0330	0.100	-		1				
Mercury	Sulfate			1.33	4.00	_		10	JLD1	01/27/23	2238 2375453	4
Mercury   ND   ND   N.0000670   N.000200   mg/L   ND   N.00131/23   N.00   N.00131/23   N.00   N.00131/23   N.00   N.00131/23   N.001	Mercury Analysis-CV	VAA										
Mercury   ND   ND   ND   ND   ND   ND   ND   N	7470 Cold Vapor Me	ercury, Liquid ".	As Received"									
Metals Analysis-ICP-MS           SW846 3005A/6020B "As Received"           Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         01/31/23         2345         2375511         6           Arsenic         J         0.00388         0.000200         0.00400         mg/L         1.00         1         SKJ         01/31/23         2345         2375511         6           Cadmium         0.0525         0.000670         0.00400         mg/L         1.00         1         -	_			0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1050 2375754	5
Namion	•					J						
Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         01/31/23         2345         2375511         6           Arsenic         J         0.00388         0.00200         0.00500         mg/L         1.00         1         L         C         2345         2375511         6           Barium         0.0525         0.00670         0.00400         mg/L         1.00         1         L	•		"									
Arsenic         J         0.00388         0.00200         0.00500         mg/L         1.00         1           Barium         0.0525         0.000670         0.00400         mg/L         1.00         1           Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         16.8         0.0800         0.200         mg/L         1.00         1           Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00330         0.0100         mg/L         1.00         1           Iron         U         ND         0.00330         0.100         mg/L         1.00         1           Lead         U         ND         0.00330         0.100         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00800         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.0500         mg/L				0.00100	0.00300	mg/L	1.00	1	SKJ	01/31/23	2345 2375511	6
Barium         0.0525         0.000670         0.00400         mg/L         1.00         1           Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         16.8         0.0800         0.200         mg/L         1.00         1           Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00300         0.0100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Lead         U         ND         0.00330         0.100         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         mg/L         1.00         1           Sodium         I         I         ND         0.00800         0.0250 <td< td=""><td>•</td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td>0 - 7 - 7 - 7</td><td></td><td></td></td<>	•					_				0 - 7 - 7 - 7		
Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         16.8         0.0800         0.200         mg/L         1.00         1           Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00300         0.0100         mg/L         1.00         1           Iron         U         ND         0.00330         0.100         mg/L         1.00         1           Lead         U         ND         0.00350         0.00200         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         J         ND         0.00800         0.250         mg/L         1.00         1           Beryllium         J         0.00422         0.000500						_		1				
Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00300         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           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7	Cadmium	U	ND	0.000300	0.00100		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           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1	Calcium		16.8	0.0800	0.200	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           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.00100	Chromium		0.0153	0.00300	0.0100	mg/L	1.00	1				
Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00	Cobalt	U		0.000300	0.00100		1.00	1				
Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	Iron	U				mg/L		1				
Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1         Image: Imag	Lead	U				_		1				
Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1         Image: Control of the	_	J				-						
Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1         Image in the contract of the contr												
Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.000500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1		J										
Beryllium         J         0.000422         0.000200         0.000500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1						_						
Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1						-			CITI	02/01/22	1004 0075511	-
Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	•					_			SKJ	02/01/23	1324 23/5511	1
Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1						_						
Molybdenum U ND 0.000200 0.00100 mg/L 1.00 1		U										
	-	TT										
	Solids Analysis	U	ND	0.000200	0.00100	mg/L	1.00	1				

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Project: GPCC00101
Sample ID: 608815001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	Analy	yst Date	Time Batch	Method
Solids Analysis											
SM2540C Dissolved S	Solids "As Rec	ceived"									
Total Dissolved Solids		148	2.38	10.0	mg/L		(	CH6	02/02/23	1428 2377347	8
Spectrometric Analysi	is										
SM 4500-S(2-) D Sulf	fide "As Recei	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 1	HH2	02/02/23	1146 2376122	9
Titration and Ion Anal	lysis										
SM 2320B Total Alka	linity "As Rec	eived"									
Alkalinity, Total as CaCO3		20.6	1.45	4.00	mg/L		]	EK1	02/06/23	1521 2378067	10
Bicarbonate alkalinity (CaC	CO3)	20.6	1.45	4.00	mg/L						
Carbonate alkalinity (CaCO	03) U	ND	1.45	4.00	mg/L						
The following Prep M	lethods were p	erformed:									
Method	Descriptio	n		Analyst	Date		Time	Pı	rep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/30/23		0830	23	75510		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	01/30/23		1128	23	75753		
The following Analyt	rical Mathode v	ware performed:									

The following Analytical Methods were performed:

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

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Project: GPCC00101
Sample ID: 608815001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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# Certificate of Analysis

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-70I Sample ID: 608815002

Matrix: WG

Collect Date: 26-JAN-23 10:22 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pH	I "As Receiv	ved"									
Field pH		5.60			SU			EOS1	01/26/23	1022 237535	7 1
GEL Field Ferrous Iron '	"As Receive	ed"									
Field Ferrous Iron		0			mg/L			EOS1	01/26/23	1022 237535	7 2
Ion Chromatography					8						
EPA 300.0 Anions Liqui	id "As Recei	ived"									
Fluoride	U	ND	0.0660	0.200	mg/L		2	JLD1	01/28/23	0037 237545	3 3
Chloride	C	5.37	0.0670	0.200	mg/L		1	JLD1	01/27/23	1709 237545	
Nitrate-N		0.275	0.0330	0.100	mg/L		1				
Sulfate		147	2.66	8.00	mg/L		20	JLD1	01/28/23	0007 237545	3 5
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu		As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1052 237575	4 6
Metals Analysis-ICP-MS	S				Ü						
SW846 3005A/6020B "A		"									
Beryllium	J	0.000217	0.000200	0.000500	mg/L	1.00	1	SKJ	02/01/23	1340 237551	1 7
Lithium	J	0.00381	0.00300	0.0100	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Magnesium		11.9	0.0500	0.150	mg/L	1.00	5	SKJ	02/01/23	1349 237551	1 8
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0010 237551	1 9
Arsenic	J	0.00366	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0250	0.000670	0.00400	mg/L	1.00	1				
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		33.4	0.0800	0.200	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt	J	0.000682	0.000300	0.00100	mg/L	1.00	1				
Iron	J	0.0364	0.0330	0.100	mg/L	1.00	1				
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1				
Manganese		0.271	0.00100	0.00500	mg/L	1.00	1				
Potassium		4.27	0.0800	0.300	mg/L	1.00	1				
Selenium		0.00921	0.00150	0.00500	mg/L	1.00	1				
Sodium	**	23.0	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1	CIZI	02/02/22	0007 007551	1 10
Boron		1.04	0.104	0.300	mg/L	1.00	20	SKJ	02/02/23	0827 237551	1 10
Solids Analysis											

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-70I Project: GPCC00101 Sample ID: 608815002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		272	2.38	10.0	mg/L		CH6	02/02/23	1428 2377347	11
Spectrometric Analys	sis									
SM 4500-S(2-) D Sul	lfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 HH2	02/02/23	1146 2376122	12
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	14.4	1.45	4.00	mg/L		EK1	02/06/23	1524 2378067	13
Bicarbonate alkalinity (Ca	CO3)	14.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaCo	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were p	erformed:								
Method	Description	n		Analyst	Date	Τ	ime F	rep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/30/23	0	830 2	375510		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/30/23	1	128 2	375753		
TT1 6 11 : A 1	13 6 . 1									

**Analyst Comments** 

The following Analytical Methods were performed:

Method	Description
1	SM 4500-H B/SW846 9040C, SM 2550B
2	GEL Field Method
3	EPA 300.0
4	EPA 300.0
5	EPA 300.0
6	SW846 7470A
7	SW846 3005A/6020B
8	SW846 3005A/6020B
9	SW846 3005A/6020B
10	SW846 3005A/6020B
11	SM 2540C
12	SM 4500-S (2-) D
13	SM 2320B

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-70I Project: GPCC00101
Sample ID: 608815002 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-05

Sample ID: 608815003

Matrix: WG

Collect Date: 26-JAN-23 12:00 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst I		Analyst Date Time Bate		Method
Ion Chromatography											
EPA 300.0 Anions Lic	quid "As Recei	ived"									
Sulfate	•	74.9	1.33	4.00	mg/L		10	JLD1	01/28/23	0107 2375453	1
Chloride		3.37	0.0670	0.200	mg/L		1	JLD1	01/27/23	1739 2375453	2
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Nitrate-N	J	0.0646	0.0330	0.100	mg/L		1				
Mercury Analysis-CV	AA										
7470 Cold Vapor Mer	cury, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1057 2375754	3
Metals Analysis-ICP-l	MS										
SW846 3005A/6020B		"									
Boron	J	0.00883	0.00520	0.0150	mg/L	1.00	1	SKJ	02/02/23	0829 2375511	4
Beryllium	J	0.000415	0.000200	0.000500	mg/L	1.00	1	SKJ	02/01/23	1343 2375511	5
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Magnesium		9.54	0.0100	0.0300	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0014 2375511	6
Arsenic	J	0.00470	0.00200	0.00500	mg/L	1.00					
Barium		0.0524	0.000670	0.00400	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00					
Calcium		16.7	0.0800	0.200	mg/L	1.00					
Chromium		0.0152	0.00300	0.0100	mg/L	1.00					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Manganese	J	0.00195	0.00100	0.00500	mg/L	1.00					
Potassium		4.50	0.0800	0.300	mg/L	1.00					
Selenium	J	0.00190	0.00150	0.00500	mg/L	1.00					
Sodium Thallium		12.1 ND	0.0800	0.250	mg/L	1.00 1.00					
	U	ND	0.000600	0.00200	mg/L	1.00	1				
Solids Analysis											
SM2540C Dissolved S	Solids "As Rec										
Total Dissolved Solids		145	2.38	10.0	mg/L			CH6	02/02/23	1428 2377347	7
Spectrometric Analysi											
SM 4500-S(2-) D Sulf	fide "As Recei										
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	HH2	02/02/23	1146 2376122	8

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### Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-05 Project: GPCC00101 Sample ID: 608815003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	KL	Units	PF	DF Anal	yst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	20.4	1.45	4.00	mg/L		EK1	02/06/23	1525 2378067	9
Bicarbonate alkalinity (Ca	CO3)	20.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were pe	erformed:								
Method	Description	n		Analyst	Date	Т	Γime P	rep Batch		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/30/23	1	128 2:	375753		
SW846 3005A	ICP-MS 3005	SA PREP		LG2	01/30/23	0	0830 23	375510		
The following Analy	ytical Methods v	vere performed:								

The following	Analy	tical i	Methods	were	nerformed:
The following	Anary	ucai.	wichious	WCIC	periornica.

The following A	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 4500-S (2-) D									
9	SM 2320B									

#### **Notes:**

Column headers are defined as follows:

Lc/LC: Critical Level DF: Dilution Factor 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

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-10

Sample ID: 608815004

Matrix: WQ

Collect Date: 26-JAN-23 11:00
Receive Date: 27-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liq	uid "As Recei	ved"									
Chloride	U	ND	0.0670	0.200	mg/L		1	JLD1	01/27/23	1809 2375453	1
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Nitrate-N	U	ND	0.0330	0.100	mg/L		1				
Sulfate	U	ND	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	AA										
7470 Cold Vapor Merc	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1058 2375754	2
Metals Analysis-ICP-M	4S										
SW846 3005A/6020B	"As Received	"									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0018 2375511	3
Arsenic	J	0.00409	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					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00					
Potassium	U	ND	0.0800	0.300	mg/L	1.00					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00					
Sodium	U	ND	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		SKJ	02/01/23	1345 2375511	4
Lithium	U	ND	0.00300	0.0100	mg/L	1.00					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00		CITI	00/00/00	0001 0075511	_
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	02/02/23	0831 2375511	5
Solids Analysis											
SM2540C Dissolved S	olids "As Rec	eived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/02/23	1428 2377347	6
Spectrometric Analysis											
SM 4500-S(2-) D Sulfi	de "As Receiv	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	HH2	02/02/23	1147 2376122	7

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### Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-10 Project: GPCC00101
Sample ID: 608815004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Ana	ılysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3 J	1.80	1.45	4.00	mg/L		EK1	02/06/23	1528 2378067	8
Bicarbonate alkalinity (Ca	CO3) J	1.80	1.45	4.00	mg/L					
Carbonate alkalinity (CaCo	O3) U	ND	1.45	4.00	mg/L					
The following Prep M	Methods were p	erformed:								
Method	Description	n		Analyst	Date		Time I	Prep Batch	l	
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/30/23		0830 2	2375510		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	01/30/23		1128 2	375753		
The fellowing Analy	tical Mathada	riana manfannadi								

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments	
Method	<b>.</b>	Anaryst 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 4500-S (2-) D		
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: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Sample ID: 608815005

Matrix: WG

Collect Date: 25-JAN-23 14:24 Receive Date: 27-JAN-23 Collector: Client Project: GPCC00101 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pl	H "As Receiv	ed"									
Field pH		7.14			SU			EOS1	01/25/23	1424 2375357	1
GEL Field Ferrous Iron	"As Receive	d"									
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1424 2375357	2
Mercury Analysis-CVA	A				C						
7470 Cold Vapor Mercu		As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1100 2375754	3
Metals Analysis-ICP-M	S				Č						
SW846 3005A/6020B ".		"									
Sodium	15 110001700	94.4	0.800	2.50	mg/L	1.00	10	SKJ	02/03/23	1014 2375511	4
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0021 2375511	
Arsenic	J	0.00368	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0171	0.000670	0.00400	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		46.3	0.0800	0.200	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.00249	0.000300	0.00100	mg/L	1.00	1				
Iron		0.220	0.0330	0.100	mg/L	1.00	1				
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1				
Manganese		0.0315	0.00100	0.00500	mg/L	1.00	1				
Potassium		8.93	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				
Boron		0.0362	0.00520	0.0150	mg/L	1.00	1	SKJ	02/02/23	0833 2375511	
Magnesium		9.93	0.0500	0.150	mg/L	1.00		SKJ	02/01/23	1352 2375511	
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		SKJ	02/01/23	1347 2375511	. 8
Lithium		0.0165	0.00300	0.0100	mg/L	1.00	1				
Molybdenum		0.0222	0.000200	0.00100	mg/L	1.00	1				
Solids Analysis											
SM2540C Dissolved So	lids "As Rec	eived"									
Total Dissolved Solids		443	2.38	10.0	mg/L			CH6	02/01/23	1305 2376741	9
The following Prep Met	hods were pe	erformed:									
Method	Description	1		Analyst	Date	,	Time	e Pı	ep Batch		_
SW846 3005A	ICP-MS 3005	A PREP		LG2	01/30/23	(	0830	23	75510		

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Project: GPCC00101 Sample ID: 608815005 Client ID: GPCC001

Parameter	Qualifier Result	DL	RL	Units	PF	DF	Analyst Date	Time Batch	Method
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid		RM4	01/30/23		1128	2375753		
The following Analyt	ical Methods were performed:								
Method	Description			A	naly	st Cor	nments		
1	SM 4500-H B/SW846 9040C, SM 2550B				-				
_									

1	SM 4500-H B/SW 840 9
2	GEL Field Method
3	SW846 7470A
4	SW846 3005A/6020B
5	SW846 3005A/6020B
6	SW846 3005A/6020B
7	SW846 3005A/6020B
8	SW846 3005A/6020B
9	SM 2540C

## 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

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### Certificate of Analysis

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Sample ID: 608815006

Matrix: WG

Collect Date: 26-JAN-23 12:40 Receive Date: 27-JAN-23 Collector: Client

DL RL Parameter **Oualifier** Units PF DF Analyst Date Time Batch Method Result Field Data Client collected Field pH "As Received" Field pH 7.14 SU EOS1 01/26/23 1240 2375357 1 GEL Field Ferrous Iron "As Received" Field Ferrous Iron 0 mg/L EOS1 01/26/23 1240 2375357 2 Ion Chromatography EPA 300.0 Anions Liquid "As Received" 2.00 JLD1 Chloride 12.3 0.670 10 01/28/23 0137 2375453 mg/L 3 Sulfate 142 1.33 4.00 10 mg/L Fluoride 0.0330 0.100 1.93 mg/L 1 JLD1 01/27/23 1839 2375453 Nitrate-N U ND 0.0330 0.100 mg/L Spectrometric Analysis SM 4500-S(2-) D Sulfide "As Received" Total Sulfide ND 0.0330 0.100 HH2 02/02/23 1147 2376122 mg/L 5 Titration and Ion Analysis SM 2320B Total Alkalinity "As Received" Alkalinity, Total as CaCO3 179 1.45 4.00 mg/L 02/06/23 1532 2378067 Bicarbonate alkalinity (CaCO3) 179 1.45 4.00 mg/L Carbonate alkalinity (CaCO3) U ND 1.45 4.00 mg/L The following Analytical Methods were performed:

 Method
 Description
 Analyst Comments

 1
 SM 4500-H B/SW846 9040C, SM 2550B

2 GEL Field Method 3 EPA 300.0 4 EPA 300.0 5 SM 4500-S (2-) D 6 SM 2320B

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Project: GPCC00101 Sample ID: 608815006 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-36S

Sample ID: 608614001

Matrix: WG

Collect Date: 25-JAN-23 15:53
Receive Date: 26-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Field Data												
Client collected Field pH	H "As Receiv	/ed"										
Field pH		5.64			SU			EOS1	01/25/23	1553	2374741	1
GEL Field Ferrous Iron	"As Receive	d"										
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1553	2374741	2
Ion Chromatography					C							
EPA 300.0 Anions Liqui	id "As Recei	ved"										
Sulfate	110 110001	237	2.66	8.00	mg/L		20	HXC1	01/27/23	0453	2374768	3
Chloride		7.93	0.0670	0.200	mg/L		1		01/26/23		2374768	4
Fluoride		0.183	0.0330	0.100	mg/L		1					
Nitrate-N		0.131	0.0330	0.100	mg/L		1					
Mercury Analysis-CVA	A											
7470 Cold Vapor Mercu	ry, Liquid "A	As Received"										
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1243	2375028	5
Metals Analysis-ICP-MS	S											
SW846 3005A/6020B "A		"										
Manganese	J	0.00205	0.00100	0.00500	mg/L	1.00	1	SKJ	02/09/23	1117	2374786	6
Boron		1.18	0.0520	0.150	mg/L	1.00	10	SKJ	02/08/23	1830	2374786	7
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1946	2374786	8
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0278	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		48.2	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00682	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					
Magnesium		20.1	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.84	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00237	0.00150	0.00500	mg/L	1.00	1					
Sodium		40.4	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	SKJ	02/07/23	1934	2374786	9
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Solids Analysis												

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Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-36S Project: GPCC00101

Sample ID: 608614001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF DF	Analy	st Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		418	2.38	10.0	mg/L		CH6	02/01/23	1135 2376740	10
Spectrometric Analys	sis									
SM 4500-S(2-) D Su	lfide "As Receiv	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L	1	JW2	01/30/23	1541 2375142	11
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	22.0	1.45	4.00	mg/L		MS3	02/07/23	1351 2379826	12
Bicarbonate alkalinity (Ca	CO3)	22.0	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were pe	erformed:								
Method	Description	n		Analyst	Date	Time	Pre	ep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23	0830	237	4785		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/27/23	0959	237	5027		

The following Analytical I	Methods were performed:
----------------------------	-------------------------

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	·	
2	GEL Field Method		
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 4500-S (2-) D		
12	SM 2320B		

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-36S Project: GPCC00101
Sample ID: 608614001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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# Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-37S

Sample ID: 608614002

Matrix: WG

Collect Date: 25-JAN-23 13:20 Receive Date: 26-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pl	H "As Receiv	/ed"									
Field pH		5.84			SU			EOS1	01/25/23	1320 2374741	1
GEL Field Ferrous Iron	"As Receive	d"									
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1320 2374741	2
Ion Chromatography					Ü						
EPA 300.0 Anions Liqu	iid "As Recei	ved"									
Nitrate-N		0.318	0.0660	0.200	mg/L		2	HXC1	01/26/23	2317 2374833	3
Chloride		1.92	0.0670	0.200	mg/L		1		01/26/23	1535 2374833	
Fluoride		0.114	0.0330	0.100	mg/L		1				
Sulfate	J	0.325	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	ιA										
7470 Cold Vapor Mercu	ary, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1245 2375028	5
Metals Analysis-ICP-M	S										
SW846 3005A/6020B "		"									
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	02/09/23	1052 2374786	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1834 2374786	
Arsenic	J	0.00300	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0247	0.000670	0.00400	mg/L	1.00	1				
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		3.65	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					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Magnesium		1.35	0.0100	0.0300	mg/L	1.00					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium		1.94	0.0800	0.300	mg/L	1.00					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1				
Sodium		4.85	0.0800	0.250	mg/L	1.00					
Thallium	U	ND ND	0.000600	0.00200	mg/L	1.00	1	CIZI	02/07/22	1027 2274796	0
Beryllium Lithium	U	ND ND	0.000200	0.000500	mg/L	1.00 1.00	1 1	SKJ	02/07/23	1937 2374786	8
	U	ND	0.00300	0.0100	mg/L	1.00	1				
Solids Analysis											

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Certificate of Analysis

Project:

**Analyst Comments** 

Report Date: February 9, 2023

GPCC00101

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-37S

Sample ID: 608614002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF 1	DF Ana	lyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved Sol	lids "As Rece	eived"								
Total Dissolved Solids		28.0	2.38	10.0	mg/L		CH6	02/01/23	1135 2376740	9
Spectrometric Analysis										
SM 4500-S(2-) D Sulfid	e "As Receiv	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW2	01/30/23	1542 2375142	10
Titration and Ion Analys	is									
SM 2320B Total Alkalir	nity "As Rece	eived"								
Alkalinity, Total as CaCO3		21.2	1.45	4.00	mg/L		MS3	02/07/23	1353 2379826	11
Bicarbonate alkalinity (CaCO3	3)	21.2	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L					
The following Prep Met	hods were pe	erformed:								
Method	Description	1		Analyst	Date	Т	ime I	Prep Batch		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/27/23	09	959 2	2375027		
SW846 3005A	ICP-MS 3005	A PREP		LG2	01/27/23	08	830 2	2374785		
The following Analytica	al Methods v	vere performed:								

	_	•	<u> </u>
Method			Description

1	$SM\ 4500\text{-H}\ B/SW846\ 9040C,\ SM\ 2550B$
2	GEL Field Method
3	EPA 300.0
4	EPA 300.0
5	SW846 7470A
6	SW846 3005A/6020B
7	SW846 3005A/6020B
8	SW846 3005A/6020B
9	SM 2540C
10	SM 4500-S (2-) D
11	SM 2320B

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Certificate of Analysis

Report Date: February 9, 2023

DF Analyst Date Time Batch Method

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Qualifier

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-37S Project: GPCC00101
Sample ID: 608614002 Client ID: GPCC001

RL

Units

PF

DL

Column headers are defined as follows:

Parameter

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Result

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-38S

Sample ID: 608614003

Matrix: WG

Collect Date: 25-JAN-23 13:53
Receive Date: 26-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field p	H "As Receiv	ved"									
Field pH		4.75			SU			EOS1	01/25/23	1353 2374741	1
GEL Field Ferrous Iror	n "As Receive	ed"									
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1353 2374741	2
Ion Chromatography											
EPA 300.0 Anions Liq	uid "As Recei	ived"									
Sulfate		291	5.32	16.0	mg/L		40	HXC1	01/27/23	0018 2374833	3
Chloride		6.53	0.0670	0.200	mg/L		1	HXC1	01/26/23	1606 2374833	4
Fluoride		0.708	0.0330	0.100	mg/L		1				
Nitrate-N	J	0.145	0.0660	0.200	mg/L		2	HXC1	01/26/23	2348 2374833	5
Mercury Analysis-CVA	AA										
7470 Cold Vapor Merc	ury, Liquid "	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1246 2375028	6
Metals Analysis-ICP-M	4S										
SW846 3005A/6020B	"As Received	"									
Boron		1.63	0.0520	0.150	mg/L	1.00	10	SKJ	02/08/23	1837 2374786	7
Manganese		1.65	0.0100	0.0500	mg/L	1.00	10				
Beryllium		0.00780	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1941 2374786	8
Lithium		0.0256	0.00300	0.0100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1949 2374786	9
Arsenic	J	0.00486	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0180	0.000670	0.00400	mg/L	1.00	1				
Cadmium	J	0.000430	0.000300	0.00100	mg/L	1.00	1				
Calcium		32.8	0.0800	0.200	mg/L	1.00	1				
Chromium	J	0.00362	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.158	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				
Magnesium		36.9	0.0100	0.0300	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Potassium		6.12	0.0800	0.300	mg/L	1.00	1				
Selenium		0.0279	0.00150	0.00500	mg/L	1.00	1				
Sodium		42.3	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1				
Solids Analysis											

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Certificate of Analysis

Report Date: February 9, 2023

GPCC00101

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-38S Project:

Sample ID: 608614003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	l Solids "As Rec	eived"								
Total Dissolved Solids		484	2.38	10.0	mg/L		CHe	02/01/23	1305 2376741	10
Spectrometric Analy	rsis									
SM 4500-S(2-) D Su	ılfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW2	01/30/23	1542 2375142	. 11
Titration and Ion An	alysis									
SM 2320B Total All	kalinity "As Rec	eived"								
Alkalinity, Total as CaCC	)3 J	3.00	1.45	4.00	mg/L		MS.	3 02/07/23	1357 2379826	12
Bicarbonate alkalinity (Ca	aCO3) J	3.00	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	CO3) U	ND	1.45	4.00	mg/L					
The following Prep l	Methods were pe	erformed:								
Method	Description	n		Analyst	Date	Τ	ime	Prep Batch		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/27/23	0	959	2375027		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23	0	830	2374785		
TE1 C 11 : A 1	136.1.1									

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

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-38S Project: GPCC00101
Sample ID: 608614003 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Sample ID: 608614004

Matrix: WG

Collect Date: 25-JAN-23 16:15
Receive Date: 26-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Field Data												
Client collected Field pH	I "As Receiv	ved"										
Field pH		7.10			SU			EOS1	01/25/23	1615	2374741	1
GEL Field Ferrous Iron	"As Receive	d"										
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1615	2374741	2
Ion Chromatography					C							
EPA 300.0 Anions Liqu	id "As Recei	ved"										
Sulfate	10 110 110001	285	5.32	16.0	mg/L		40	HXC1	01/27/23	0120	2374833	3
Nitrate-N	U	ND	0.0660	0.200	mg/L		2		01/27/23		2374833	4
Chloride		4.66	0.0670	0.200	mg/L		1		01/26/23		2374833	5
Fluoride		0.282	0.0330	0.100	mg/L		1					
Mercury Analysis-CVA	A											
7470 Cold Vapor Mercu		As Received"										
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1251	2375028	6
Metals Analysis-ICP-MS	S											
SW846 3005A/6020B "A		"										
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1953	2374786	7
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0536	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	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.204	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Magnesium		19.4	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.00234	0.000200	0.00100	mg/L	1.00	1					
Potassium		6.66	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		48.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1		00/05/00	1011	225.450.4	
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1944	2374786	8
Lithium		0.0207	0.00300	0.0100	mg/L	1.00	1					
Calcium		78.5	0.400	1.00	mg/L	1.00	5	SKJ	02/08/23		2374786	9
Boron		1.11	0.0520	0.150	mg/L	1.00	10	SKJ	02/08/23		2374786	10
Manganese		0.628	0.00100	0.00500	mg/L	1.00	1	SKJ	02/09/23	1121	2374786	11
Solids Analysis												

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Project: GPCC00101 Sample ID: 608614004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Anal	yst Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved So	olids "As Rec	eived"										
Total Dissolved Solids		517	2.38	10.0	mg/L			CH6	02/01/23	1305	2376741	12
Spectrometric Analysis												
SM 4500-S(2-) D Sulfie	de "As Recei	ved"										
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	JW2	01/30/23	1542	2375142	13
Titration and Ion Analy	rsis											
SM 2320B Total Alkali	nity "As Rec	eived"										
Alkalinity, Total as CaCO3		49.0	1.45	4.00	mg/L			MS3	02/07/23	1401	2379826	14
Bicarbonate alkalinity (CaCC	03)	49.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3	) U	ND	1.45	4.00	mg/L							
The following Prep Me	thods were pe	erformed:										
Method	Description	n		Analyst	Date		Time	P	rep Batch			
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23		0830	23	374785			
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/27/23		0959	23	375027			

The following Analytical Methods were performed	The	following	Analytical	Methods	were	performed
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Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	•	
2	GEL Field Method		
3	EPA 300.0		
4	EPA 300.0		
5	EPA 300.0		
6	SW846 7470A		
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 4500-S (2-) D		
14	SM 2320B		

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Project: GPCC00101 Sample ID: 608614004 Client ID: GPCC001

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

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-09

Sample ID: 608614005

Matrix: WQ

Collect Date: 25-JAN-23 12:45 Receive Date: 26-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liqu	uid "As Recei	ved"									
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	01/26/23	1707 2374833	1
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Nitrate-N	U	ND	0.0330	0.100	mg/L		1				
Sulfate	U	ND	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	λA										
7470 Cold Vapor Merci	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1253 2375028	2
Metals Analysis-ICP-M	IS										
SW846 3005A/6020B "	'As Received'	"									
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1948 2374786	3
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1855 2374786	4
Arsenic	J	0.00210	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				
Magnesium	U	ND	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				
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				
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	02/09/23	1055 2374786	5
Solids Analysis											
SM2540C Dissolved So	olids "As Rec	eived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/01/23	1305 2376741	6
Spectrometric Analysis											
SM 4500-S(2-) D Sulfic	de "As Receiv	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	JW2	01/30/23	1542 2375142	7

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### Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-09 Project: GPCC00101
Sample ID: 608614005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Titration and Ion Ana	lysis									
SM 2320B Total Alka	alinity "As Reco	eived"								
Alkalinity, Total as CaCO3	U	ND	1.45	4.00	mg/L		MS3	3 02/07/23	1403 2379826	8
Bicarbonate alkalinity (CaC	CO3) U	ND	1.45	4.00	mg/L					
Carbonate alkalinity (CaCC	D3) U	ND	1.45	4.00	mg/L					
The following Prep M	lethods were pe	erformed:								
Method	Description	1		Analyst	Date		Time	Prep Batch	l	
SW846 3005A	ICP-MS 3005	A PREP		LG2	01/27/23		0830	2374785		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/27/23		0959	2375027		
The following Analyst	tical Methods v	vere performed:								

C	J I	
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 4500-S (2-) D	
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

Project:

Client ID:

1.00 1

1.00 1

1.00 1

1.00 1

1.00

1.00

1.00 1

1.00

1

1

CH6

JW2

02/01/23 1305 2376741

01/30/23 1542 2375142

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-08

Sample ID: 608614006

Matrix: WQ

Collect Date: 25-JAN-23 16:45 Receive Date: 26-JAN-23 Collector: Client

U

U

U

U

U

U

U

ND

Parameter **Oualifier** DL RL Units PF DF Analyst Date Time Batch Method Result Ion Chromatography EPA 300.0 Anions Liquid "As Received" Chloride ND 0.0670 0.200 mg/L HXC1 01/26/23 1809 2374833 1 ND Fluoride U 0.0330 0.100 mg/L 1 Nitrate-N U ND 0.0330 0.100 mg/L 1 Sulfate U ND 0.133 0.400mg/L1 Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury 0.0000670 0.000200 mg/L 1.00 1 JP2 01/30/23 1255 2375028 2 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received" Boron ND 0.00520 0.0150 mg/L 1.00 1 SKJ 02/09/23 1057 2374786 3 Beryllium U ND 0.0002000.000500mg/L 1.00 1 SKJ 02/07/23 1952 2374786 4 U 0.00300 0.0100 mg/L 1.00 Lithium ND 1 1.00 Antimony U ND 0.00100 0.00300 mg/L1 SKJ 02/08/23 1859 2374786 5 mg/L Arsenic 0.00228 0.00200 0.00500 1.00 1 J mg/L Barium U ND 0.000670 0.004001.00 1 U 0.00100 1.00 Cadmium ND 0.000300 mg/L Calcium U ND 0.0800 0.200 mg/L 1.00 1 U 0.0100 Chromium ND 0.00300mg/L 1.00 1 Cobalt U ND 0.000300 0.00100 1.00 mg/L 1 U 0.100 ND 0.0330 mg/L1.00 1 Iron mg/L

0.000500

0.0100

0.00100

0.000200

0.0800

0.00150

0.000600

0.0800

2.38

0.0330

0.00200

0.00500

0.00100

0.00500

0.00200

0.300

0.250

10.0

0.100

0.0300

SM2540C Dissolved Solids "As Received"

SM 4500-S(2-) D Sulfide "As Received"

Lead

Magnesium

Manganese

Potassium

Selenium

Sodium

Thallium

Total Sulfide

Solids Analysis

Total Dissolved Solids

Spectrometric Analysis

Molybdenum

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### Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-08 Project: GPCC00101 Sample ID: 608614006 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alka	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3 U	ND	1.45	4.00	mg/L		MS3	02/07/23	1405 2379826	8
Bicarbonate alkalinity (Ca	CO3) U	ND	1.45	4.00	mg/L					
Carbonate alkalinity (CaCo	O3) U	ND	1.45	4.00	mg/L					
The following Prep M	Methods were po	erformed:								
Method	Description	n		Analyst	Date		Time P	rep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23		0830 23	374785		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/27/23		0959 23	375027		
The following Analy	tical Methods v	were performed:								

The following Analytical Methods v	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 4500-S (2-) D	
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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

### Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-17S

Sample ID: 608418001

Matrix: WG

Collect Date: 24-JAN-23 16:18
Receive Date: 25-JAN-23
Collector: Client

Parameter DL RL Units PF DF Analyst Date Time Batch Method **Oualifier** Result Field Data Client collected Field pH "As Received" Field pH 6.37 SU AJ1 01/24/23 1618 2373871 1 GEL Field Ferrous Iron "As Received" Field Ferrous Iron 0 mg/L AJ1 01/24/23 1618 2373871 2 Ion Chromatography EPA 300.0 Anions Liquid "As Received" 0.200 Chloride 6.31 0.0670 HXC1 01/25/23 1838 2373867 mg/L 1 3 Fluoride 0.216 0.0330 0.100 mg/L 1 0.200 Nitrate-N J 0.119 0.0660 mg/L 2 HXC1 01/26/23 0136 2373867 4 HXC1 01/26/23 Sulfate 153 2.66 8.00 mg/L 20 0107 2373867 Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury ND 0.0000670 0.000200 mg/L 1.00 1 JP2 01/27/23 1051 2374419 6 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received" Antimony ND 0.00100 0.00300 mg/L 1.00 1 SKI 02/01/23 1926 2374301 Barium 0.0422 0.000670 0.00400 1.00 mg/L 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Calcium 41.3 0.0800 0.200 mg/L 1.00 1 0.00886 0.0100 mg/LChromium J 0.00300 1.00 1 ND 0.00100 mg/L Cobalt U 0.000300 1.00 1 Iron U ND 0.0330 0.100 mg/L 1.00 1 Manganese U ND 0.001000.00500 mg/L 1.00 Potassium 1.08 0.0800 0.300 mg/L 1.00 1 0.00178 0.00500Selenium J 0.00150 mg/L 1.00 1 Sodium 0.250 25.5 0.0800 mg/L 1.00 1 Thallium U ND 0.000600 0.00200 mg/L1.00 1 Arsenic U ND 0.00200 0.00500 mg/L 1.00 1 SKJ 02/03/23 1453 2374301 1.00 Beryllium U ND 0.000200 0.000500 mg/L 1 Boron 0.0326 0.00520 0.0150 mg/L 1.00 1 ND 0.002001.00 Lead U 0.000500 mg/L 1 Lithium U ND 0.00300 0.0100 mg/L 1.00 1 26.1 0.0100 0.0300 mg/L1.00 Magnesium 1 Molybdenum U ND 0.000200 0.00100 mg/L 1.00

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Solids Analysis

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

Certificate of Analysis

Report Date: February 7, 2023

GPCC00101

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-17S Project:

Sample ID: 608418001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved S	Solids "As Rec	eived"								
Total Dissolved Solids		344	2.38	10.0	mg/L		CF	H6 01/31/23	1235 2376170	9
Spectrometric Analysi	S									
SM 4500-S(2-) D Sulf	ide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW	72 01/30/23	1543 2374521	10
Titration and Ion Anal	ysis									
SM 2320B Total Alka	linity "As Rec	eived"								
Alkalinity, Total as CaCO3	-	81.4	1.45	4.00	mg/L		EK	1 01/30/23	1543 2375521	11
Bicarbonate alkalinity (CaC	O3)	81.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO	(3) U	ND	1.45	4.00	mg/L					
The following Prep M	ethods were po	erformed:								
Method	Description	n		Analyst	Date	Τ	ime	Prep Batch	Į.	
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23	1	222	2374418		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23	0	815	2374300		
The following Analyt	ical Methods v	vere performed:								

The following F	tharytical Methods were performed.		
Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	·	
2	GEL Field Method		
3	EPA 300.0		
4	EPA 300.0		
5	EPA 300.0		
6	SW846 7470A		
7	SW846 3005A/6020B		
8	SW846 3005A/6020B		
9	SM 2540C		
10	SM 4500-S (2-) D		
11	SM 2320B		

**Notes:** 

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

Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-17S Project: GPCC00101
Sample ID: 608418001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

# Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-33S

Sample ID: 608418002

Matrix: WG

Collect Date: 24-JAN-23 13:40 Receive Date: 25-JAN-23 Collector: Client

Priest   P	Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Persons Iron "As Received Field Persons Iron "As Recei	Field Data											
Field Persons Iron "As Received Field Persons Iron "As Recei	Client collected Field	d pH "As Recei	ved"									
Field Ferrous Iron "Na Received Front Property of State 1		1				SU			AJ1	01/24/23	1340 2373871	1
Field Ferrous Iron   Field F		on "As Receive	ed"									
Parameter   Para						mg/L			AJ1	01/24/23	1340 2373871	2
Fluoride	Ion Chromatography					8						
Fluoride			ived"									
Nitrate-N		iquia 115 iteee		0.0330	0.100	mg/L		1	HXC1	01/25/23	1908 2373867	3
Chloride		J				_		1	111101	01/23/23	1700 2373007	5
Sulfate   375   5.32   16.0   mg/L   3   3   3   3   3   3   3   3   3		-				_		40	HXC1	01/26/23	0206 2373867	4
Mercury Analysis-CVAA    7470 Cold Vapor Mercury, Liquid "As Received"   8	Sulfate					-						
7470 Cold Vapor Mercury, Liquid "As Received"           Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         01/27/23         1052         2374419         5           Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         01/27/23         1052         2374401         5           SW846 3005A/6020B "As Received"           Boron         1.19         0.0520         0.150         mg/L         1.00         10         SKJ         02/01/23         1427         2374301         6           Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         02/01/23         1342         2374301         6           Antimony         U         ND         0.00300         0.00100         mg/L         1.00         1         SKJ         02/01/23         374301         7           Barium         J. 0.00368         0.000000         0.00100         mg/L         1.00         1         5         5         5         5         5         5         5         4 <t< td=""><td>Mercury Analysis-C'</td><td>VAA</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Mercury Analysis-C'	VAA										
Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         01/27/28         1052         2374419         5           Metals Analysis-ICP-MS         SW846 3005A/6020B "As Received"           Boron         1.19         0.0520         0.150         mg/L         1.00         10         SKJ         02/03/23         1427         2374301         6           Antimony         U         ND         0.00100         0.00400         mg/L         1.00         10         SKJ         02/03/23         1427         2374301         6           Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         5         4         574301         6           Cadmium         J         0.00482         0.000300         0.0100         mg/L         1.00         1         1         1         4         <	• •		As Received"									
Metals Analysis-ICP-MS           SW846 3005A/6020B "As Received"         1.19         0.0520         0.150         mg/L         1.00         10         SKJ         02/03/23         1427         2374301         6           Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         02/01/23         1427         2374301         6           Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         SKJ         02/01/23         193         2374301         6           Cadmium         J         0.0368         0.000300         0.00100         mg/L         1.00         1	-	• •		0.0000670	0.000200	mg/L	1.00	1	JP2	01/27/23	1052 2374419	5
SW846 3005 A/6020B "As Received"   Boron	•		T.D	0.0000070	0.000200		1.00	•	012	01/2//20	1002 2071119	
Boron   1.19	•		1"									
Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         02/01/23         1930         2374301         7           Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         L         V         V         V         0.00000         0.00100         mg/L         1.00         1         L         V         V         V         V         0.00300         0.00100         mg/L         1.00         1         L         V		D AS RECEIVED		0.0520	0.150	ma/I	1.00	10	CVI	02/02/22	1427 2274201	6
Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         Image: Control of the control o		ĪĪ				_						
Cadmium         J         0.000482         0.000300         0.00100         mg/L         1.00         1           Chromium         U         ND         0.00300         0.0100         mg/L         1.00         1           Cobalt         0.0582         0.000300         0.00100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Potassium         J         0.00490         0.0330         0.100         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.00600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         1         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         1         SKJ         02/03/23 <td>•</td> <td>O</td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td>SIX</td> <td>02/01/23</td> <td>1730 2374301</td> <td>,</td>	•	O				_			SIX	02/01/23	1730 2374301	,
Chromium         U         ND         0.00300         0.0100         mg/L         1.00         1           Cobalt         0.0582         0.000300         0.00100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Potassium         14.5         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         J         0.00         0.00600         0.00200         mg/L         1.00         1           Mangansee         2.68         0.0100         0.0500         mg/L         1.00         1         SKJ         02/03/23         154         2374301         9           Beryllium         0.00235         0.00200         0.00500         mg/L         1.00         1         Image: Company of the company of the company of t		ī				_						
Cobalt         0.0582         0.000300         0.00100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Potassium         14.5         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Solium         U         ND         0.000600         0.0200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         1         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         1         14         2374301         9           Lead         U         ND         0.000500         0.00200         mg/L						_						
Fron		C				_						
Potassium         14.5         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         1         20/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         1         20/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         1         1         2374301         9           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1         1         1         2374301         9           Lithium         0.0115         0.00300         0.00200         mg/L         1.00         1         1         1		II				_		-				
Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         1         1         1         1         2374301         9         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1<		C										
Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         Image: Company of the company of t		J										
Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1         C		·				_						
Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00200         mg/L         1.00         1         Image: Control of the control of		U										
Manganese         2.68         0.0100         0.0500         mg/L         1.00         10           Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.000500         mg/L         1.00         1           Lead         U         ND         0.00300         0.0100         mg/L         1.00         1           Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1		_				_		10	SKJ	02/02/23	1217 2374301	8
Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.000500         mg/L         1.00         1 </td <td>Manganese</td> <td></td> <td>2.68</td> <td></td> <td></td> <td>_</td> <td></td> <td>10</td> <td></td> <td></td> <td></td> <td></td>	Manganese		2.68			_		10				
Beryllium         0.00235         0.000200         0.000500         mg/L         1.00         1           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	•	J	0.00201	0.00200	0.00500	_	1.00	1	SKJ	02/03/23	1541 2374301	9
Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	Beryllium		0.00235	0.000200	0.000500	_	1.00	1				
Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1		U	ND	0.000500	0.00200	_	1.00	1				
Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	Lithium		0.0115	0.00300	0.0100	_	1.00	1				
Molybdenum U ND 0.000200 0.00100 mg/L 1.00 1	Magnesium		15.0	0.0100	0.0300		1.00	1				
·	•	U	ND	0.000200	0.00100		1.00	1				
	Solids Analysis					-						

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-33S Project: GPCC00101
Sample ID: 608418002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF I	OF Ana	llyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	ceived"								
Total Dissolved Solids		615	2.38	10.0	mg/L		CH6	01/31/23	1235 2376170	10
Spectrometric Analys	sis									
SM 4500-S(2-) D Sul	lfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW2	01/30/23	1543 2374521	11
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3 J	3.80	1.45	4.00	mg/L		EK1	01/30/23	1551 2375521	12
Bicarbonate alkalinity (Car	CO3) J	3.80	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were p	erformed:								
Method	Description	n		Analyst	Date	Ti	me ]	Prep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23	08	15	2374300		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	01/26/23	12	22	2374418		
FB1 6 11 : A 1	13.6 .1 .1	6 1								

**Analyst Comments** 

The following Analytical Methods were performed:

Method	Description
1	SM 4500-H B/SW846 9040C, SM 2550B
2	GEL Field Method
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 4500-S (2-) D
12	SM 2320B

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-33S Project: GPCC00101
Sample ID: 608418002 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-34S

Sample ID: 608418003

Matrix: WG

Collect Date: 24-JAN-23 12:53
Receive Date: 25-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field	oH "As Receiv	ved"									
Field pH	1253 2373871	1									
GEL Field Ferrous Iron	n "As Receive	ed"									
Field Ferrous Iron		0			mg/L			AJ1	01/24/23	1253 2373871	2
Ion Chromatography					J						
EPA 300.0 Anions Liq	mid "As Recei	ived"									
Chloride	ara Tis Iteees	7.50	0.0670	0.200	mg/L		1	HXC1	01/25/23	1938 2373867	3
Fluoride		0.122	0.0330	0.100	mg/L		1	111101	01/23/23	1930 2373007	5
Nitrate-N	U	ND	0.0330	0.100	mg/L		1				
Sulfate		267	5.32	16.0	mg/L		40	HXC1	01/26/23	0236 2373867	4
Mercury Analysis-CV	AA										
7470 Cold Vapor Merc	cury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/27/23	1054 2374419	5
Metals Analysis-ICP-N	ИS										
SW846 3005A/6020B		"									
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	SKJ	02/03/23	1544 2374301	6
Beryllium	U	ND	0.000200	0.000500	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		18.6	0.0100	0.0300	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	1933 2374301	7
Barium		0.0232	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		0.00351	0.000300	0.00100	mg/L	1.00	1				
Iron	U	ND	0.0330	0.100	mg/L	1.00	1				
Potassium		3.54	0.0800	0.300	mg/L	1.00	1				
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1				
Sodium	**	21.7	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1	CIZI	00/00/00	1242 2274201	0
Calcium		80.0 3.29	0.400 0.00500	1.00 0.0250	mg/L	1.00 1.00	5 5	SKJ	02/02/23	1343 2374301	8
Manganese Boron			0.00500	0.0250	mg/L	1.00	20	SKJ	02/03/23	1430 2374301	9
		2.21	0.104	0.500	mg/L	1.00	20	2V1	02/03/23	1430 2374301	9
Solids Analysis											

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-34S Project: GPCC00101

Sample ID: 608418003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		433	2.38	10.0	mg/L		CI	H6 01/31/23	1235 2376170	10
Spectrometric Analys	sis									
SM 4500-S(2-) D Su	lfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW	/2 01/30/23	1543 2374521	11
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	30.0	1.45	4.00	mg/L		EF	(1 01/30/23	1557 2375521	12
Bicarbonate alkalinity (Ca	CO3)	30.0	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were po	erformed:								
Method	Description	n		Analyst	Date	,	Time	Prep Batch	ļ	
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23		1222	2374418		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23		0815	2374300		
FP1 C 11 : A 1	136.1.1									

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	•	
2	GEL Field Method		
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 4500-S (2-) D		
12	SM 2320B		

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-34S Project: GPCC00101
Sample ID: 608418003 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-35S

Sample ID: 608418004

Matrix: WG

04 1431 00 14 44

Collect Date: Receive Date:		24-JAN	1-23 14:44								
		25-JAN	I-23								
	Collector:	Client									
						** *					
Parameter	Qua	lifier R	esult	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Field Data											
Client colle	ected Field pH "As	Received"									
Field pH			6.08			SU		AJ1	01/24/23	1444 2373871	1
GEL Field	Ferrous Iron "As R	Received"									
Field Ferrous	Iron		0			mg/L		AJ1	01/24/23	1444 2373871	2

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Solids Analysis

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-35S Project: GPCC00101
Sample ID: 608418004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst	t Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved S	olids "As Rec	eived"										
Total Dissolved Solids		507	2.38	10.0	mg/L		C	CH6 (	01/31/23	1235 2	2376170	10
Spectrometric Analysis	S											
SM 4500-S(2-) D Sulfi	de "As Recei	ved"										
Total Sulfide	J	0.0354	0.0330	0.100	mg/L		1 Ј	W2 (	01/30/23	1543 2	2374521	11
Titration and Ion Analy	ysis											
SM 2320B Total Alkal	inity "As Rec	eived"										
Alkalinity, Total as CaCO3		51.6	1.45	4.00	mg/L		E	K1 (	01/30/23	1559 2	2375521	12
Bicarbonate alkalinity (CaCo	O3)	51.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3	3) U	ND	1.45	4.00	mg/L							
The following Prep Me	ethods were pe	erformed:										
Method	Description	n		Analyst	Date		Time	Prep	p Batch			
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/26/23		1222	2374	1418			
SW846 3005A	ICP-MS 3005	SA PREP		LG2	01/26/23		0815	2374	1300			

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	•	
2	GEL Field Method		
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 4500-S (2-) D		
12	SM 2320B		

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-35S Project: GPCC00101
Sample ID: 608418004 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

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

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

Atlanta, Georgia Joju Abraham

Workorder: 608422

**Contact:** 

Report Date: February 7, 2023
Page 1 of 11

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2374002								
QC1205304359 608413001 DU Chloride	JР	3.79	3.79	mg/L	0.124		(0%-20%) HXC1	01/25/23 19:29
Fluoride	Л	0.0926 J	0.0925	mg/L	0.108 ^		(+/-0.100)	
Nitrate-N		0.945	0.920	mg/L	2.68 ^		(+/-0.500)	01/25/23 23:05
Sulfate		0.628	0.612	mg/L	2.71 ^		(+/-0.400)	01/25/23 19:29
QC1205304358 LCS Chloride	5.00		4.87	mg/L		97.3	(90%-110%)	01/25/23 20:31
Fluoride	2.50		2.53	mg/L		101	(90%-110%)	
Nitrate-N	2.50		2.43	mg/L		97.2	(90%-110%)	
Sulfate	10.0		9.76	mg/L		97.6	(90%-110%)	
QC1205304357 MB Chloride		U	ND	mg/L				01/25/23 21:02
Fluoride		U	ND	mg/L				
Nitrate-N		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205304360 608413001 PS Chloride	5.00	3.79	9.31	mg/L		110	(90%-110%)	01/25/23 20:00

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### **QC** Summary

Workorder: 608422 Page 2 of 11 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography Batch 2374002 Fluoride 2.50 0.0926 2.68 mg/L104 (90%-110%) HXC1 01/25/23 20:00 Nitrate-N 2.50 0.189 2.65 98.2 (90%-110%) 01/25/23 23:36 mg/L Sulfate 10.0 0.628 10.6 mg/L 99.5 (90%-110%) 01/25/23 20:00 Metals Analysis - ICPMS Batch 2374301 QC1205304629 LCS 0.0500 0.0512 102 02/01/23 18:21 (80%-120%) Antimony mg/L Arsenic 0.0500 0.0540 mg/L 108 (80%-120%) 02/03/23 14:21 0.0500 0.0494 98.9 02/01/23 18:21 Barium mg/L (80%-120%) Beryllium 0.0500 0.0599 mg/L 120 (80%-120%) 02/03/23 14:21 Boron 0.100 0.113 113 (80%-120%) mg/L 0.0524 Cadmium 0.0500 mg/L 105 (80%-120%) 02/01/23 18:21 Calcium 2.00 2.14 mg/L107 (80%-120%) 0.0500 0.0525 105 Chromium mg/L (80%-120%) Cobalt 0.0500 0.0523 mg/L 105 (80%-120%) 102 2.00 2.04 (80%-120%) Iron mg/L 0.0500 Lead 0.0549 mg/L 110 (80%-120%) 02/03/23 14:21

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## QC Summary

608422 Page 3 of 11 REC% Parmname **NOM** Sample Qual QC Units RPD% Range Anlst Date Time Metals Analysis - ICPMS Batch 2374301 Lithium 0.0500 0.0574 mg/L115 (80%-120%) SKJ 02/03/23 14:21 Magnesium 2.00 2.36 118 (80%-120%) mg/L mg/L Manganese 0.0500 0.0508 102 (80%-120%) 02/01/23 18:21 0.0500 0.0539 108 Molybdenum mg/L (80%-120%) 02/03/23 14:21 Potassium 2.00 2.08 mg/L 104 (80%-120%) 02/01/23 18:21 0.0500 0.0500 100 Selenium mg/L(80%-120%) 2.23 Sodium 2.00 mg/L111 (80%-120%) 0.0500 0.0526 Thallium 105 (80%-120%) mg/L QC1205304628 MB U ND 02/01/23 18:18 Antimony mg/LU ND mg/L 02/03/23 14:18 Arsenic U ND 02/01/23 18:18 Barium mg/LU ND Beryllium 02/03/23 14:18 mg/L Boron U ND mg/L U ND 02/01/23 18:18 Cadmium mg/L Calcium U ND mg/L

Workorder:

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## QC Summary

Page 4 of 11 QC RPD% REC% Range **Parmname NOM** Sample Qual Units Anlst Date Time Metals Analysis - ICPMS Batch 2374301 Chromium U ND mg/LSKJ 02/01/23 18:18 Cobalt U ND mg/L Iron U ND mg/LU ND 02/03/23 14:18 Lead mg/L Lithium U ND mg/L U ND Magnesium mg/LU ND 02/01/23 18:18 Manganese mg/LU ND 02/03/23 14:18 Molybdenum mg/LU ND Potassium mg/L 02/01/23 18:18 Selenium U ND mg/LU ND Sodium mg/L Thallium U ND mg/L QC1205304630 608410001 MS Antimony 0.0500 U ND 0.0516 103 (75%-125%) 02/01/23 18:29 mg/L0.0500 U ND 0.0534 105 02/03/23 15:08 mg/L (75%-125%) Arsenic Barium 0.0500 0.0118 0.0604 mg/L 97.3 (75% - 125%)02/01/23 18:29

Workorder:

608422

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### **QC** Summary

608422 Page 5 of 11 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch Beryllium 0.0500 U ND 0.0578 mg/L 115 (75%-125%) SKJ 02/06/23 16:16 Boron 0.100 U ND 0.125 121 (75%-125%) 02/03/23 15:08 mg/L Cadmium 0.0500 U ND 0.0524 mg/L 105 (75%-125%) 02/01/23 18:29 Calcium 2.00 4.86 7.20 mg/L 117 (75%-125%) Chromium 0.0500 J 0.00950 0.0628 mg/L 107 (75%-125%) 0.0500 0.000829 0.0532 105 Cobalt J mg/L (75%-125%) J 0.0824 2.11 Iron 2.00 mg/L 102 (75%-125%) Lead 0.0500 U ND 0.0551 110 02/03/23 15:08 mg/L (75% - 125%)ND 0.0500 U 0.0625Lithium mg/L 124 (75%-125%) 2.00 5.34 7.70 Magnesium mg/L118 (75% - 125%)0.0500 0.0348 0.0864 103 (75%-125%) 02/01/23 18:29 Manganese mg/L 0.0500 U ND 0.0549 110 02/03/23 15:08 Molybdenum mg/L (75% - 125%)0.432 2.54 Potassium 2.00 mg/L 106 (75%-125%) 02/01/23 18:29 Selenium 0.0500 ND 0.0465 93.1 (75% - 125%)mg/L 2.00 3.63 5.85 Sodium mg/L 111 (75%-125%)

Workorder:

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# QC Summary

Workorder: 608422									Page 6 of 11
Parmname	NO	M	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 2374301									
Thallium	0.0500	U	ND	0.0530	mg/L		106	(75%-125%) S	KJ 02/01/23 18:29
QC1205304631 608410001 MSD Antimony	0.0500	U	ND	0.0500	mg/L	3.18	99.4	(0%-20%)	02/01/23 18:32
Arsenic	0.0500	U	ND	0.0541	mg/L	1.27	106	(0%-20%)	02/03/23 15:11
Barium	0.0500		0.0118	0.0587	mg/L	3	93.7	(0%-20%)	02/01/23 18:32
Beryllium	0.0500	U	ND	0.0558	mg/L	3.42	112	(0%-20%)	02/06/23 16:18
Boron	0.100	U	ND	0.124	mg/L	0.226	121	(0%-20%)	02/03/23 15:11
Cadmium	0.0500	U	ND	0.0503	mg/L	4.08	101	(0%-20%)	02/01/23 18:32
Calcium	2.00		4.86	7.13	mg/L	0.991	113	(0%-20%)	
Chromium	0.0500	J	0.00950	0.0614	mg/L	2.16	104	(0%-20%)	
Cobalt	0.0500	J	0.000829	0.0530	mg/L	0.458	104	(0%-20%)	
Iron	2.00	J	0.0824	2.06	mg/L	2.49	99	(0%-20%)	
Lead	0.0500	U	ND	0.0543	mg/L	1.38	109	(0%-20%)	02/03/23 15:11
Lithium	0.0500	U	ND	0.0623	mg/L	0.261	123	(0%-20%)	
Magnesium	2.00		5.34	7.85	mg/L	1.81	125	(0%-20%)	
Manganese	0.0500		0.0348	0.0852	mg/L	1.43	101	(0%-20%)	02/01/23 18:32

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### **QC** Summary

608422 Page 7 of 11 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch Molybdenum 0.0500 U ND 0.0558 mg/L1.5 112 (0%-20%)SKJ 02/03/23 15:11 Potassium 2.00 0.432 2.55 mg/L 0.416 106 (0%-20%)02/01/23 18:32 mg/L Selenium 0.0500 ND 0.0467 0.333 93.4 (0%-20%)104 Sodium 2.00 3.63 5.71 mg/L 2.43 (0%-20%)Thallium 0.0500 U ND 0.0519 mg/L 2.13 104 (0%-20%)QC1205304632 608410001 SDILT Antimony U ND U ND ug/L N/A (0%-20%)02/01/23 18:39 U Arsenic ND U ND ug/L N/A (0%-20%)02/03/23 15:17 11.8 2.36 Barium J ug/L .33 (0%-20%)02/01/23 18:39 U ND U ND Beryllium ug/L N/A (0%-20%)02/06/23 16:20 U ND U ND (0%-20%)02/03/23 15:17 Boron ug/L N/A U ND U ND Cadmium ug/L N/A (0%-20%)02/01/23 18:39 1000 Calcium 4860 ug/L (0%-20%)3.15 Chromium J 9.50 U ND N/A (0% - 20%)ug/L J 0.829 U ND Cobalt ug/L N/A (0%-20%)Iron J 82.4 U ND ug/L N/A (0% - 20%)

Workorder:

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### **QC** Summary

608422 Page 8 of 11 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch (0%-20%) Lead U ND U ND ug/L N/A SKJ 02/03/23 15:17 U Lithium ND U ND ug/L (0%-20%)N/A Magnesium 5340 1050 ug/L 1.84 (0%-20%)34.8 (0%-20%)Manganese 6.88 ug/L 1.11 02/01/23 18:39 U Molybdenum ND U ND ug/L N/A (0%-20%)02/03/23 15:17 432 J 97.3 (0%-20%)Potassium ug/L 02/01/23 18:39 12.6 U U ND Selenium ND ug/L N/A (0% - 20%)Sodium 3630 689 4.95 (0%-20%)ug/L U ND U ND Thallium ug/L N/A (0% - 20%)Metals Analysis-Mercury 2374419 QC1205304806 608391001 DUP U Mercury ND U ND mg/LN/A JP2 01/27/23 10:12 QC1205304805 LCS Mercury 0.00200 0.00213mg/L106 (80% - 120%)01/27/23 10:08 QC1205304804 MB U ND mg/L 01/27/23 10:07 Mercury QC1205304807 608391001 MS Mercury 0.00200 U ND 0.00212 mg/L106 (75%-125%) 01/27/23 10:13

Workorder:

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### **QC** Summary

Workorder: 608422 Page 9 of 11 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury Batch 2374419 QC1205304808 608391001 SDILT U ND U ND ug/L JP2 01/27/23 10:15 Mercury N/A (0%-10%)**Solids Analysis** 2376170 Batch QC1205307926 608418001 DUP 344 Total Dissolved Solids 341 0.876 (0%-5%)CH6 01/31/23 12:35 mg/L OC1205307924 LCS Total Dissolved Solids 300 301 mg/L100 (95%-105%) 01/31/23 12:35 QC1205307923 U ND 01/31/23 12:35 Total Dissolved Solids mg/L Spectrometric Analysis 2374521 Batch QC1205304980 LCS Total Sulfide 0.400 0.402 101 JW2 01/30/23 15:43 mg/L(85%-115%) OC1205304979 MB Total Sulfide U ND 01/30/23 15:43 mg/LQC1205304981 608410001 PS ND 0.387 Total Sulfide 0.400 U 01/30/23 15:43 mg/L 96.8 (75% - 125%)OC1205304983 608418002 PS Total Sulfide 0.400 U ND 0.352 86.7 (75%-125%) 01/30/23 15:43 mg/LQC1205304982 608410001 PSD Total Sulfide 0.400 U ND 0.392 1.29 98.1 (0%-15%)01/30/23 15:43 mg/L QC1205304984 608418002 PSD Total Sulfide 0.400 U ND 0.362 89.3 (0%-15%)01/30/23 15:43 mg/L2.82

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### **QC** Summary

Workorder: 608422 Page 10 of 11 Units **Parmname** NOM Sample Qual  $\mathbf{OC}$ RPD% REC% Range Anlst Date Time Titration and Ion Analysis Batch 2375518 QC1205306806 608051001 DUP 67.6 69.6 mg/L MS3 01/28/23 12:24 Alkalinity, Total as CaCO3 2.92 (0%-20%)Bicarbonate alkalinity (CaCO3) 67.6 69.6 mg/L 2.92 (0%-20%)U ND ND Carbonate alkalinity (CaCO3) U N/A mg/L QC1205306658 LCS 103 Alkalinity, Total as CaCO3 100 mg/L 103 (90%-110%) 01/28/23 12:18 QC1205306807 608051001 MS Alkalinity, Total as CaCO3 100 67.6 167 mg/L 99.6 (80%-120%) 01/28/23 12:30

#### **Notes:**

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed

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### QC Summary

Workorder: 608422 Page 11 of 11
Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

invalid for reporting to regulatory agencies

- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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.
- B The target analyte was detected in the associated blank.
- 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
- J See case narrative for an explanation

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 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.

\* 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: February 10, 2023

Page 1 of 11

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

Atlanta, Georgia Joju Abraham

Workorder:

**Contact:** 

608815

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anls	t Date Time
Ion Chromatography Batch 2375453									
QC1205306674 608815001 DUP Chloride		3.36		3.36	mg/L	0.0149		(0%-20%) JL	D1 01/27/23 20:08
Fluoride	U	ND	U	ND	mg/L	N/A			
Nitrate-N	J	0.0655	J	0.0595	mg/L	9.6 ′		(+/-0.100)	
Sulfate		75.3		74.2	mg/L	1.55		(0%-20%)	01/27/23 23:08
QC1205306563 LCS Chloride	5.00			4.55	mg/L		91	(90%-110%)	01/27/23 19:38
Fluoride	2.50			2.56	mg/L		102	(90%-110%)	
Nitrate-N	2.50			2.33	mg/L		93.3	(90%-110%)	
Sulfate	10.0			9.47	mg/L		94.7	(90%-110%)	
QC1205306562 MB Chloride			U	ND	mg/L				01/27/23 19:09
Fluoride			U	ND	mg/L				
Nitrate-N			U	ND	mg/L				
Sulfate			U	ND	mg/L				
QC1205306675 608815001 PS Chloride	5.00	3.36		8.31	mg/L		98.8	(90%-110%)	01/27/23 20:38

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# QC Summary

Workorder: 608815 Page 2 of 11 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography Batch 2375453 Fluoride 2.50 U ND 2.67 mg/L107 (90%-110%) JLD1 01/27/23 20:38 Nitrate-N 2.50 J 0.0655 2.35 91.4 (90%-110%) mg/L Sulfate 10.0 7.53 17.3 mg/L 98.1 (90%-110%) 01/27/23 23:37 Metals Analysis - ICPMS Batch 2375511 QC1205306650 LCS 0.0500 0.0503 101 SKJ 01/31/23 23:42 mg/L(80%-120%) Antimony Arsenic 0.0500 0.0524 mg/L 105 (80%-120%) Barium 0.0500 0.0492 98.4 mg/L (80%-120%) Beryllium 0.0500 0.0567 mg/L 113 (80%-120%) 02/01/23 13:22 Boron 0.100 0.112 112 (80%-120%) mg/L 0.0520 Cadmium 0.0500 mg/L 104 (80%-120%) 01/31/23 23:42 Calcium 2.00 2.14 mg/L107 (80%-120%) 0.0500 0.0515 103 Chromium mg/L (80%-120%) Cobalt 0.0500 0.0515 mg/L 103 (80%-120%) 2.00 2.02 101 Iron (80%-120%) mg/L 0.0500 Lead 0.0533 mg/L107 (80%-120%)

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## QC Summary

Workorder: 608815 Page 3 of 11 QC RPD% REC% Parmname **NOM** Sample Qual Units Range Anlst Date Time Metals Analysis - ICPMS Batch 2375511 Lithium 0.0500 0.0548 mg/L110 (80%-120%) SKJ 02/01/23 13:22 Magnesium 2.00 2.23 mg/L 112 (80%-120%) Manganese 0.0500 0.0513 mg/L103 (80%-120%) 01/31/23 23:42 0.0500 0.0530 106 (80%-120%)02/01/23 13:22 Molybdenum mg/LPotassium 2.00 2.06 mg/L 103 (80%-120%) 01/31/23 23:42 0.0503 0.0500 101 Selenium mg/L(80%-120%) 2.00 2.15 Sodium mg/L108 (80%-120%) 0.0500 0.0517 Thallium 103 (80%-120%) mg/L QC1205306649 MB U ND 01/31/23 23:38 Antimony mg/LU ND mg/L Arsenic U ND mg/LBarium U ND 02/01/23 13:20 Beryllium mg/LBoron U ND mg/LU ND 01/31/23 23:38 Cadmium mg/L Calcium U ND mg/L

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## QC Summary

Workorder: 608815 Page 4 of 11 NOM QC RPD% REC% Range Parmname Sample Qual Units Anlst Date Time Metals Analysis - ICPMS Batch 2375511 Chromium U ND mg/LSKJ 01/31/23 23:38 Cobalt U ND mg/L Iron U ND mg/LU ND Lead mg/L 02/01/23 13:20 Lithium U ND mg/L U ND mg/LMagnesium U ND 01/31/23 23:38 Manganese mg/LU ND 02/01/23 13:20 Molybdenum mg/LU ND Potassium mg/L 01/31/23 23:38 Selenium U ND mg/LU ND Sodium mg/L Thallium U ND mg/L QC1205306651 608815001 MS Antimony 0.0500 U ND 0.0518 mg/L 103 (75%-125%) 01/31/23 23:49 0.0500 0.00388 0.0546 J 101 (75%-125%) Arsenic mg/L Barium 0.0500 0.0525 0.101 mg/L96.6 (75% - 125%)

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### **QC** Summary

Page 5 of 11 Sample Qual Parmname **NOM** QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2375511 Batch Beryllium 0.0500 0.000422 0.0573 mg/L114 (75%-125%) SKJ 02/01/23 13:27 Boron 0.100 J 0.0104 0.117 106 (75%-125%) mg/L Cadmium 0.0500 U ND 0.0519 mg/L104 (75%-125%) 01/31/23 23:49 Calcium 2.00 16.8 19.3 mg/L N/A (75%-125%) Chromium 0.0500 0.0153 0.0671 mg/L 104 (75%-125%) 0.0500 U ND 0.0514 mg/L 103 Cobalt (75%-125%) 2.00 U ND 99.2 Iron 1.99 mg/L (75%-125%) Lead 0.0500 U ND 0.0536 107 mg/L (75% - 125%)ND 0.0500 U 0.0563 02/01/23 13:27 Lithium mg/L 110 (75% - 125%)2.00 9.68 N/A Magnesium 11.6 mg/L(75% - 125%)0.0500 J 0.00207 0.0523 100 (75%-125%) 01/31/23 23:49 Manganese mg/L 0.0500 U ND 0.0542 108 02/01/23 13:27 Molybdenum mg/L (75% - 125%)104 Potassium 2.00 4.41 6.48 mg/L (75%-125%) 01/31/23 23:49 Selenium 0.0500 0.00215 0.0511 97.9 (75% - 125%)mg/L 2.00 11.7 14.3 Sodium mg/L N/A (75%-125%)

Workorder:

608815

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# QC Summary

Workorder: 608815										Page 6 of 11
Parmname	NO	M	Sample Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Time
Metals Analysis - ICPMS Batch 2375511										
Thallium	0.0500	U	ND	0.0522	mg/L		104	(75%-125%)	SKJ	01/31/23 23:49
QC1205306652 608815001 MSD Antimony	0.0500	U	ND	0.0498	mg/L	3.93	99.4	(0%-20%)		01/31/23 23:52
Arsenic	0.0500	J	0.00388	0.0549	mg/L	0.541	102	(0%-20%)		
Barium	0.0500		0.0525	0.0994	mg/L	1.41	93.8	(0%-20%)		
Beryllium	0.0500	J	0.000422	0.0577	mg/L	0.723	115	(0%-20%)		02/01/23 13:29
Boron	0.100	J	0.0104	0.124	mg/L	6.12	114	(0%-20%)		
Cadmium	0.0500	U	ND	0.0503	mg/L	3.11	101	(0%-20%)		01/31/23 23:52
Calcium	2.00		16.8	18.5	mg/L	4.38	N/A	(0%-20%)		
Chromium	0.0500		0.0153	0.0660	mg/L	1.77	101	(0%-20%)		
Cobalt	0.0500	U	ND	0.0518	mg/L	0.69	103	(0%-20%)		
Iron	2.00	U	ND	2.00	mg/L	0.515	99.7	(0%-20%)		
Lead	0.0500	U	ND	0.0531	mg/L	0.849	106	(0%-20%)		
Lithium	0.0500	U	ND	0.0561	mg/L	0.276	110	(0%-20%)		02/01/23 13:29
Magnesium	2.00		9.68	11.8	mg/L	1.97	N/A	(0%-20%)		
Manganese	0.0500	J	0.00207	0.0516	mg/L	1.19	99.1	(0%-20%)		01/31/23 23:52

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### **QC** Summary

Workorder: 608815 Page 7 of 11 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2375511 Batch Molybdenum 0.0500 U ND 0.0546 mg/L 0.616 109 (0%-20%)SKJ 02/01/23 13:29 Potassium 2.00 4.41 6.55 mg/L 1.08 107 (0%-20%)01/31/23 23:52 Selenium 0.0500 0.00215 0.0508 mg/L 0.632 97.3 (0%-20%)Sodium 2.00 11.7 14.5 mg/L 0.899 N/A(0%-20%)mg/L Thallium 0.0500 U ND 0.0522 0.0364 104 (0%-20%)QC1205306653 608815001 SDILT Antimony U ND U ND ug/L N/A (0%-20%)01/31/23 23:59 J Arsenic 3.88 U ND ug/L N/A (0%-20%)52.5 10.3 Barium ug/L 1.39 (0%-20%)0.422 U ND 02/01/23 13:33 Beryllium J ug/L N/A (0%-20%)J 10.4 J 5.27 (0%-20%)Boron ug/L 153 U ND U ND 01/31/23 23:59 Cadmium ug/L N/A (0%-20%)16800 3280 Calcium ug/L 2.22 (0%-20%)Chromium 15.3 3.02 1.13 (0%-20%)ug/L U ND U ND Cobalt ug/L N/A (0%-20%)Iron U ND U ND ug/L N/A (0%-20%)

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### **QC** Summary

Workorder: 608815 Page 8 of 11 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2375511 Batch Lead U ND U ND ug/L N/A (0%-20%)SKJ 01/31/23 23:59 U Lithium ND U ND ug/L (0%-20%)02/01/23 13:33 N/A ug/L Magnesium 9680 1880 3.11 (0%-20%)J 2.07 U ND (0%-20%)Manganese ug/L N/A 01/31/23 23:59 Molybdenum U ND U ND ug/L N/A (0%-20%)02/01/23 13:33 4410 839 (0%-20%)01/31/23 23:59 Potassium ug/L 4.91 J U ND Selenium 2.15 ug/L N/A (0% - 20%)Sodium 11700 2330 (0%-20%)ug/L .218 U ND U ND Thallium ug/L N/A (0% - 20%)Metals Analysis-Mercury 2375754 QC1205307096 608803003 DUP U Mercury ND U ND mg/LN/A JP2 01/31/23 10:21 QC1205307095 LCS Mercury 0.00200 0.00211 mg/L105 (80% - 120%)01/31/23 10:11 QC1205307094 MB U ND mg/L 01/31/23 10:09 Mercury QC1205307097 608803003 MS Mercury 0.00200 U ND 0.00180 mg/L (75%-125%) 01/31/23 10:22

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# QC Summary

Workorder: 608815			·	~	•						Page 9 of 1	11
Parmname	N	ОМ	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time	_
Metals Analysis-Mercury Batch 2375754  QC1205307098 608803003 Mercury	SDILT	U	ND	U	ND	ug/L	N/A		(0%-10%)	JP2	01/31/23 10:2	24
Solids Analysis Batch 2376741												-
QC1205308819 608803009 Total Dissolved Solids	DUP		693		693	mg/L	0		(0%-5%)	СН6	02/01/23 13:0	)5
QC1205308817 LCS Total Dissolved Solids	30	0			300	mg/L		100	(95%-105%)		02/01/23 13:0	)5
QC1205308816 MB Total Dissolved Solids				U	ND	mg/L					02/01/23 13:0	)5
Batch 2377347												-
QC1205309759 608803013 Total Dissolved Solids	DUP		2280		2240	mg/L	1.68		(0%-5%)	СН6	02/02/23 14:2	28
QC1205309760 608969004 Total Dissolved Solids	DUP		898		882	mg/L	1.8		(0%-5%)		02/02/23 14:2	28
QC1205309758 LCS Total Dissolved Solids	30	0			301	mg/L		100	(95%-105%)		02/02/23 14:2	28
QC1205309757 MB Total Dissolved Solids				U	ND	mg/L					02/02/23 14:2	28
Spectrometric Analysis Batch 2376122												-
QC1205307836 LCS Total Sulfide	0.40	0			0.396	mg/L		99	(85%-115%)	НН2	02/02/23 11:4	12
QC1205307835 MB Total Sulfide				U	ND	mg/L					02/02/23 11:4	12

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# **QC** Summary

Workorder: 608815 Page 10 of 11 Units **Parmname** NOM Sample Qual QC RPD% REC% Range Anlst Date Time Spectrometric Analysis Batch 2376122 QC1205307839 608815006 PS ND 0.367 0.400 U mg/L 86.7 HH2 02/02/23 11:47 Total Sulfide (75% - 125%)QC1205307840 608815006 PSD ND Total Sulfide 0.400 U 0.374 mg/L 1.88 88.4 (0%-15%)02/02/23 11:48 **Titration and Ion Analysis** 2378067 Batch QC1205313003 608803012 DUP Alkalinity, Total as CaCO3 6.00 6.20 mg/L 3.28 ^ (+/-4.00)02/06/23 14:58 6.00 Bicarbonate alkalinity (CaCO3) 6.20 mg/L 3.28 ^ (+/-4.00)U Carbonate alkalinity (CaCO3) ND U ND mg/L N/A QC1205311158 LCS Alkalinity, Total as CaCO3 100 104 mg/L 104 (90%-110%) 02/06/23 14:46 QC1205313004 608803012 MS 6.00 107 Alkalinity, Total as CaCO3 100 mg/L 101 (80%-120%) 02/06/23 15:03

#### **Notes:**

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample

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# **QC** Summary

Page 11 of 11 **Parmname NOM** Sample Qual  $\mathbf{OC}$ Units RPD% REC% Anlst Date Time

- Range RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.

608815

- Analyte concentration is not detected above the detection limit ND
- % difference of sample and SD is >10%. Sample concentration must meet flagging criteria Е
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- 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
- N1See case narrative

Workorder:

- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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 R purposes.
- The target analyte was detected in the associated blank. R
- 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 e reporting purposes
- See case narrative for an explanation

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 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.
- \* 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: February 7, 2023

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

Atlanta, Georgia Joju Abraham

Contact: Joju Ab

Workorder: 608418

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2373867								
QC1205304001 608418004 DUP Chloride		6.46	6.46	mg/L	0.065		(0%-20%) HXC1	01/25/23 20:38
Fluoride		0.239	0.199	mg/L	18.2 ^		(+/-0.100)	
Nitrate-N		0.149	0.151	mg/L	0.867 ^		(+/-0.100)	
Sulfate		334	334	mg/L	0.0547		(0%-20%)	01/26/23 04:36
QC1205304000 LCS Chloride	5.00		4.85	mg/L		97.1	(90%-110%)	01/25/23 23:07
Fluoride	2.50		2.61	mg/L		105	(90%-110%)	
Nitrate-N	2.50		2.50	mg/L		99.8	(90%-110%)	
Sulfate	10.0		10.0	mg/L		100	(90%-110%)	
QC1205303999 MB Chloride		U	ND	mg/L				01/25/23 22:37
Fluoride		U	ND	mg/L				
Nitrate-N		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205304002 608418004 PS Chloride	5.00	6.46	12.5	mg/L		120*	(90%-110%)	01/25/23 22:07

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Workorder: 608418								Page 2 of 11
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
<b>Ion Chromatography</b> Batch 2373867								
Fluoride	2.50	0.239	2.80	mg/L		103	(90%-110%) HXC1	01/25/23 22:07
Nitrate-N	2.50	0.149	2.67	mg/L		101	(90%-110%)	
Sulfate	10.0	13.4	24.4	mg/L		111*	(90%-110%)	01/26/23 05:06
Metals Analysis - ICPMS Batch 2374301								
QC1205304629 LCS Antimony	0.0500		0.0512	mg/L		102	(80%-120%) SKJ	02/01/23 18:21
Arsenic	0.0500		0.0540	mg/L		108	(80%-120%)	02/03/23 14:21
Barium	0.0500		0.0494	mg/L		98.9	(80%-120%)	02/01/23 18:21
Beryllium	0.0500		0.0599	mg/L		120	(80%-120%)	02/03/23 14:21
Boron	0.100		0.113	mg/L		113	(80%-120%)	
Cadmium	0.0500		0.0524	mg/L		105	(80%-120%)	02/01/23 18:21
Calcium	2.00		2.14	mg/L		107	(80%-120%)	
Chromium	0.0500		0.0525	mg/L		105	(80%-120%)	
Cobalt	0.0500		0.0523	mg/L		105	(80%-120%)	
Iron	2.00		2.04	mg/L		102	(80%-120%)	
Lead	0.0500		0.0549	mg/L		110	(80%-120%)	02/03/23 14:21

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# QC Summary

Workorder: 608418 Page 3 of 11 RPD% REC% Parmname **NOM** Sample Qual QC Units Range Anlst Date Time Metals Analysis - ICPMS Batch 2374301 Lithium 0.0500 0.0574 mg/L115 (80%-120%) SKJ 02/03/23 14:21 Magnesium 2.00 2.36 118 (80%-120%) mg/L Manganese 0.0500 0.0508 mg/L102 (80%-120%) 02/01/23 18:21 0.0500 0.0539 108 (80%-120%)Molybdenum mg/L 02/03/23 14:21 Potassium 2.00 2.08 mg/L 104 (80%-120%) 02/01/23 18:21 0.0500 0.0500 100 Selenium mg/L(80%-120%) 2.23 Sodium 2.00 mg/L111 (80%-120%) 0.0500 0.0526 Thallium 105 (80%-120%) mg/L QC1205304628 MB U ND 02/01/23 18:18 Antimony mg/LU ND mg/L 02/03/23 14:18 Arsenic U ND 02/01/23 18:18 Barium mg/LU ND Beryllium 02/03/23 14:18 mg/L Boron U ND mg/L U ND 02/01/23 18:18 Cadmium mg/L Calcium U ND mg/L

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Workorder: 608418									Page 4 of 11
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS Batch 2374301									
Chromium		U	ND	mg/L				SKJ	02/01/23 18:18
Cobalt		U	ND	mg/L					
Iron		U	ND	mg/L					
				C					
Lead		U	ND	mg/L					02/03/23 14:18
Loud			112	mg/L					02/03/23 11.10
Lithium		U	ND	ma/I					
Littiitiii		O	ND	mg/L					
		11	NID	/T					
Magnesium		U	ND	mg/L					
									00/01/00/10/10
Manganese		U	ND	mg/L					02/01/23 18:18
Molybdenum		U	ND	mg/L					02/03/23 14:18
Potassium		U	ND	mg/L					02/01/23 18:18
Selenium		U	ND	mg/L					
Sodium		U	ND	mg/L					
Thallium		U	ND	mg/L					
QC1205304630 608410001									
Antimony	0.0500 U	ND	0.0516	mg/L		103	(75%-125%	)	02/01/23 18:29
Arsenic	0.0500 U	ND	0.0534	mg/L		105	(75%-125%	)	02/03/23 15:08
Barium	0.0500	0.0118	0.0604	mg/L		97.3	(75%-125%	)	02/01/23 18:29

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Workorder:	608418									Page 5 of 11
Parmname Metals Analysis	- ICPMS	NO	<u>M</u>	Sample (	QC QC	Units	RPD% REC	C% Range	Anlst	Date Time
	2374301									
Beryllium		0.0500	U	ND	0.0578	mg/L	11	5 (75%-125%	SKJ	02/06/23 16:16
Boron		0.100	U	ND	0.125	mg/L	12	1 (75%-125%	5)	02/03/23 15:08
Cadmium		0.0500	T T	ND	0.0524	mg/L	10.	5 (75%-125%		02/01/23 18:29
Cadillulli		0.0300	U	ND	0.0324	IIIg/L	10	3 (73%-123%	))	02/01/23 18:29
Calcium		2.00		4.86	7.20	mg/L	11	7 (75%-125%	5)	
Chromium		0.0500	J	0.00950	0.0628	mg/L	10	7 (75%-125%	5)	
Cobalt		0.0500	J	0.000829	0.0532	mg/L	10.	5 (75%-125%	5)	
Iron		2.00	J	0.0824	2.11	mg/L	10	2 (75%-125%	5)	
Lead		0.0500	IJ	ND	0.0551	mg/L	11	0 (75%-125%	<i>5</i> )	02/03/23 15:08
Leau		0.0300	Ü	ND	0.0331	mg/L	11	0 (7570-12570	,,	02/03/23 13.00
Lithium		0.0500	U	ND	0.0625	mg/L	12	4 (75%-125%	5)	
Magnesium		2.00		5.34	7.70	mg/L	11	8 (75%-125%	5)	
Manganese		0.0500		0.0348	0.0864	mg/L	10	3 (75%-125%	5)	02/01/23 18:29
MILL		0.0500		ND	0.0549	/T	11	0 (750) 1050		02/02/22 15 00
Molybdenum		0.0500	U	ND	0.0349	mg/L	11	0 (75%-125%	)	02/03/23 15:08
Potassium		2.00		0.432	2.54	mg/L	10	6 (75%-125%	5)	02/01/23 18:29
Selenium		0.0500	U	ND	0.0465	mg/L	93.	1 (75%-125%	5)	
Sodium		2.00		3.63	5.85	mg/L	11	1 (75%-125%	5)	

Workorder: 608418									Page 6 of 11
Parmname	NO	М	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 2374301									
Thallium	0.0500	U	ND	0.0530	mg/L		106	(75%-125%) SK	J 02/01/23 18:29
QC1205304631 608410001 MSD Antimony	0.0500	U	ND	0.0500	mg/L	3.18	99.4	(0%-20%)	02/01/23 18:32
Arsenic	0.0500	U	ND	0.0541	mg/L	1.27	106	(0%-20%)	02/03/23 15:11
					_				
Barium	0.0500		0.0118	0.0587	mg/L	3	93.7	(0%-20%)	02/01/23 18:32
Beryllium	0.0500	U	ND	0.0558	mg/L	3.42	112	(0%-20%)	02/06/23 16:18
Boron	0.100	U	ND	0.124	mg/L	0.226	121	(0%-20%)	02/03/23 15:11
					8			(373 2373)	
Cadmium	0.0500	U	ND	0.0503	mg/L	4.08	101	(0%-20%)	02/01/23 18:32
Calcium	2.00		4.86	7.13	mg/L	0.991	113	(0%-20%)	
Chromium	0.0500	J	0.00950	0.0614	mg/L	2.16	104	(0%-20%)	
Cobalt	0.0500	J	0.000829	0.0530	mg/L	0.458	104	(0%-20%)	
Iron	2.00	J	0.0824	2.06	mg/L	2.49	99	(0%-20%)	
Lead	0.0500	U	ND	0.0543	mg/L	1.38	109	(0%-20%)	02/03/23 15:11
Lithium	0.0500	U	ND	0.0623	mg/L	0.261	123	(0%-20%)	
Magnesium	2.00		5.34	7.85	mg/L	1.81	125	(0%-20%)	
Manganese	0.0500		0.0348	0.0852	mg/L	1.43	101	(0%-20%)	02/01/23 18:32

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# **QC** Summary

608418 Page 7 of 11 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch Molybdenum 0.0500 U ND 0.0558 mg/L1.5 112 (0%-20%)SKJ 02/03/23 15:11 Potassium 2.00 0.432 2.55 mg/L 0.416 106 (0%-20%)02/01/23 18:32 mg/L Selenium 0.0500 ND 0.0467 0.333 93.4 (0%-20%)104 Sodium 2.00 3.63 5.71 mg/L 2.43 (0%-20%)Thallium 0.0500 U ND 0.0519 mg/L 2.13 104 (0%-20%)QC1205304632 608410001 SDILT Antimony U ND U ND ug/L N/A (0%-20%)02/01/23 18:39 U Arsenic ND U ND ug/L N/A (0%-20%)02/03/23 15:17 11.8 2.36 Barium J ug/L .33 (0%-20%)02/01/23 18:39 U ND U ND Beryllium ug/L N/A (0%-20%)02/06/23 16:20 U ND U ND (0%-20%)02/03/23 15:17 Boron ug/L N/A U ND U ND Cadmium ug/L N/A (0%-20%)02/01/23 18:39 1000 Calcium 4860 ug/L (0%-20%)3.15 Chromium J 9.50 U ND N/A (0% - 20%)ug/L J 0.829 U ND Cobalt ug/L N/A (0%-20%)Iron J 82.4 U ND ug/L N/A (0%-20%)

Workorder:

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Workorder:	608418												Page 8 of 11
<b>Parmname</b>			NO	M	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis Batch	- <b>ICPMS</b> 2374301												
Lead				U	ND	U	ND	ug/L	N/A		(0%-20%)	SKJ	02/03/23 15:17
Lithium				U	ND	U	ND	ug/L	N/A		(0%-20%)		
Magnesium					5340		1050	ug/L	1.84		(0%-20%)		
Manganese					34.8		6.88	ug/L	1.11		(0%-20%)		02/01/23 18:39
Molybdenum				U	ND	U	ND	ug/L	N/A		(0%-20%)		02/03/23 15:17
Potassium					432	J	97.3	ug/L	12.6		(0%-20%)		02/01/23 18:39
Selenium				U	ND	U	ND	ug/L	N/A		(0%-20%)		
Sodium					3630		689	ug/L	4.95		(0%-20%)		
Thallium				U	ND	U	ND	ug/L	N/A		(0%-20%)		
Metals Analysis- Batch	<b>Mercury</b> 2374419												
QC12053048 Mercury	806 608391001	DUP		U	ND	U	ND	mg/L	N/A			JP2	01/27/23 10:12
QC12053048 Mercury	805 LCS		0.00200				0.00213	mg/L		106	(80%-120%)		01/27/23 10:08
QC12053048 Mercury	804 MB					U	ND	mg/L					01/27/23 10:07
QC12053048 Mercury	608391001	MS	0.00200	U	ND		0.00212	mg/L		106	(75%-125%)		01/27/23 10:13

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# **QC** Summary

Workorder: 608418 Page 9 of 11 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury Batch 2374419 QC1205304808 608391001 SDILT U ND U ND ug/L JP2 01/27/23 10:15 Mercury N/A (0%-10%)**Solids Analysis** 2376170 Batch QC1205307926 608418001 DUP 344 Total Dissolved Solids 341 0.876 (0%-5%)CH6 01/31/23 12:35 mg/L OC1205307924 LCS Total Dissolved Solids 300 301 mg/L100 (95%-105%) 01/31/23 12:35 OC1205307923 U ND 01/31/23 12:35 Total Dissolved Solids mg/L Spectrometric Analysis 2374521 Batch QC1205304980 LCS Total Sulfide 0.400 0.402 101 JW2 01/30/23 15:43 mg/L(85%-115%) OC1205304979 MB Total Sulfide U ND 01/30/23 15:43 mg/LQC1205304983 608418002 PS ND 0.400 U 0.352 01/30/23 15:43 Total Sulfide mg/L 86.7 (75% - 125%)QC1205304984 608418002 PSD Total Sulfide 0.400 U ND 0.362 2.82 89.3 (0%-15%)01/30/23 15:43 mg/L**Titration and Ion Analysis** Batch 2375521 QC1205306667 608540001 DUP EK1 01/30/23 16:11 Alkalinity, Total as CaCO3 71.6 72.0 mg/L 0.557 (0%-20%)Bicarbonate alkalinity (CaCO3) 71.6 72.0 0.557 (0%-20%)mg/L

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# **QC** Summary

Workorder: 608418 Page 10 of 11 **Parmname** NOM Sample Qual  $\mathbf{OC}$ Units RPD% REC% Range Anlst Date Time **Titration and Ion Analysis** Batch 2375521 Carbonate alkalinity (CaCO3) U ND ND mg/L N/A EK1 01/30/23 16:11 QC1205306666 LCS 100 101 Alkalinity, Total as CaCO3 mg/L 101 (90%-110%) 01/30/23 15:14 QC1205306668 608540001 MS 100 71.6 173 101 01/30/23 16:15 Alkalinity, Total as CaCO3 mg/L (80%-120%)

#### Notes:

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- 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
- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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.

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# QC Summary

Workorder: 608418

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Parmname

NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- B The target analyte was detected in the associated blank.
- 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
- J See case narrative for an explanation

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 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.
- \* 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

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

Atlanta, Georgia Joju Abraham

Workorder: 608614

**Contact:** 

Report Date: February 9, 2023

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Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography	-0									
Batch 237476 QC1205305382 60 Chloride			5.84		5.87	mg/L	0.538		(0%-20%) HXC1	01/26/23 21:55
Fluoride			0.130		0.180	mg/L	31.8 ^		(+/-0.100)	
Nitrate-N		U	ND	U	ND	mg/L	N/A			01/26/23 23:25
Sulfate			41.0		41.1	mg/L	0.217		(0%-20%)	
QC1205305381 Chloride	LCS	5.00			4.83	mg/L		96.6	(90%-110%)	01/26/23 21:25
Fluoride		2.50			2.61	mg/L		104	(90%-110%)	
Nitrate-N		2.50			2.49	mg/L		99.4	(90%-110%)	
Sulfate		10.0			10.0	mg/L		100	(90%-110%)	
QC1205305380 Chloride	МВ			U	ND	mg/L				01/26/23 19:56
Fluoride				U	ND	mg/L				
Nitrate-N				U	ND	mg/L				
Sulfate				U	ND	mg/L				
QC1205305383 60 Chloride	08602001 PS	5.00	5.84		11.6	mg/L		115*	(90%-110%)	01/26/23 22:25

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# **QC** Summary

Workorder: 608614 Page 2 of 12 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography 2374768 Batch Fluoride 2.50 0.130 2.78 mg/L106 (90%-110%) HXC1 01/26/23 22:25 Nitrate-N 2.50 U ND 2.47 98.7 (90%-110%) 01/26/23 23:55 mg/L Sulfate 10.0 8.20 18.7 mg/L 105 (90%-110%) Batch 2374833 QC1205305506 608457001 DUP Chloride 10.0 10.0 mg/L 0.186 (0%-20%) HXC1 01/27/23 04:25 0.585 Fluoride 0.734 mg/L22.6\* (0%-20%)01/26/23 22:15 1.17 Nitrate-N 1.18 mg/L 1.04 (0%-20%)01/27/23 04:25 Sulfate 5.03 5.08 01/26/23 22:15 mg/L 1.03 (0%-20%)QC1205305505 LCS Chloride 5.00 4.84 96.8 (90%-110%) 01/26/23 21:44 mg/L2.50 2.52 Fluoride mg/L 101 (90%-110%) Nitrate-N 2.50 2.39 95.7 mg/L (90%-110%) Sulfate 10.0 9.68 96.8 (90%-110%) mg/LQC1205305504 MB U ND 01/26/23 20:12 Chloride mg/L Fluoride U ND mg/L U ND Nitrate-N mg/L

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# **QC** Summary

Workorder: 608614 Page 3 of 12 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography 2374833 Batch Sulfate U ND mg/L HXC1 01/26/23 20:12 QC1205305507 608457001 PS 5.01 Chloride 5.00 10.5 mg/L 110 (90%-110%) 01/27/23 04:56 Fluoride 2.50 0.585 3.14 102 (90%-110%) 01/26/23 22:46 mg/L Nitrate-N 2.50 0.590 2.87 91.3 (90%-110%) 01/27/23 04:56 mg/L Sulfate 10.0 5.03 15.4 mg/L 104 (90%-110%) 01/26/23 22:46 Metals Analysis - ICPMS 2374786 Batch QC1205305393 LCS 0.0500 0.0526 mg/L 105 SKJ 02/08/23 17:36 Antimony (80% - 120%)0.0527 Arsenic 0.0500 mg/L 105 (80% - 120%)0.0500 0.0508 102 Barium mg/L (80%-120%) 0.0597 Beryllium 0.0500 02/07/23 18:32 mg/L 119 (80%-120%) Boron 0.100 0.119 119 (80%-120%) 02/08/23 17:36 mg/L0.0500 0.0538 108 Cadmium mg/L (80%-120%) Calcium 2.00 2.20 110 (80%-120%) mg/LChromium 0.0500 0.0522 104 mg/L (80%-120%) Cobalt 0.0500 0.0514 mg/L 103 (80%-120%)

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Ar	ılst	Date Time
Metals Analysis - ICPMS Batch 2374786									
Iron	2.00		2.04	mg/L		102	(80%-120%)	SKJ	02/08/23 17:36
Lead	0.0500		0.0526	mg/L		105	(80%-120%)		
Lithium	0.0500		0.0571	mg/L		114	(80%-120%)		02/07/23 18:32
Magnesium	2.00		2.24	mg/L		112	(80%-120%)		02/08/23 17:36
Manganese	0.0500		0.0518	mg/L		104	(80%-120%)		
Molybdenum	0.0500		0.0547	mg/L		109	(80%-120%)		
Potassium	2.00		2.06	mg/L		103	(80%-120%)		
Selenium	0.0500		0.0527	mg/L		105	(80%-120%)		
Sodium	2.00		2.24	mg/L		112	(80%-120%)		
Thallium	0.0500		0.0516	mg/L		103	(80%-120%)		
QC1205305392 MB Antimony		U	ND	mg/L					02/08/23 17:32
Arsenic		U	ND	mg/L					
Barium		U	ND	mg/L					
Beryllium		U	ND	mg/L					02/07/23 18:29
Boron		U	ND	mg/L					02/08/23 17:32

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Workorder:	608614												5 of 12
Parmname		NO	<u>M</u>	Sample Q	)ual	QC	Units	RPD%	REC%	Range	Anlst	<b>Date</b>	Time
Metals Analysis Batch	- ICPMS 2374786												
Cadmium					U	ND	mg/L				SKJ	02/08/2	23 17:32
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					02/07/2	23 18:29
Magnesium					U	ND	mg/L					02/08/2	23 17:32
Manganese					U	ND	mg/L						
Molybdenum					U	ND	mg/L						
Potassium					U	ND	mg/L						
Selenium					U	ND	mg/L						
Sodium					U	ND	mg/L						
Thallium					U	ND	mg/L						
QC12053053 Antimony	394 608602001	MS 0.0500	U	ND		0.0535	mg/L		107	(75%-125%	n)	02/08/2	23 19:13

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# **QC** Summary

608614 Page 6 of 12 Sample Qual Parmname **NOM** QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch Arsenic 0.0500 0.00221 0.0524 mg/L100 (75%-125%) SKJ 02/08/23 19:13 Barium 0.0500 0.0498 0.0988 97.9 (75%-125%) mg/L Beryllium 0.0500 U ND 0.0601 mg/L 120 (75% - 125%)02/07/23 18:40 Boron 0.100 1.47 1.54 mg/L N/A (75%-125%) 02/08/23 17:43 Cadmium 0.0500 U ND 0.0530 mg/L 106 (75%-125%) 02/08/23 19:13 25.1 27.8 mg/L Calcium 2.00 N/A (75%-125%)0.0500 U ND 0.0520 Chromium mg/L 103 (75%-125%) Cobalt 0.0500 U ND 0.0513 102 (75% - 125%)mg/L 0.0504 2.04 Iron 2.00 J mg/L 99.6 (75%-125%) 0.0500 U ND 0.0518 104 Lead mg/L(75% - 125%)Lithium 0.0500J 0.00728 0.0653116 (75%-125%) 02/07/23 18:40 mg/L 2.00 10.8 13.1 N/A 02/08/23 19:13 Magnesium mg/L (75% - 125%)0.459 Manganese 0.0500 0.396 mg/L N/A (75%-125%) 02/09/23 11:05 Molybdenum 0.0500 ND 0.0554 111 (75% - 125%)02/08/23 19:13 mg/L 2.00 2.95 5.22 Potassium mg/L 114 (75%-125%)

Workorder:

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# **QC** Summary

Workorder: 608614 Page 7 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch Selenium 0.0500 U ND 0.0492 mg/L98.3 (75% - 125%)SKJ 02/08/23 19:13 Sodium 2.00 12.5 14.9 N/A (75%-125%) mg/L Thallium 0.0500 U ND 0.0513 mg/L 103 (75% - 125%)QC1205305395 608602001 MSD Antimony 0.0500 U ND 0.0526 mg/L 1.66 105 (0%-20%)02/08/23 19:17 0.0500 0.00221 0.0525 101 J mg/L 0.168 (0%-20%)Arsenic Barium 0.0500 0.0498 0.0968 mg/L 2 94 (0%-20%)Beryllium 0.0500 U ND 0.0617 2.74 123 (0%-20%)02/07/23 18:43 mg/L 1.47 Boron 0.100 1.61 mg/L 4.7 N/A(0%-20%)02/08/23 17:47 ND 0.0544 02/08/23 19:17 Cadmium 0.0500 U 2.71 109 (0%-20%)mg/L 2.00 25.1 27.2 N/A Calcium mg/L 2.09 (0%-20%)0.0500 U ND 0.0516 102 Chromium mg/L 0.689 (0%-20%)ND 0.0501 Cobalt 0.0500 U mg/L 99.8 (0%-20%)2.39 2.00 0.0504 2.01 1.41 98.2 (0% - 20%)Iron mg/L ND 0.0502 0.0500 U 100 mg/L 3.16 (0%-20%)Lead Lithium 0.0500 J 0.00728 0.0658 mg/L 0.747 117 (0%-20%)02/07/23 18:43

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# **QC** Summary

Workorder: 608614 Page 8 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch Magnesium 2.00 10.8 13.2 mg/L0.43 N/A (0%-20%)SKJ 02/08/23 19:17 Manganese 0.0500 0.396 0.444 3.41 N/A(0%-20%)02/09/23 11:07 mg/L mg/L Molybdenum 0.0500 ND 0.0559 0.82 112 (0%-20%)02/08/23 19:17 2.95 109 Potassium 2.00 5.12 mg/L 1.87 (0%-20%)Selenium 0.0500 U ND 0.0498 mg/L 1.27 99.6 (0%-20%)12.5 14.4 mg/L (0%-20%)Sodium 2.00 3.52 N/A0.0500 U ND 0.0494 Thallium mg/L 3.8 98.8 (0%-20%)QC1205305396 608602001 SDILT U ND U ND Antimony ug/L N/A (0%-20%)02/08/23 19:24 U ND J 2.21 ug/L N/A (0%-20%)Arsenic 49.8 9.94 (0%-20%)Barium ug/L .173 U ND U ND Beryllium ug/L N/A (0%-20%)02/07/23 18:50 147 37.0 Boron ug/L (0%-20%)02/08/23 17:50 26.2 Cadmium U ND U ND N/A (0%-20%)02/08/23 19:24 ug/L 25100 5080 Calcium ug/L 1.08 (0%-20%)Chromium U ND U ND ug/L N/A (0%-20%)

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# **QC** Summary

Workorder: 608614 Page 9 of 12 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch (0%-20%) Cobalt U ND U ND ug/L N/A SKJ 02/08/23 19:24 J 50.4 U ND ug/L (0%-20%)Iron N/A ug/L Lead U ND U ND N/A (0%-20%)J 7.28 U ND (0%-20%)Lithium ug/L N/A 02/07/23 18:50 Magnesium 10800 2170 ug/L .232 (0%-20%)02/08/23 19:24 396 79.8 (0%-20%)ug/L .655 02/09/23 11:11 Manganese U U ND 02/08/23 19:24 Molybdenum ND ug/L N/A (0%-20%)Potassium 2950 585 (0%-20%)ug/L .814 U ND U ND Selenium ug/L N/A (0%-20%)Sodium 12500 2450 ug/L 1.88 (0%-20%)U Thallium ND U ND (0%-20%)ug/L N/A Metals Analysis-Mercury Batch 2375028 QC1205305820 608516009 DUP U Mercury ND U ND mg/L N/A JP2 01/30/23 12:15 QC1205305819 LCS 0.00200 0.00188 mg/L93.8 (80%-120%) 01/30/23 12:07 Mercury QC1205305818 MB U 01/30/23 12:05 Mercury ND mg/L

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# **QC** Summary

Workorder: 608614 Page 10 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury Batch 2375028 QC1205305821 608516009 MS ND 0.00184 0.00200 U mg/L 91.9 JP2 01/30/23 12:17 (75% - 125%)QC1205305822 608516009 SDILT U ND Mercury U ND ug/L N/A (0%-10%)01/30/23 12:19 **Solids Analysis** 2376740 Batch QC1205308815 608602001 DUP **Total Dissolved Solids** 156 154 mg/L 1.29 (0%-5%)CH6 02/01/23 11:35 QC1205308813 LCS Total Dissolved Solids 300 302 mg/L 101 (95%-105%) 02/01/23 11:35 QC1205308812 MB U ND 02/01/23 11:35 **Total Dissolved Solids** mg/L 2376741 Batch QC1205308819 608803009 DUP **Total Dissolved Solids** 693 693 mg/L0 (0%-5%)CH6 02/01/23 13:05 OC1205308817 LCS 300 300 100 02/01/23 13:05 **Total Dissolved Solids** (95%-105%) mg/L QC1205308816 MB U ND 02/01/23 13:05 Total Dissolved Solids mg/L Spectrometric Analysis Batch QC1205306028 LCS 0.400 0.413 Total Sulfide 103 (85%-115%) JW2 01/30/23 15:41 mg/L QC1205306027 MB U ND 01/30/23 15:41 Total Sulfide mg/L

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# **QC** Summary

Workorder: 608614 Page 11 of 12 Units **Parmname NOM** Sample Qual QC RPD% REC% Range Anlst Date Time Spectrometric Analysis Batch 2375142 QC1205306031 608614004 PS ND 0.392 0.400 U mg/L 96.8 JW2 01/30/23 15:42 Total Sulfide (75% - 125%)QC1205306032 608614004 PSD ND 0.382 Total Sulfide 0.400 U mg/L 2.6 94.3 (0%-15%)01/30/23 15:42 **Titration and Ion Analysis** 2379826 Batch QC1205313789 608555001 DUP Alkalinity, Total as CaCO3 55.2 55.6 mg/L 0.722 (0%-20%)MS3 02/07/23 13:24 55.6 Bicarbonate alkalinity (CaCO3) 55.2 mg/L 0.722 (0%-20%)U Carbonate alkalinity (CaCO3) ND U ND mg/L N/A QC1205313786 LCS Alkalinity, Total as CaCO3 100 103 mg/L 103 (90%-110%) 02/07/23 12:39 QC1205313790 608555001 MS 55.2 158 Alkalinity, Total as CaCO3 100 mg/L 102 (80%-120%) 02/07/23 13:27

#### **Notes:**

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample

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# **QC** Summary

Page 12 of 12 **Parmname NOM** Sample Qual  $\mathbf{OC}$ Units RPD% REC% Range Anlst Date Time

- RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.

608614

- Analyte concentration is not detected above the detection limit ND
- % difference of sample and SD is >10%. Sample concentration must meet flagging criteria Е
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- 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
- N1See case narrative

Workorder:

- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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 R purposes.
- The target analyte was detected in the associated blank. R
- 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 e reporting purposes
- See case narrative for an explanation

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 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.
- \* 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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### Technical Case Narrative Georgia Power Company SDG #: 608815

# **Metals**

**Product: Determination of Metals by ICP-MS Analytical Method:** SW846 3005A/6020B **Analytical Procedure:** GL-MA-E-014 REV# 35

**Analytical Batch:** 2375511

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2375510

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815005	BRA-PZ-52D
1205306649	Method Blank (MB)ICP-MS
1205306650	Laboratory Control Sample (LCS)
1205306653	608815001(BRA-PZ-13SL) Serial Dilution (SD)
1205306651	608815001(BRA-PZ-13SS) Matrix Spike (MS)
1205306652	608815001(BRA-PZ-13SSD) 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 608815002 (BRA-PZ-70I) and 608815005 (BRA-PZ-52D) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

A l	608815						
Analyte	002	005					
Boron	20X	1X					
Magnesium	5X	5X					
Sodium	1X	10X					

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 39

**Analytical Batch:** 2375754

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 39

**Preparation Batch:** 2375753

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815005	BRA-PZ-52D
1205307094	Method Blank (MB)CVAA
1205307095	Laboratory Control Sample (LCS)
1205307098	608803003(BRA-BRGWC-30IL) Serial Dilution (SD)
1205307096	608803003(BRA-BRGWC-30ID) Sample Duplicate (DUP)
1205307097	608803003(BRA-BRGWC-30IS) 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:** 2375453

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608815001 BRA-PZ-13S

608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815006	BRA-PZ-52D
1205306562	Method Blank (MB)
1205306563	Laboratory Control Sample (LCS)
1205306674	608815001(BRA-PZ-13S) Sample Duplicate (DUP)
1205306675	608815001(BRA-PZ-13S) 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 1205306674 (BRA-PZ-13SDUP), 1205306675 (BRA-PZ-13SPS), 608815001 (BRA-PZ-13S), 608815002 (BRA-PZ-70I), 608815003 (BRA-APE-FD-05) and 608815006 (BRA-PZ-52D) were diluted because target analyte concentrations exceeded the calibration range. The following sample 608815002 (BRA-PZ-70I) in this sample group was diluted due to matrix interference. 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.

A a la a	608815			
Analyte	001	002	003	006
Chloride	1X	1X	1X	10X
Fluoride	1X	2X	1X	1X
Sulfate	10X	20X	10X	10X

#### **Miscellaneous Information**

#### **Manual Integrations**

Sample 608815006 (BRA-PZ-52D) was 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# 20

**Analytical Batch:** 2376741

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification
608815005 BRA-PZ-52D
1205308816 Method Blank (MB)

1205308817 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:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2377347

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
1205309757	Method Blank (MB)
1205309758	Laboratory Control Sample (LCS)
1205309759	608803013(BRA-PZ-61I) Sample Duplicate (DUP)
1205309760	608969004(BRA-PZ-57I) 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:** Sulfide, Total

Analytical Method: SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

**Analytical Batch:** 2376122

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815006	BRA-PZ-52D
1205307835	Method Blank (MB)
1205307836	Laboratory Control Sample (LCS)
1205307839	608815006(BRA-PZ-52D) Post Spike (PS)
1205307840	608815006(BRA-PZ-52D) Post Spike Duplicate (PSD)

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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:** 2378067

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815006	BRA-PZ-52D
1205311158	Laboratory Control Sample (LCS)
1205313003	608803012(BRA-PZ-60I) Sample Duplicate (DUP)
1205313004	608803012(BRA-PZ-60I) 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.

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### Technical Case Narrative Georgia Power Company SDG #: 608614

# **Metals**

Product: Determination of Metals by ICP-MS Analytical Method: SW846 3005A/6020B Analytical Procedure: GL-MA-E-014 REV# 35

**Analytical Batch:** 2374786

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2374785

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205305392	Method Blank (MB)ICP-MS
1205305393	Laboratory Control Sample (LCS)
1205305396	608602001(BRA-PZ-44L) Serial Dilution (SD)
1205305394	608602001(BRA-PZ-44S) Matrix Spike (MS)
1205305395	608602001(BRA-PZ-44SD) 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 boron. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. 608614001 (BRA-BRGWC-36S), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D).

#### **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**

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### **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 608614001 (BRA-BRGWC-36S), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

A	608614			
Analyte	001	003	004	
Boron	10X	10X	10X	
Calcium	1X	1X	5X	
Manganese	1X	10X	1X	

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 39

**Analytical Batch:** 2375028

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 39

**Preparation Batch:** 2375027

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205305818	Method Blank (MB)CVAA
1205305819	Laboratory Control Sample (LCS)
1205305822	608516009(NonSDGL) Serial Dilution (SD)
1205305820	608516009(NonSDGD) Sample Duplicate (DUP)
1205305821	608516009(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

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**Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

**Analytical Batch:** 2374768

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
608614001	BRA-BRGWC-36S

1205305380 1205305381 Method Blank (MB)

Laboratory Control Sample (LCS)

608602001(BRA-PZ-44) Sample Duplicate (DUP) 1205305382

608602001(BRA-PZ-44) Post Spike (PS) 1205305383

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	1205305383 (BRA-PZ-44PS)	115* (90%-110%)

### **Technical Information**

### Sample Dilutions

The following samples 1205305382 (BRA-PZ-44DUP), 1205305383 (BRA-PZ-44PS) and 608614001 (BRA-BRGWC-36S) were diluted because target analyte concentrations exceeded the calibration range. The following samples 1205305382 (BRA-PZ-44DUP) and 1205305383 (BRA-PZ-44PS) in this sample group were diluted due to matrix interference. 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.

Analysta	608614
Analyte	001
Sulfate	20X

**Product:** Ion Chromatography **Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

**Analytical Batch:** 2374833

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The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205305504	Method Blank (MB)
1205305505	Laboratory Control Sample (LCS)
1205305506	608457001(NonSDG) Sample Duplicate (DUP)
1205305507	608457001(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.

#### **Quality Control (QC) Information**

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Fluoride	1205305506 (Non SDG 608457001DUP)	22.6* (0%-20%)

### **Technical Information**

### **Sample Dilutions**

The following samples 1205305506 (Non SDG 608457001DUP), 1205305507 (Non SDG 608457001PS), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D) were diluted because target analyte concentrations exceeded the calibration range. The following samples 1205305506 (Non SDG 608457001DUP), 1205305507 (Non SDG 608457001PS), 608614002 (BRA-BRGWC-37S), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D) in this sample group were diluted due to matrix interference. 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.

A l 4 -	608614			
Analyte	002	003	004	
Nitrate-N	2X	2X	2X	
Sulfate	1X	40X	40X	

### **Miscellaneous Information**

### **Manual Integrations**

Samples 608614004 (BRA-PZ-53D) and 608614006 (BRA-APE-FB-08) were manually integrated to correctly position the baseline as set in the calibration standards.

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**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2376740

The following samples were analyzed using the above methods and analytical procedure(s).

 GEL Sample ID#
 Client Sample Identification

 608614001
 BRA-BRGWC-36S

 608614002
 BRA-BRGWC-37S

 1205308812
 Method Blank (MB)

1205308813 Laboratory Control Sample (LCS)

1205308815 608602001(BRA-PZ-44) 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# 20

**Analytical Batch:** 2376741

The following samples were analyzed using the above methods and analytical procedure(s).

**GEL Sample ID# Client Sample Identification** 608614003 **BRA-BRGWC-38S** 608614004 BRA-PZ-53D BRA-APE-EB-09 608614005 608614006 BRA-APE-FB-08 1205308816 Method Blank (MB) 1205308817 Laboratory Control Sample (LCS) 608803009(BRA-PZ-51D) Sample Duplicate (DUP) 1205308819

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:** Sulfide, Total

Analytical Method: SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

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**Analytical Batch:** 2375142

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205306027	Method Blank (MB)
1205306028	Laboratory Control Sample (LCS)
1205306031	608614004(BRA-PZ-53D) Post Spike (PS)
1205306032	608614004(BRA-PZ-53D) Post Spike Duplicate (PSD)

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:** 2379826

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205313786	Laboratory Control Sample (LCS)
1205313789	608555001(NonSDG) Sample Duplicate (DUP)
1205313790	608555001(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.

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### Technical Case Narrative Georgia Power Company SDG #: 608422

# **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2374301

**Preparation Method:** SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

**Preparation Batch:** 2374300

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304628	Method Blank (MB)ICP-MS
1205304629	Laboratory Control Sample (LCS)
1205304632	608410001(BRA-BRGWA-2SL) Serial Dilution (SD)
1205304630	608410001(BRA-BRGWA-2SS) Matrix Spike (MS)
1205304631	608410001(BRA-BRGWA-2SSD) 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 608422001 (BRA-APE-FD-04) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

A 1 4 .	608422	
Analyte	001	
Boron	10X	
Calcium	10X	

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**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 39

**Analytical Batch:** 2374419

**Preparation Method:** SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 39

**Preparation Batch:** 2374418

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304804	Method Blank (MB)CVAA
1205304805	Laboratory Control Sample (LCS)
1205304808	608391001(NonSDGL) Serial Dilution (SD)
1205304806	608391001(NonSDGD) Sample Duplicate (DUP)
1205304807	608391001(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:** 2374002

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	<u>Client Sample Identification</u>
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304357	Method Blank (MB)
1205304358	Laboratory Control Sample (LCS)
1205304359	608413001(BRA-BRGWA-12S) Sample Duplicate (DUP)
1205304360	608413001(BRA-BRGWA-12S) 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 sample 608422001 (BRA-APE-FD-04) was diluted because target analyte concentrations exceeded the calibration range. The following samples 1205304359 (BRA-BRGWA-12SDUP), 1205304360 (BRA-BRGWA-12SPS) and 608422001 (BRA-APE-FD-04) in this sample group were diluted due to matrix interference. 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	608422
	001
Chloride	40X
Nitrate-N	2X
Sulfate	40X

### **Miscellaneous Information**

### **Manual Integrations**

Sample 608422001 (BRA-APE-FD-04) was manually integrated to correctly position the baseline as set in the calibration standards.

<u>Product:</u> Solids, Total Dissolved Analytical Method: SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2376170

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205307923	Method Blank (MB)
1205307924	Laboratory Control Sample (LCS)
1205307926	608418001(BRA-BRGWC-17S) 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.

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**Product:** Sulfide, Total

Analytical Method: SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

**Analytical Batch:** 2374521

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304979	Method Blank (MB)
1205304980	Laboratory Control Sample (LCS)
1205304981	608410001(BRA-BRGWA-2S) Post Spike (PS)
1205304982	608410001(BRA-BRGWA-2S) Post Spike Duplicate (PSD)
1205304983	608418002(BRA-BRGWC-33S) Post Spike (PS)
1205304984	608418002(BRA-BRGWC-33S) Post Spike Duplicate (PSD)

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:** 2375518

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205306658	Laboratory Control Sample (LCS)
1205306806	608051001(NonSDG) Sample Duplicate (DUP)
1205306807	608051001(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.

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## Technical Case Narrative Georgia Power Company SDG #: 608418

## **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2374301

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2374300

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205304628	Method Blank (MB)ICP-MS
1205304629	Laboratory Control Sample (LCS)
1205304632	608410001(BRA-BRGWA-2SL) Serial Dilution (SD)
1205304630	608410001(BRA-BRGWA-2SS) Matrix Spike (MS)
1205304631	608410001(BRA-BRGWA-2SSD) 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 608418002 (BRA-BRGWC-33S), 608418003 (BRA-BRGWC-34S) and 608418004 (BRA-BRGWC-35S) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

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	608418		
Analyte	002	003	004
Boron	10X	20X	20X
Calcium	10X	5X	5X
Manganese	10X	5X	1X

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 39

**Analytical Batch:** 2374419

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 39

**Preparation Batch:** 2374418

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	<b>Client Sample Identification</b>
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205304804	Method Blank (MB)CVAA
1205304805	Laboratory Control Sample (LCS)
1205304808	608391001(NonSDGL) Serial Dilution (SD)
1205304806	608391001(NonSDGD) Sample Duplicate (DUP)
1205304807	608391001(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:** 2373867

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608418001 BRA-BRGWC-17S 608418002 BRA-BRGWC-33S

608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205303999	Method Blank (MB)
1205304000	Laboratory Control Sample (LCS)
1205304001	608418004(BRA-BRGWC-35S) Sample Duplicate (DUP)
1205304002	608418004(BRA-BRGWC-35S) 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	1205304002 (BRA-BRGWC-35SPS)	120* (90%-110%)
Sulfate	1205304002 (BRA-BRGWC-35SPS)	111* (90%-110%)

### **Technical Information**

### **Sample Dilutions**

The following samples 1205304001 (BRA-BRGWC-35SDUP), 1205304002 (BRA-BRGWC-35SPS), 608418001 (BRA-BRGWC-17S), 608418002 (BRA-BRGWC-33S), 608418003 (BRA-BRGWC-34S) and 608418004 (BRA-BRGWC-35S) were diluted because target analyte concentrations exceeded the calibration range. The following sample 608418001 (BRA-BRGWC-17S) in this sample group was diluted due to matrix interference. 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		608	418	
Anaryte	001	002	003	004
Chloride	1X	40X	1X	1X
Nitrate-N	2X	1X	1X	1X
Sulfate	20X	40X	40X	25X

**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2376170

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205307923	Method Blank (MB)
1205307924	Laboratory Control Sample (LCS)
1205307926	608418001(BRA-BRGWC-17S) 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:** Sulfide, Total

**Analytical Method:** SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

**Analytical Batch:** 2374521

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205304979	Method Blank (MB)
1205304980	Laboratory Control Sample (LCS)
1205304983	608418002(BRA-BRGWC-33S) Post Spike (PS)
1205304984	608418002(BRA-BRGWC-33S) Post Spike Duplicate (PSD)

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:** 2375521

The following samples were analyzed using the above methods and analytical procedure(s).

### GEL Sample ID# Client Sample Identification

608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205306666	Laboratory Control Sample (LCS)
1205306667	608540001(NonSDG) Sample Duplicate (DUP)
1205306668	608540001(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.

Page 116 of 130 SDG: 608815

Part	Page: Of A	608622	<b>1 1 1 1 1 1 1 1 1 1</b>	ii of of	Laboratories LLC Coloration Radiobioassay   Specialty Analytics Chain of Custody and Analytical Request	and A	ries stry I Radio nalytic	LLC bioassay al Req	l Speciali uest	(CO) y Analytic	8	4	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	ories, LLC Road C 29407 556-8171	
Start Content and Perceive   Pe	O Number:	GEL Work Order Numbe			GEL P	roject N	fanager	Erin 1	rent				Fax: (843) 760	6-1178	
Standard Auth Fonds - Each Royal Ponds - Each Roy				04-506-7	116		1	Sa	mple A	nalysis	Reque		in the number of	containers for	r each test)
Sample McGill How St. Adition G. Scind Results To. SCS & Gosyymer Controls   Control Results To. SCS & Gosyymer Control   Control Results To. Science	Project/Site Name: Plant Branch Ash Ponds - E		Fax#				Should	399	S.		IN	IN		V	- Preservative Type (6)
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Sample ID	T. Gade	Send Results To: SCS & (	Geosyntec (	Contacts			ylqq		ARRES	SM 2540 Sicarb Al	7L '0109 4 s ju	912, 932		requ	Note: extra sample is ired for sample speci
BAG-WC-345  BAG-WC	Sample ID * For composites - indicate start and stop date		*Time Collected (Military) (hhmm)	QC Code (3)	Field Filtered <sup>(3)</sup>	Sample Matrix (4)	yes, please su		Station Co.	EPA 300, 5 Total & B	EPA 6020,	HnS 6 948-MS		Ta	QC Sk_Code: BRA-CCF ASSMT-2023S1
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10   10   10   10   10   10   10   10	BRA- BGGWC-375	61/25/23	1320			MG	Z	2	S	1	1	1		field	pH = 5.84 ferrous iron = 0 · 0
PP2 - 53D   Chain of Custody Signatures	BRA- BAGWC-345	01/25/23	1353	6	2	NG		2	N	1	1	1		field	1 1
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S, see Sample Receipt & Review form (SRR.)  FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Y - for yes the sample was field filtered or - N - for sample was not field filtered.  We water, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix  Interced (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank  Characteristic Hazards  Listed Waste  Characteristic Hazards  LW= Listed Waste  CO = Corrosive  RE = Reactive  RE = Reactive  RE = Reactive  FT.K.P and U-listed wastes.)  FT.K.P and U-listed wastes.)  Misc. Highlow PH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  Description:  Description:	Mount Hall	C	1	1/1	6/23	7	2	Addition For Lab	al Rema Receivi	rks: ng Use (	* Meta	s: B,Ca,Sb,As	Ba,Be,Cd,Cr,Co,Pl	b,Li,Mo,Se,Tl,Fo	,Mg,Mn,K,Na,Hg
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Claracteristic Hazards   Claracteristic Hazards   Claracteristic Hazards   Claracteristic Hazards   Claracteristic Hazards   CD = Corrosive   FL = Flammable/Ignitable   LW = Listed Waste   OT = Other / Unknown	), matrix codes. W D-Drinking water, W G-Groundwater, V ) Sample Analysis Requested: Analytical method requested (i ) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Ac	(i.e. 8260B, 6010B/7470A) and number cid, SH = Sodium Hydroxide, SA = Su	of containers p	rovided for = Ascorbic	sz–seume each (i.e. 82 Acid, HX =	60B - 3, 60 Hexane, S	108/7470A T = Sodium	vater Quai 1). Thiosulfa	e, If no pi	eservative	s added =	eave field blank			
Hg= Mercury RE = Reactive RE = Reactive Rescription: Ag= Silver MR= Misc. RCRA metals RE = Reactive Raste code(s): Description:  TSCA Regulated Description:  CO = Corrosive Raste code(s): Description:  CB = Polychlorinated Description:  CB = Reactive Raste code(s): Description:  CB = Polychlorinated Description:  CB = Republication Description: Descripti	NOWN OR POSSIBLE HAZARDS	Characteristic Hazards FL = Flammable/Ignitable	Listed LW= I	Waste Listed Wa	iste			Other OT=Oth	ier / Un	cnown			Ple	ease provide ar	y additional details handling and/or
Ag= Silver MR= Misc. RCRA metals		CO = Corrosive RE = Reactive	(F,K,P Waste	and U-li code(s):	sted waste	5.5		i.e.: Hig nisc. hee Descript	h/low p ilth hazi ion:	H, asbes ırds, etc.	os, bery	Nium, irritan	-	sposal concern mple(s), type oj ttrices, etc.)	s. (i.e.: Origin of site collected from, od
		TSCA Regulated PCB = Polychlorinated biphenyls													

PO Number:  Client Name: GA Power  Project/Site Name: Plant Branch Ash Ponds - TW. E  Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: A C Send Results		Chall	500	ממא מוור	Analyti	Chain of Custody and Analytical Request	F Custody and Analytical Request	Mayuco		д	Charleston, SC 29407 Phone: (843) 556-8171	407 8171
Client Name: GA Power  Project/Site Name: Plant Branch Ash Ponds -TW, E  Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: 7 ( A) A AC Send Result	GEL Work Order Number:		S	GEL Project Manager: Erin Trent	t Manage	r: Erin 1	Trent			H	Fax: (843) 766-1178	78
Project/Site Name: Plant Branch Ash Ponds - TW. E. Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: 7 (23) 0 ACC Send Result	Pho	Phone # 404-	404-506-7116			Sa	Sample Ana	Analysis Requested (5)	quested		e number of con	(Fill in the number of containers for each test)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: ( ) ACC   Send Result	Fax#	# 3			Shou	Should this	diore		IN IN			< Preservative Type (6)
(Lahle ACC					consi	sample be considered:	503	ΙΚ	LHL	+		Comments
	Send Results To: SCS & Geosyntec	yntec Con	Contacts			r. sr.qz	TDS, N	A dassis 8028	20, 6010 Metals			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time	*Date Collected (N (mm/dd/yy) (l	*Time Collected (Military) Co	QC Fie	Field Sample Filtered (3) Matrix (4)	E adioactive yes, please su isotopic info.	(7) Known or	Total numbe Cl, F, SO4, EPA 300,	Total & B		WIPOY WS WS		QC Task_Code: BRA-CCR- ASSMT-2023S1
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12,153 7:15	2 148	11	26/2	2	7	Addition	Additional Remarks:	.S. *	Metals: B,	* Metals: B,Ca,Fe,Mg,Mn,K,Na	1 1	1 1
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<ol> <li>Chain of Custody Number = Client Determined</li> <li>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</li> <li>Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.</li> </ol>	B = Equipment Blank, MS as field filtered or - N - for s	= Matrix Spik ample was not	e Sample, M	SD = Matrix :	spike Duplica	te Sample, C	G = Grab, C =	- Composite				
4.) Matrix Codes: WD=Drmking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix S. Sample Analysis Requested: Analytical method requested (i.e. 82608, 6010B/7470A) and number of containers provided for each (i.e. 82608 - 3, 6010B/74704 - 1).	sr, W.W=Waste Water, W.L. B/7470A) and number of co	=Leachate, St ntainers provid	Jesoil, SE	(i.e. 8260B -	3, 6010B/747	= water Qua 0A - 1).	unty Control IV	Tatrix		1		
E.) Preservative Type: HA = Hydrochlone Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfune Acid, AA = Ascorbic Acid, HA = Hexane, SI = Sodium Injosuliate, If no preservative is added = leave held blank  VANOVINI OD DOCEDED E HAZA DISC.	n Hydroxide, SA = Sulfuric	Acid, AA = A	scorbic Acid	, нх = нехаг	e, SI = Sodik	Im I mosuifa	ate, If no press	ervative is ac	ided = leave	neld blank	, u	TO FIL SHEET
_	ble	Listed waste LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	waste Listed Waste and U-listed code(s):	wastes.)		OT= Other / (i.e.: High/lc misc. health Description:	Office: Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	own asbestos, ds, etc.)	beryllim	Other / Unknown  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.)
AR MR Misc, RCRA metals PCB =	Polychlorinated biphenyls				ľ							

GEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

SDG/AR/COC/Work Order: 608622, 60864 GPCC Client: Received By: Stacy Boone Date Received: JAN 26, 2023 FedEx Express FedEx Ground UPS Field Services Courier Carrier and Tracking Number 2 1816 Net Counts > 1000pm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Suspected Hazard Information UN#: Hazard Class Shipped: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes\_\_\_No\_ A)Shipped as a DOT Hazardous? COC notation or radioactive stickers on containers equal client designation. B) Did the client designate the samples are to be Maximum Net Counts Observed\* (Observed Counts - Area Background Counts): \_\_\_\_\_\_\_CPM / mR/Hr received as radioactive? Classified as: Rad 1 Rad 2 Rad 3 C) Did the RSO classify the samples as radioactive? COC notation or hazard labels on containers equal elient designation. D) Did the client designate samples are hazardous? If D or E is yes, select Hazards below. RCRA Asbestos Beryllium Fareign Soil Flammable PCB's E) Did the RSO identify possible hazards? Comments/Qualifiers (Required for Non-Conforming Items) § <del>≥</del> 2 Sample Receipt Criteria Circle Applicable: Scals broken Damaged container Leaking container Other (describe) Shipping containers received intact and sealed? COC created upon receipt Circle Applicable: Client contacted and provided COC Chain of custody documents included Preservation Method: Wet Ice Ice Packs Dry ice None Other:
\*all temperatures are recorded in Colsius with shipment? TEMP: 14 x 5 Samples requiring cold preservation within  $(0 \le 6 \text{ deg. C})$ ?\* Temperature Device Serial #: 1R3-22 Daily check performed and passed on IR Secondary Temperature Device Serial # (If Applicable): Circle Applicable: Seals broken Damuged container Leaking container Other (describe) temperature gun? Sample containers intact and sealed? 5 Sample ID's and Containers Affected; Samples requiring chemical preservation If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) 6 at proper pH? Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes\_\_\_ No\_\_ NA\_ Do any samples require Volatile 7 Analysis? Sample ID's and containers affected: ID's and tests affected: Samples received within holding time? ID's and containers affected: Sample ID's on COC match ID's on Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) bottles? Date & time on COC match date & time on bottles? Circle Applicable: No container count on COC Other (describe) Number of containers received match number indicated on COC? Are sample containers identifiable as GEL provided by use of GEL labels? Circle Applicable: Not relinquished Other (describe) COC form is properly signed in relinquished/received sections? Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials

*** age: of ***	333	GEL GEL GEL GRAND	DE Chain		ADOF nistry   Rad	ator iochemist	Laboratories   Coloratories   Colo	LC ioassay 18	#	60881 6	00	0	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	LLC .07
O Number:	GEL Work Order Number:	er Number		5	GEL Pr	oject M.	GEL Project Manager: Erin Trent	Erin Tre	ent		N		Fax: (843) 766-1178	
Client Name: GA Power			Phone # 40	404-506-7116	91	2013	根原	Sam	Sample Analysis Requested (5)	alysis F	Request		(Fill in the number of containers for each test)	ainers for each test)
Project/Site Name: Plant Branch Ash Ponds - E			Fax#				Should this	1100	S		IN			< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308						sample be considered:	161	60		_	07		Comments
Collected By: A Schniffen ACC	Send Results To: SCS & Geosyntec	: SCS & G	sosyntec C.	Contacts		31/	(If	rds	LDS, N	lA dassi	2610,74	əpi		Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field S Filtered (3) M	Sample Matrix (4)	Radioactive yes, please sup isotopic info.)	(7) Known or possible Haza	Total number	EPA 300, S Total & Bi	Meta FPA 6020, 6 Radium 22	F6 948-WS		QC Task Code: BRA-CCR-ASSMT-2023S1
3RA-PZ-135	01	82/92/10	0711	Ö	z	DM	>	2	>	>	>	>		field pH = $5.56$
IOL-2d-V88	10	01 26 23	220	9	N,	MG	2	2	>	>	>	>		-
BRA-APE-FD-05	110	01/26/23	/	9	2	9	Z	2	>	>	>	>		
3RA- APE-EB-10	/10	01/26/23	1100	0	7	MB	2	Z	>	>	>	7		field pH = $NA$ field ferrous iron = $NA$
SRA-														field pH =
Ch	Chain of Custody Signatures	ignatures						TAT	TAT Requested:		Normal:	x Rush:	Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time	(	Received by (signed)	1	Date	Time		T.	Fax Results: [ ] Yes	S: [ ] Y		[x] No			
1/21/23	0950	M	1	1/8/	28 9	2		elect Del	iverable	:[]Co	[] ¥J	QC Summa	Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2	wel 2 [ ] Level 3 [ ] Level 4
JANA 1/27/23 X	7	1	d	153	23	7	<b>→</b>	Additional Remarks: For Lah Receiving I	Remari	O dsi	* Metals	B,Ca,Sb,As,	Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,N	* Metals: B.Ca.Sb.As.Ba.Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  * Metals: B.Ca.Sb,As.Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	ımple Receipt & R	eview form	(SRR.)			Sı	ample Co.	llection 's	Time Zo	ne: [x]	Eastern	[ ] Pacifi	77	Tountain [ ] Other:
). 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 yeas the sample was field filtered or - N - for sample was not field filtered.	ld Duplicate, EB = Equi	pment Blank, 1	MS = Matrix S or sample was	pike Sample	., MSD = Ma	atrix Spike	Duplicate S.	ample, G=	Grab, C=	= Composi	υ,			
.) 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. 82608, 60108/14704) and number of containers provided for each (i.e. 82608 - 3, 60108/14704 - 1).	S=Surface Water, WW= 2. 8260B, 6010B/7470A	-Waste Water, '	WL=Leachate, f containers pri	SO=Soil, S	E=Sediment ach (i.e. 826)	, SL=Slud, 0B - 3, 60.	ge, WQ=W <sub>E</sub>	nter Quality	Control A	fatrix				
) 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	d, SH = Sodium Hydrox	ide, SA = Sulfi	ric Acid, AA =	Ascorbic /	\cid, HX = F	Texane, ST	r = Sodium T	Thiosulfate,	If no pres	ervative is	added = le	ave field blank		
NOR POSSIBLE HAZARDS  teals iic Hg= Mercury im Se= Selenium nium Ag= Silver mium MR= Misc. RCRA metals	Characteristic Hazards FL = Flammable/Ignitable CO = Corrosive RE = Reactive TISCA Regulated PCB = Polychlorinated	gnitable	Listed Waste LW= Listed V (F,K,P and U- Waste code(s)	Listed Waste LW=Listed Waste (F,K,P and U-listec Waste code(s):	Listed Waste LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):			Other OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	r / Unkn Iow pH, h hazar. n:	own asbestc ds, etc.)	s, beryli	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.)
$0 = \mathbf{L}$ ead	biphenyis						l							

age: 2 of 2.		45	0	CC Chain of Custody and Analytical Request	tOries	S LLC idiobioassay	Specialty	Analytics	8	15	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	LLC 07 1171	
O Number:	GEL Work Order Number:	r:		GEL Project Manager: Erin Trent	ct Manag	er: Erin	Frent				Fax: (843) 766-1178	8,	-
lient Name: GA Power		Phone # 40	404-506-7116	9		S	Sample Analysis Requested (5)	alysis R	quested		he number of con	(Fill in the number of containers for each test)	
roject/Site Name: Plant Branch Ash Ponds - E		Fax#			Sho	122	s.	Œ	IN IN			< Preservative Type (6)	13
ddress: 241 Ralph McGill Blvd SE, Atlanta GA 30308	4 30308				Sar	sample be considered:	-60		8	40		Comments	
ollected By: A Schmittler ACC	Send Results To: SCS & Geosyntec Contacts	Jeosyntec Co	ontacts		ylqq		TDS, №	icarb Al 820B	77 % 97 9010° 4	005		Note: extra sample is required for sample specific	.0
Sample ID * For composites - indicate start and stop date/time	*Date Collected	*Time Collected (Military) (hhmm)	QC Code (2) Fil	Field Sample Filtered (3) Matrix (4)	Radioactive yes, please sup	isotopic info.) (7) Known or possible Hazs	Total number	Total & B SM 2:	Meta EPA 6020, 6 SW-846 93	SM 4 CI 7, SC EPA 300,		QC Task_Code: BRA-CCR- ASSMT-2023S1	
BRA- PZ-52D	01/25/13	1424	U	D <sub>M</sub>	2	>	N		>			field pH = $7$ i $\dot{\psi}$ field ferrous iron = $0.0.0$	1
OSS-520	01/26/23 1240	0771	<b>O</b>	N WG	5	2	W	>		>		field pH = 7+488	
IRA-												field pH = field ferrous iron =	
RA-												field pH =	
RA-				H									1-1-
Ü	Chain of Custody Signatures					TA	TAT Requested:		Normal: x	Rush:	Specify:	(Subject to Surcharge)	
Relinquished By (Signed) Date Time	ne Received by (signed)	) jeg	Date	Time		Fax Res	Fax Results: [ 1 Yes	Yes [x] No	o <sub>N</sub>				1
1/22/100	0450	No	1921	23 6	8	Select	Select Deliverable: [ ] C of A	:[]Cof	A [ ]Q(	[ ] QC Summary	[ ] level 1 [x] Level 2	evel 2 [ ] Level 3 [ ] Level 4	
91/0/ 1/8/183	30 2 11	d	112	2	2	For La	Additional Remarks: For Lab Receiving I	ks: *	Metals: B	Ca,Sb,As,Ba	Additional Remarks: * Metals: B.Ca.Sb.As,Ba.Be.Cd.Cr.Co.Pb.Li,M. Far Lab Reveiving Use Only: Custody Seal Intart? [ ] Yes [ ] No	* Metals: B.Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  "http://weindo.kgot/pirace? [ ] Yee [ ] No Cooler Temm:	1
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Receipt & Review forn	ı (SRR.)			Sample	Collectio	n Time Zo	me: [x] I	astern	] Pacific	[ ] Central [ ] N	ountain [ ] Other:	
Chain of Custody Number = Client Determined QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MS Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered	rield Duplicate, $\mathbf{EB} = \mathbf{Equipment\ Blank}$ , yes the sample was field filtered or - N	MS = Matrix Sp - for sample was	oike Sample, not field filter	Spike Sample, $MSD = Matrix$ Spike Duplicate Sample, $G = Grab$ , $C = Composite$ is not field filtered.	s Spike Duplic	ate Sample,	G = Grab, C	= Composite					
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. 82608, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Preservative Tyne: 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	WS=Surface Water, WW=Waste Water (i.e. 8260B, 6010B/7470A) and number cid, SH = Sodium Hydroxide, SA = Su	, WL=Leachate, of containers pro fluric Acid, AA =	SO=Soil, SE wided for eac Ascorbic Ac	=Sediment, SI h (i.e. 8260B id, HX = Hex	_=Sludge, W( - 3, 6010B/74 me, ST = Sod	2=Water Qua 704 - 1). ium Thiosulf	lity Control l	Matrix Matrix Servative is a	dded = leave	field blank			
KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards FL = Flammable/Ignitable	Listed Waste LW=Listed W	Listed Waste LW= Listed Waste			Other OT= Ot	Other OT= Other / Unknown	nown			Please, below 1	Please provide any additional details below regarding handling and/or	V
	CO = Corrosive RE = Reactive	(F,K,P a Waste co	(F,K,P and U-listed wastes.) Waste code(s):	d wastes.)	1	(i.e.: High/lo misc. health Description:	(i.e.: High/low pH, asbeste misc. health hazards, etc.) Description:	, asbestos ds, etc.)	, beryllim	(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)	
<pre>d = Cadmium Ag= Silver r = Chromium MR= Misc. RCRA metals b = Lead</pre>	TSCA Regulated PCB = Polychlorinated . biphenyls				I								

Cli	ent:			en	SAMPLE RECEIPT & REVIEW FORM  G/AR/COC/Work Order:
	ceived By:Thyasia Tatum				
Re	Carrier and Tracking Number			Da	rice Received:  Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Sus	pected Hazard Information	ž	ž	*If	Net Counts > 100cpm on sumples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)S	Shipped as a DOT Hazardous?	_	\ <u></u>	Haz	zard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
	Did the client designate the samples are to be sived as radioactive?		V	1	C notation or radioactive stickers on containers equal client designation.
	Did the RSO classify the samples as loactive?	,		Ma	ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad i Rad 2 Rad 3
	Did the client designate samples are hazardous?	  -	/	1 1	Cnotation or hazard labels on containers equal client designation.  O or B is yes, select Hazards below.  PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
E) I	Did the RSO identify possible hazards?  Sample Receipt Criteria	× S	12/2	ž	
1	Shipping containers received intact and sealed?	/	7	<u>z</u>	Circle Applicable: Scals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*				Preservation Method: Wet Ice life Packs Dry ice None Other: *all temperatures are recorded in Celsius  TEMP:
4	Daily check performed and passed on IR temperature gun?			_	Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	V			Circle Applicable: Scals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	V			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			レ	If Y/s, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  No liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
8	Samples received within holding time?	V			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	レ			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	V	Ĺ		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?			<b>!</b>	Circle Applicable: No container count on COC Other (describe)
12	GEL provided by use of GEL labels?	V		/	
13 Con	COC form is properly signed in relinquished/received sections?	し			Circle Applicable: Not relinquished Other (describe)
					A) 1/2/1

age: of	809	608418	GEL Glass		Cabain of Custody and Analytical Request	ator inchemistand Ar	Tes   try   Radiot	LC bioassay I	Specialty Jest	Analytics			GEL Laboratories, LL 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-817	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	
O Number;	GEL Work	GEL Work Order Number:	3		GEL Pr	oject M	GEL Project Manager: Erin Trent	Erin Ti	ent.				Fax: (843) 766-1178	766-1178	
Client Name: GA Power			Phone # 4(	404-506-7116	116			Sar	Sample Analysis Requested (5)	alysis F	equest		the number	of containers	(Fill in the number of containers for each test)
roject/Site Name: Plant Branch Ash Ponds - E	ш		Fax#				Should this	this	S.		IN			29410	< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308						sample be considered:	be red:	60			0			Comments
Sollected By: 7 ; 6054-27 ACC	Send Resul	Send Results To: SCS & Geosyntec		Contacts		317			N 'SQL	A dassi	L '0109	əpi			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time	aie/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field S Filtered (3) M	Sample Matrix (4)	Radioactive yes, please suj isotopic info.)	(7) Known or possible Haza	Total number	EPA 300, S Total & B SM 23	Meta EPA 6020, 6 Radium 22	FE 948-WS			Task_Code: BRA-CCR-ASSMT-2023S1
BRA- BRGWC-17S		01/24/23	1618	Ð	z	DM	2	Z	8	1	>	1		在	field pH = G.37
8RA- BRGWC-335		01/24/23	1340	5	N	FMG.	'Z	Z	8	)	1	)		打 打 打	2 0 0
RA-BAGNC-34S		01/24/23	1253	5	2	MG	Z	2	5	1	/	1		41 4	field pH = 5.93
RA- BAGNIC - 35S		01/24/23	1441	9	7	W.C.	2	2	8	1	2	1		# # #	8
RA-														iii ii	
	Chain of Custo	Chain of Custody Signatures				t		TAT	TAT Requested:		Normal:	x Rush:	Specify		field ferrous iron = (Subject to Surcharge)
Relinquished By (Signed) Date Tin	Time	Received by (signed)	ned)	Date	Time		Į.,	ax Resul	Fax Results: [ ] Yes		[x] No				(18 miles of the first of the f
194/02 195-23/ 6	0229	I Brown	all s	13	22 July	Shi	2000	elect De	Select Deliverable: [	[ ]Co	A [ ]	Seject Deliverable: [] C of A [] QC Summary Additional Remarks. * Morelle: P.O. St. & B.O.	[ ] level 1	[x] Level 2	of A [] QC Summary [] level 1 [x] Level 2 [] Level 3 [] Level 4  * Morelle: B Co. St. A. B. B. C. A. C., D. L. I. M. S. C. T. D. M. M. M. V. M. M.
		3					F	or Lab	Receiving	Use O	ly: Cus.	ody Seal Inte	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	No Coo	Cooler Temp:
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.) Chain of Creardy Munkop = Client Detainment	Sample Receip	t & Review form	(SRR.)			St	Sample Collection Time Zone: [x] Eastern	llection	Time Zo	ne: [x]	Sastem	[ ] Pacific	[ ] Pacific [ ] Central	[ ] Mo	[ ] Other:
O Chairl of Custody Normel Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite of Fleted: For liquid matrices, indicate with a - Y - for vos the sample was field filtered or - N - for sample was not field filtered.	Field Duplicate, EB	= Equipment Blank,	MS = Matrix S for sample was	pike Sample not field fill	, MSD = Ma	ıtrix Spike	Duplicate S	ample, G =	Grab, C=	Composit					
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	WS=Surface Water,	WW=Waste Water,	WL=Leachate,	SO=Soil, S	E=Sediment,	SL=Sludg	ge, WQ=Wa	iter Quality	Control N	atrix					
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 = Hydrochloric Acid, This entities of the preservative is added = Leaves field bloom.	(i.e. 8260B, 6010B/ Acid. SH = Sodium 1	7470A) and number Hydroxide. SA = Sulf	of containers printing Acid AA =	ovided for e	provided for each (i.e. 8260B - 3, 6010B/7470A - 1). A = Ascorbic Acid HX = Hevane ST = Sodium Thio	18 -3, 601	10B/7470A	- 1). Thiosulfate	If no pres	o evitori	ed = laber	Just bloth			
KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	tic Hazards	Listed Waste	Vaste			0	Other			700	o non	1	Please provide	Please provide any additional details
	FL = Flammable CO = Corrosive RE = Reactive	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW= Listed W (F,K,P and U-l. Waste code(s):	LW= Listed Waste (F,K,P and U-lister Waste code(s):	LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):		O E E O	OT= Other / (i.e.: High/lc misc. health Description:	OT= Other / Unknown fi.e.: High/low pH, asbest misc. health hazards, etc., Description:	asbesto.	i, berylli	OT=Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regarding he disposal concerns. sample(s), type of simatrices, etc.)	below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
a = Cadmum Ag= Silver r = Chromium MR= Misc. RCRA metals b = Lead	PCB = Polychlorinated biphenyls	segulated Polychlorinated biphenyls				1	111						Ш		
			8												

GEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

04			יעפן	G/AR/COC/Work Order: 608418 608420
Received By: # 6				te Received: 175/73
Carrier and Tracking Number				Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	ž	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Haz	ard Class Shipped:  If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
B) Did the client designate the samples are to be received as radioactive?		Х	1:	C notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Max	ximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?      E) Did the RSO identify possible hazards?		メメ	ــــال	C notation or hazard labels on containers equal client designation.  Por E is yes, select Hazards below.  PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other;
Sample Receipt Criteria	Yes	NA.	l 2	
1 Shipping containers received intact and scaled?	<u>/</u>	Z	Z	Comments/Qualifiers (Required for Non-Conforming Items)  Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	Z			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: Wet Ice Ice Packs Dry ice None Other:  *all temperatures are recorded in Celsius  TEMP:
Daily check performed and passed on IR temperature gun?	X		_	Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	Y			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	:		Х	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?	X			ID's and tests affected:
g Sample ID's on COC match ID's on bottles?	Х			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?  Are sample containers identifiable as	X			Circle Applicable: No container count on COC Other (describe)
GEL provided by use of GEL labels?  COC form is properly signed in relinquished/received sections?	X. Y			Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):				als AM Date   26 2 3 Page of

ge:	608422 GE	22 6	The gelicom		Laboratories LLC Chemistry I Radiochemistry I Radiobloassay I Specialty Analytics	Ories	S LLC diobloassay	Specialt	y Analytic	ø		GEL Li 2040 S Charles	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	
OC Number (0):	0000	3	Chair	of Cus	Chain of Custody and Analytical Request	d Analyt	ical Rec	nest				Phone:	Phone: (843) 556-8171	
O Number:	GEL Work Order Number:	er Number:	Dhone # 404	3117 305 404	GEL Project Manager: Erin Trent	ct Manag	er: Erin	rent		5		Fax: (8	Fax: (843) 766-1178	
Jein Name. On rower			<b>t</b>	-2006-1110			ñ	Sample Analysis Requested	nalysis	Kedne		II in the num	iber of containe	(Fill in the number of containers for each test)
oject/Site Name: Plant Branch Ash Ponds - E		Щ	Fax#			Sho	Should this	r.s		IN	IN			< Preservative Type (6)
ddress: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308					cons	sample be considered:	1	OC	047				Comments
ollected By: J. Collected By: J. ACC	Send Results To: SCS & Geosyntec	SCS & Ge		Contacts				W-lot	SM 254	* sli	315, 93 7de			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm/dd/yy)	*Time Collected (Military)	QC Filtr	Field Sample Filtered (3) Matrixy(9)	Radioactive yes, please su	isotopic info.) (7) Known or possible Haza	Total numbe	EPA 300, 5 Total & B	EPA 6020,	2 muibsA 2 846 9 2 Sull 5 MS			QC Task_Code: BRA-CCR- ASSMT-2023S1
RA- APE - FD - OH	010	01/24123		Ŋ	P P	2	3	00	>	>	1			field pH =
RA- 17PE - FB - 07	110	01/24/23	1400	5	のなって	2	7	×	1	>	>			field pH =field ferrous iron =
RA-														field pH = field ferrous iron =
RA-							<u>'</u>							
RA-									-					field pH =
Ü	Chain of Custody Signatures	Signatures					TA	TAT Requested:		Normal: x		Rush: Sp	Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time		Received by (signed)	ed) Date		Time		Fax Re	Fax Results: [ ] Yes	9	[x] No				
Tay Sall 1-25-23/ 0	1,7824	my	n	1.	135/18	20	2 Select I	Deliverab	ile: [ ] C	ofA	J QC Sum	6.6.2 Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1	el 1 [x] Level 2	2 [ ] Level 3 [ ] Level 4
1921	2 "	4	{		3	500		Additional Remarks: For Lab Receiving I	ing Use	* Mets	Is: B,Ca,Sb	Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,C	r,Co,Pb,Li,Mo,Se	* Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  "http:://www.Seal/hiart?"   1 Yes   1 No Cooler Town:
I- For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Receipt & 1	Review form (	SRR.)			Sample	Collectio	n Time	Zone: [	k] Easte	Sample Collection Time Zone: [x] Eastern [ ] Pacific	ific [ ] Central	1 [ ] Mo	[ ] Other:
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: MSD-Driving Waster WG-Commentaries Wises Wilton Wilton WG-Commentaries Wilton Wilton WG-Commentaries Wilton WG-Commentaries Wilton WG-Commentaries Wilton WG-Commentaries Wilton WG-Commentaries WG-	iteld Duplicate, EB = Equ yes the sample was field	nipment Blank, N filtered or - N - fi	1S = Matrix Sp or sample was r	ike Sample, I not field filter	MSD = Matrix ed.	: Spike Duplic	ate Sample,	G = Grab,	C = Comp	osite				
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, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	(i.e. <b>8260B</b> , <b>6010B/7470</b> .cid, SH = Sodium Hydro	A) and number of xide, SA = Sulfu	containers pro	vided for eac Ascorbic Aci	n (i.e. 8260B	-3, 6010B/74 ine, ST = Sod	70A - 1).	ate, If no p	reservative	is added =	leave field bl	놛		
	Characteristic Hazards FL = Flammable/Ignitable CO = Corrosive RE = Reactive	lazards Tgnitable	Listed Waste LW=Listed W (F,K,P and U-l) Waste code(s):	Listed Waste LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	d wastes.)		Other OT=Other/(i.e.: High/lomisc. health	Other OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	known H, asbe: ards, etc	itos, ber	Other OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	ants, other	Please provid below regard disposal conc sample(s), typ matrices, 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 matrices, etc.)
1 = Cadmium Ag= Silver = Chromium MR= Misc, RCRA metals = Lead	TSCA Regulated PCB = Polychlorinated biphenyls	inated				1	Ш							

GEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

Client: ( ) PC C			SD	G/AR/COC/Work Order: , 605422 608423
Received By: PU			1	te Received: 175/73
Carrier and Tracking Number				Circle Applicable: PedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	2	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Haz	ard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
B) Did the client designate the samples are to be received as radioactive?		X	ļ.	C notation or radicactive stickers on containers equal client designation.
C) Did the RSO classify the samples as adioactive?		Χ	Ma	ximum Net Counts Observed* (Observed Counts - Area Background Counts): CPMC mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		X	I	C notation or hazard labels on containers equal client designation.  or E is yes, select Hazards below.
E) Did the RSO identify possible hazards?	<u></u>			PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	NA	ž	Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	X		,	Circle Applicable: Client contacted and provided COC COC created upon receipt  Preservation Method: Wet Ice   Ice Packs   Dry ice   None   Other:
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	7	·		*all temperatures are recorded in Celsius
Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	火			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	χ			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?			Х	If Yes, are Encores or Soil Kits present for solids? YesNoNA (If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA (If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
8 Samples received within holding time?	X			ID's and tests affected:
Sample ID's on COC match ID's on bottles?	<u> </u>			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?  COC form is properly signed in	X,			Circle Applicable: Not relinquished Other (describe)
relinquished/received sections? comments (Use Continuation Form if needed):	Х,			
				ls AM Date

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List of current GEL Certifications as of 10 February 2023

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	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC002 SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	
Pennsylvania NELAP  Puerto Rico	68-00485
S. Carolina Radiochem	SC00012
	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

List of current GEL Certifications as of 07 February 2023

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
Kansas NELAI  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
	9976
Michigan	9976 SC00012
Mississippi Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP New Mexico	SC002
	SC00012
New York NELAP  North Carolina	11501
North Carolina SDWA	233
	45709
North Dakota	R-158
Oklahoma  Danasakasais NELAR	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

List of current GEL Certifications as of 09 February 2023

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	SC000122023-4
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

List of current GEL Certifications as of 07 February 2023

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
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Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kansas NELAI  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
	9976
Michigan	9976 SC00012
Mississippi Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP New Mexico	SC002
	SC00012
New York NELAP  North Carolina	11501
North Carolina SDWA	233
	45709
North Dakota	R-158
Oklahoma  Danasakasais NELAR	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



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

# 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 ( $^{\circ}$ C), both within and outside of the EPA Region 4 criteria of  $4^{\circ}$ C  $\pm$  2 $^{\circ}$ C. Since the samples were received between 0-6 $^{\circ}$ 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  $(\checkmark)$  indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ⊗ 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

## 1.4 <u>Matrix Spike/Matrix Spike Duplicate (MS/MSD)</u>

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). 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

<sup>\*</sup> Validation qualifiers are defined in Attachment 1 at the end of this report

<sup>\*\*</sup>Reason codes are defined in Attachment 2 at the end of this report

# 1.5 <u>Laboratory Control Sample (LCS)</u>

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

### 1.6 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	Laboratory Flag	Validation Result	Validation Qualifier	Reason Code
ED 05	3.5	(mg/L)	-	(mg/L)	**	
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

## 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

Final Review: K Henderson 11/07/2022

mg/L- milligram per liter

NA-not applicable

J-the result is less than RL but greater than the MDL and the concentration is an approximate value 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  $(\checkmark)$  indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ⊗ Matrix Spike
- ✓ 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 <u>Matrix Spike</u>

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  $(\checkmark)$  indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ⊗ Matrix Spike
- ✓ 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.

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### 3.6 <u>Laboratory Duplicate</u>

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 CaCO3	20.6	NA	20.6	U	3
EB-05	Bicarbonate alkalinity (CaCO3)	20.6	NA	20.6	U	3
BRGWA-2I	Bicarbonate alkalinity (CaCO3)	62.4	NA	62.4	J+	3
BRGWA-2I	Alkalinity, Total as CaCO3	62.4	NA	62.4	J+	3
BRGWA-2S	Bicarbonate alkalinity (CaCO3)	32.6	NA	32.6	J+	3
BRGWA-2S	Alkalinity, Total as CaCO3	32.6	NA	32.6	J+	3
BRGWA-5I	Bicarbonate alkalinity (CaCO3)	72.8	NA	72.8	J+	3
BRGWA-5I	Alkalinity, Total as CaCO3	72.8	NA	72.8	J+	3
BRGWA-5S	Bicarbonate alkalinity (CaCO3)	73.8	NA	73.8	J+	3
BRGWA-5S	Alkalinity, Total as CaCO3	73.8	NA	73.8	J+	3
BRGWA-6S	Bicarbonate alkalinity (CaCO3)	58.2	NA	58.2	J+	3
BRGWA-6S	Alkalinity, Total as CaCO3	58.2	NA	58.2	J+	3
BRGWA-23S	Bicarbonate alkalinity (CaCO3)	30.4	NA	30.4	U	3
BRGWA-23S	Alkalinity, Total as CaCO3	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 (CaCO3)	28.4	NA	28.4	U	3
BRGWC-47	Alkalinity, Total as CaCO3	28.4	NA	28.4	U	3
BRGWA-12I	Bicarbonate alkalinity (CaCO3)	65.8	NA	65.8	J+	3
BRGWA-12I	Alkalinity, Total as CaCO3	65.8	NA	65.8	J+	3
BRGWA-12S	Bicarbonate alkalinity (CaCO3)	32.0	NA	32.0	U	3
BRGWA-12S	Alkalinity, Total as CaCO3	32.0	NA	32.0	U	3
BRGWC-25I	Bicarbonate alkalinity (CaCO3)	75.6	NA	75.6	J+	3
BRGWC-25I	Alkalinity, Total as CaCO3	75.6	NA	75.6	J+	3
BRGWC-33S	Bicarbonate alkalinity (CaCO3)	3.40	J	4.00	U	3
BRGWC-33S	Alkalinity, Total as CaCO3	3.40	J	4.00	U	3
BRGWC-37S	Bicarbonate alkalinity (CaCO3)	21.2	NA	21.2	U	3
BRGWC-37S	Alkalinity, Total as CaCO3	21.2	NA	21.2	U	3
PZ-13S	Bicarbonate alkalinity (CaCO3)	21.4	NA	21.4	U	3
PZ-13S	Alkalinity, Total as CaCO3	21.4	NA	21.4	U	3
PZ-53D	Bicarbonate alkalinity (CaCO3)	82.8	NA	82.8	J+	3
PZ-53D	Alkalinity, Total as CaCO3	82.8	NA	82.8	J+	3
EB-08	Bicarbonate alkalinity (CaCO3)	2.40	J	4.00	U	3
EB-08	Alkalinity, Total as CaCO3	2.40	J	4.00	U	3
EB-06	Bicarbonate alkalinity (CaCO3)	3.00	J	4.00	U	3
EB-06	Alkalinity, Total as CaCO3	3.00	J	4.00	U	3
EB-07	Bicarbonate alkalinity (CaCO3)	2.80	J	4.00	U	3
EB-07	Alkalinity, Total as CaCO3	2.80	J	4.00	U	3
PZ-60I	Bicarbonate alkalinity (CaCO3)	2.00	J	4.00	U	3

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Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
PZ-60I	Alkalinity, Total as CaCO3	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.

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## 3.10 **Sensitivity**

The samples were reported to the MDLs. Elevated non-detect results were not reported.

## 3.11 <u>Electronic Data Deliverable Review</u>

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



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Final Review: JK Caprio 11/09/2022

## 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  $(\checkmark)$  indicates an area of review in which the data were acceptable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ⊗ Overall Assessment
- ✓ Holding Times
- ⊗ Method Blank
- ✓ Matrix Spike
- ✓ 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

#### 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

<sup>\*</sup> Validation qualifiers are defined in Attachment 1 at the end of this report

<sup>\*\*</sup>Reason codes are defined in Attachment 2 at the end of this report

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 <u>Matrix Spike</u>

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 <u>Laboratory Control Sample (LCS)</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). 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 <u>Laboratory Duplicate</u>

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

Sample	Analyte	Laboratory		Validation	Validation	Reason
		Result (pCi/L)	Flag	Result (pCi/L)	Qualifier	Code
DD GWIG FOL	D !! 22 € 22 0 G		27.4	•	_	
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 NA	2.91	J+	3
PZ-011	Radium-220+226 Sulli	2.71	INA	2.71	J -	<u> </u>

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  $(2\sigma)$  < 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	NT A	3.24	J	7
BRGWC-36S	Radium-226+228 Sum	1.38	NA	NA	1.38	J	7

Final Review: JK Caprio 11/09/2022

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 <u>Electronic Data Deliverable (EDD) Review</u>

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

Final Review: JK Caprio 11/09/2022

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

January/February 2023



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## Memorandum

Date: 27 July 2023

To: Lauren Fitzgerald

**Courtney Collins** 

From: Ashley Wilson

CC: K. Henderson

Subject: Stage 2A Data Validation - Level II Data Deliverables - GEL

**Laboratories, LLC Work Orders:** 

AP-BCD: 608413, 608602, 608803, 608969, 609212, 614819, 616295,

621821, 622760, 623143, 624176, 624375, 624831 and 624832

AP-E: 608815, 608614, 608422 and 608418

Both: 608410

SITE: Plant Branch CCR Groundwater Compliance AP-BCD and AP-E

#### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of fifty-nine groundwater samples, five equipment blanks, five field blanks and five field duplicate samples, collected 24-26 & 30 January 2023, 1 February 2023, 3 & 29 March 2023, 11, 18, 22 & 31 May 2023 and 1, 5 & 6 June 2023 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 (Nitrate-Nitrogen (N), Chloride, Fluoride and Sulfate) by US EPA Method 300.0
- Total Dissolved Solids (TDS) by Standard Method (SM) 2540C
- Total Sulfide by SM 4500-S2-D
- 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
608413001	BRA-BRGWA-12S
608413002	BRA-BRGWA-12I
608413003	BRA-BRGWA-23S
608413004	BRA-BRGWC-32S
608602001	BRA-PZ-44
608602002	BRA-APBCD-FD-01
608602003	BRA-BRGWC-45
608602004	BRA-APBCD-EB-04
608602005	BRA-APBCD-FB-01
608602006	BRA-BRGWC-50
608602007	BRA-BRGWC-52I
608602008	BRA-BRGWC-27I
608803001	BRA-BRGWC-25I
608803002	BRA-BRGWC-29I
608803003	BRA-BRGWC-30I
608803004	BRA-APBCD-EB-05
608803005	BRA-APBCD-FB-02
608803006	BRA-PZ-51I
608803007	BRA-APBCD-FD-02
608803008	BRA-BRGWC-47
608803009	BRA-PZ-51D
608803010	BRA-PZ-58I
608803011	BRA-PZ-59I
608803012	BRA-PZ-60I
608803013	BRA-PZ-61I
608803014	BRA-PZ-65I
608803015	BRA-PZ-50D
608969001	BRA-PZ-66I
608969002	BRA-APBCD-FB-03
608969003	BRA-APBCD-EB-06

Laboratory IDs	Client IDs
608969004	BRA-PZ-57I
608969005	BRA-APBCD-FD03
608969006	BRA-PZ-63I
608969007	BRA-PZ-62I
608969008	BRA-PZ-51S
608969009	BRA-PZ-64I
609212001	BRA-PZ-68D
609212002	BRA-PZ-69I
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815005	BRA-PZ-52D
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
608410001	BRA-BRGWA-2S
608410002	BRA-BRGWA-2I
608410003	BRA-BRGWA-5S
608410004	BRA-BRGWA-5I
608410005	BRA-BRGWA-6S

<b>Laboratory IDs</b>	Client IDs
614819001	BRA-PZ-69I
616295001	BRA-PZ-18S
616295002	BRA-PZ-19S
621821001	BRA-PZ-71I
622760001	BRA-PZ-71I
623143001	BRA-PZ-72I
623143002	BRA-PZ-73I

Laboratory IDs	Client IDs
624176001	BRA-PZ-73I
624375001	BRA-PZ-73I
624375002	BRA-PZ-72I
624831001	BRA-IW-B-5
624831002	BRA-IW-B-4
624831003	BRA-IW-B-3
624832001	BRA-PZ-74I

The samples were received at 0.0, 1.0 and 2.0 degrees Celsius ( $^{\circ}$ C), both within and outside of the EPA Region 4 criteria of  $4^{\circ}$ C  $\pm$   $2^{\circ}$ C. Since the samples were received between 0-6 $^{\circ}$ 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, APBCD-FD-01, APBCD-FD-02, APBCD-FD-03, BRA-APE-FD-04 and BRA-APE-FD-05. The laboratory logged the samples in with the collection time of 12:00.

624276: COC was missing both relinquishing and receiving signatures, dates and times.

622760: The relinquishing time was not documented on the COC.

608413, 608803, 608602 and 608815: Incorrect error corrections were observed on the COCs, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

The field pH and field ferrous iron data included in the laboratory reports were not validated.

The DVR was revised on July 27, 2023, to include data from work orders: 614819, 616295, 621821, 622760, 623143, 624176, 624375, 624831 and 624832.

#### 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  $(\checkmark)$  indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ⊗ Field Blank
- ⊗ Equipment Blank
- ⊗ Field Duplicate
- ⊗ Serial Dilution
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## 1.1 Overall Assessment

### 1.1.1 Completeness

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%.

## 1.1.2 Analysis Anomaly

All reports: The laboratory noted that the interference check standard analysis (ICSA) solution contained trace impurities for metals.

608602 and 608614: The laboratory noted that the contract required detection limits (CRDLs) were met for the metals except for boron. Since boron was either not detected in the associated samples or based on the boron concentrations in the associated samples and professional and technical judgment, no qualifications were applied to the data.

624176 and 624831: The laboratory noted that the CRDLs were met for the metals except for calcium. Since calcium was either not detected in the associated samples or based on the boron concentrations in the associated samples and professional and technical judgment, 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). Sixteen method blanks were reported (batches 2375324, 2377747, 2376276, 2374786, 2374301, 2375511, 2400579, 2406504, 2410791, 2428156, 2431467, 2433108, 2436929, 2437819, 2439850 and 2439740). Metals were not detected in the method blanks at or above the method detection limits (MDLs), with the following exceptions.

608803: Molybdenum was detected in the method blank in batch 2375324 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated molybdenum concentrations in samples BRA-BRGWC-25I, BRA-BRGWC-47, BRA-PZ-50D, BRA-PZ-51D and BRA-PZ-51I were U qualified as not detected at or above the RL.

608969: Beryllium was detected in the method blank in batch 2376276 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated concentrations of beryllium in samples BRA-APBCD-FD03, BRA-PZ-62I and BRA-PZ-66I were U qualified as not detected at or above the RL.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier*	Reason Code**
BRA-BRGWC-25I	Molybdenum	0.000920	J	0.00100	U	3
BRA-BRGWC-47	Molybdenum	0.000270	J	0.00100	U	3
BRA-PZ-50D	Molybdenum	0.000817	J	0.00100	U	3
BRA-PZ-51D	Molybdenum	0.000850	J	0.00100	U	3
BRA-PZ-51I	Molybdenum	0.000283	J	0.00100	U	3
BRA-APBCD-FD03	Beryllium	0.000291	J	0.000500	U	3
BRA-PZ-62I	Beryllium	0.000293	J	0.000500	U	3
BRA-PZ-66I	Beryllium	0.000318	J	0.000500	U	3

mg/L- milligram per liter

## 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). Fourteen sample set specific MS/MSD pairs were reported, using samples BRA-BRGWC-25I, BRA-PZ-66I, BRA-PZ-44, BRA-PZ-13S, BRA-BRGWA-2S, BRA-PZ-18S, BRA-PZ-19S, BRA-PZ-71I, BRA-PZ-71I, BRA-PZ-72I, BRA-PZ-73I, BRA-PZ-72I, BRA-PZ-74I and BRA-IW-B-5. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

<sup>\*</sup> Validation qualifiers are defined in Attachment 1 at the end of this report

<sup>\*\*</sup>Reason codes are defined in Attachment 2 at the end of this report

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

## 1.5 <u>Laboratory Control Sample (LCS)</u>

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

## 1.6 Field Blank

Five field blanks, BRA-APBCD-FB-01, BRA-APBCD-FB-02, BRA-APBCD-FB-03, BRA-APE-FB-07 and BRA-APE-FB-08 were collected with the sample set. Metals were not detected in the field blanks at or above the MDLs, with the following exceptions.

608602: Arsenic was detected in field blank BRA-APBCD-FB-01 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated concentrations of arsenic in samples BRA-APBCD-EB-04, BRA-BRGWC-45, BRA-BRGWC-50 and BRA-PZ-44 were U qualified as not detected at or above the RL.

608969: Manganese (0.017 mg/L) and molybdenum (0.00113 mg/L) were detected in field blank BRA-APBCD-FB-03 at concentrations greater than the RLs. Therefore, the estimated manganese concentration in sample BRA-APBCD-EB-06 and the estimated molybdenum concentrations in samples BRA-APBCD-FD03, BRA-PZ-62I, BRA-PZ-63I, BRA-PZ-64I and BRA-PZ-66I were U qualified as not detected at or above the RLs.

608614: Arsenic was detected in field blank BRA-APE-FB-08 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated concentrations of arsenic in samples BRA-APE-EB-09, BRA-BRGWC-37S and BRA-BRGWC-38S were U qualified as not detected at or above the RL.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-APBCD-EB-04	Arsenic	0.00285	J	0.00500	U	3
BRA-BRGWC-45	Arsenic	0.00225	J	0.00500	U	3
BRA-BRGWC-50	Arsenic	0.00236	J	0.00500	U	3
BRA-PZ-44	Arsenic	0.00221	J	0.00500	U	3
BRA-APBCD-EB-06	Manganese	0.00112	J	0.00500	U	3
BRA-APBCD-FD03	Molybdenum	0.000251	J	0.00100	U	3
BRA-PZ-62I	Molybdenum	0.000247	J	0.00100	U	3
BRA-PZ-63I	Molybdenum	0.000803	J	0.00100	U	3

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-PZ-64I	Molybdenum	0.000201	J	0.00100	U	3
BRA-PZ-66I	Molybdenum	0.000675	J	0.00100	U	3
BRA-APE-EB-09	Arsenic	0.00210	J	0.00500	U	3
BRA-BRGWC-37S	Arsenic	0.00300	J	0.00500	U	3
BRA-BRGWC-38S	Arsenic	0.00486	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

## 1.7 **Equipment Blank**

Five equipment blanks, BRA-APBCD-EB-04, BRA-APBCD-EB-05, BRA-APBCD-EB-06, BRA-APE-EB-09 and BRA-APE-EB-10 were collected with the sample set. Metals were not detected in the equipment blanks at or above the MDLs, with the following exceptions.

608602: Arsenic was detected in equipment blank BRA-APBCD-EB-04 at an estimated concentration greater than the MDL and less than the RL. Since the arsenic concentration in BRA-APBCD-EB-04 was U qualified due to field blank contamination, no additional qualifications were applied to the arsenic data.

608803: Boron was detected in equipment blank BRA-APBCD-EB-05 at an estimated concentration greater than the MDL and less than the RL. Since boron was detected in the associated samples at concentrations greater than the RL and based on professional and technical judgment, no qualifications were applied to the data.

608969: Manganese was detected in equipment blank BRA-APBCD-EB-06 at an estimated concentration greater than the MDL and less than the RL. Since the manganese concentration in BRA-APBCD-EB-06 was U qualified due to field blank contamination, no additional qualifications were applied to the data.

608815: Arsenic was detected in equipment blank BRA-APE-EB-10 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated concentrations of arsenic in samples BRA-APE-FD-05, BRA-PZ-13S, BRA-PZ-52D and BRA-PZ-70I were U qualified as not detected at or above the RL.

608614: Arsenic was detected in equipment blank BRA-APE-EB-09 at an estimated concentration greater than the MDL and less than the RL. Since the arsenic concentration in BRA-APE-EB-09 was U qualified due to field blank contamination, no additional qualifications were applied to the arsenic data.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-APE-FD-05-WG- 20230126	Arsenic	0.00470	J	0.00500	U	3
BRA-PZ-13S-WG-20230126	Arsenic	0.00388	J	0.00500	U	3
BRA-PZ-52D-WG- 20230125	Arsenic	0.00368	J	0.00500	U	3
BRA-PZ-70I-WG-20230126	Arsenic	0.00366	J	0.00500	U	3

mg/L- milligram per liter

#### 1.8 Field Duplicate

Five field duplicate samples, BRA-APBCD-FD-01, BRA-APBCD-FD-02, BRA-APBCD-FD03, BRA-APE-FD-04 and BRA-APE-FD-05 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, BRA-BRGWC-45, BRA-PZ-58I, BRA-PZ-62I, BRA-BRGWC-33S and BRA-PZ-13S, respectively, with the following exceptions.

608602: Arsenic and lead were not detected in BRA-APBCD-FD-01 and detected in sample BRA-BRGWC-45, resulting in a noncalculable RPD. Since the arsenic concentration in BRA-BRGWC-45 was U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the arsenic data. However, based on professional and technical judgment, the lead concentration in sample BRA-BRGWC-45 was J qualified as estimated and the non-detect result in BRA-APBCD-FD-01 was UJ qualified as estimated less than the MDL.

608969: Arsenic was not detected in sample BRA-PZ-62I and detected in BRA-APBCD-FD03, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the arsenic concentration in BRA-APBCD-FD03 was J qualified as estimated and the non-detect result in sample BRA-PZ-62I was UJ qualified as estimated less than the MDL.

608422/608418: Arsenic was not detected in BRA-APE-FD-04 and detected in sample BRA-BRGWC-33S, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the arsenic concentration in sample BRA-BRGWC-33S was J qualified as estimated and the non-detect results in BRA-APE-FD-04 was UJ qualified as estimated less than the MDL.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	RPD	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-APBCD-FD- 01	Lead	0.00200	U	NC	0.00200	UJ	7

Final Review: K Henderson 07/28/2023

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	RPD	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-BRGWC-45	Lead	0.000595	J		0.000595	J	7
BRA-APBCD-FD03	Arsenic	0.00201	J	NC	0.00201	J	7
BRA-PZ-62I	Arsenic	0.00200	U		0.00200	UJ	7
BRA-APE-FD-04	Arsenic	0.00200	U	NC	0.00200	UJ	7
BRA-BRGWC-33S	Arsenic	0.00201	J		0.00201	J	7

mg/L- milligram per liter

U-not detected at or above the MDL

J-the result is less than RL but greater than the MDL and the concentration is an approximate value

#### 1.9 **Serial Dilution**

Fourteen sample set specific serial dilutions were reported for metals using samples BRA-BRGWC-25I, BRA-PZ-66I, BRA-PZ-44, BRA-PZ-13S, BRA-BRGWA-2S, BRA-PZ-18S, BRA-PZ-19S, BRA-PZ-71I, BRA-PZ-71I, BRA-PZ-72I, BRA-PZ-73I, BRA-PZ-72I, BRA-PZ-74I and BRA-IW-B-5. The percent difference (%D) results were within the method specified acceptance criteria, with the following exceptions.

608969: The %Ds of magnesium, calcium and sodium in the serial dilution using sample BRA-PZ-66I were greater than 20% and the sample concentrations were greater than 50 times the MDLs. Therefore, the magnesium, calcium and sodium concentrations in sample BRA-PZ-66I were J qualified as estimated.

Two batch serial dilution was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-PZ-66I	Magnesium	303	NA	303	J	8
BRA-PZ-66I	Calcium	217	NA	217	J	8
BRA-PZ-66I	Sodium	62.9	NA	62.9	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 reported due to dilutions analyzed.

## 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  $(\checkmark)$  indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike
- ✓ 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.

Final Review: K Henderson 07/28/2023

## 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). Eight method blanks were reported (batches 2375754, 2378878, 2376750, 2375028, 2374419, 2401400, 2428103 and 2437128). Mercury was not detected in the method blanks at or above the MDL.

## 2.4 <u>Matrix Spike</u>

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 BRA-BRGWC-30I. The recovery result was within the laboratory specified acceptance criteria

Seven 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.

## 2.5 <u>Laboratory Control Sample</u>

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

## 2.6 <u>Laboratory Duplicate</u>

One sample set specific laboratory duplicate was reported using sample BRA-BRGWC-30I. The RPD result was within the laboratory specified acceptance criteria.

Eight 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

Five field blanks, BRA-APBCD-FB-01, BRA-APBCD-FB-02, BRA-APBCD-FB-03, BRA-APE-FB-07 and BRA-APE-FB-08 were collected with the sample set. Mercury was not detected in the field blanks at or above the MDL.

## 2.8 Equipment Blank

Five equipment blanks, BRA-APBCD-EB-04, BRA-APBCD-EB-05, BRA-APBCD-EB-06, BRA-APE-EB-09 and BRA-APE-EB-10 were collected with the sample set. Mercury was not detected in the equipment blanks at or above the MDL.

## 2.9 Field Duplicate

Five field duplicate samples, BRA-APBCD-FD-01, BRA-APBCD-FD-02, BRA-APBCD-FD03, BRA-APE-FD-04 and BRA-APE-FD-05 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, BRA-BRGWC-45, BRA-PZ-58I, BRA-PZ-62I, BRA-BRGWC-33S and BRA-PZ-13S, respectively.

#### 2.10 Serial Dilution

One sample set specific serial dilution was performed on sample BRA-BRGWC-30I. The %D results were within the method specified acceptance criteria. Seven 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, total sulfide by SM 4500-S2-D and alkalinity by SM 2320B.

The areas of data review are listed below. A leading check mark  $(\checkmark)$  indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ⊗ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ⊗ Field Blank
- ⊗ Equipment Blank

- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

## 3.1 Overall Assessment

### 3.1.1 Completeness

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%.

## 3.1.2 **Analysis Anomaly**

608803, 608969, 608413, 608815, 621821, 624831 and 624832: Manual integrations were performed to position the baseline as set in the calibration standard for the anion analyses.

616295: Additional information from the laboratory states that the sulfide samples in work order 616295 were not within preservation range upon arrival. The provided correspondence between the client and laboratory states that the client allowed the laboratory to preserve the samples and proceed with analysis.

## 3.2 Holding Times

The holding time for the nitrate-N analyses of a water sample is 48 hours from sample collection to analysis. The holding time for the anion (fluoride, chloride, sulfate) analyses of a water sample is 28 days from sample collection to analysis. The holding time for the TDS and total sulfide 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). Fourteen method blanks were reported for anions (batches 2375330, 2375336, 2377739, 2376273, 2374768, 2374002, 2375453, 2373867, 2374833, 2400698, 2406403, 2428256, 2437803 and 2439679). Thirteen method blanks were reported for TDS (batches 2376741, 2377374, 2379677, 2377347, 2374524, 2374521, 2376170, 2376740, 2400767, 2406625, 2428760, 2437940 and 2440211). Eleven method blanks were reported for total sulfide (batches 2375859, 2376122, 2377896, 2374524, 2374521, 2375142, 2406779, 2408818, 2427582, 2437743 and 2440523). The wet chemistry parameters were not detected in the method blanks at or above the MDLs.

## 3.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

Eight sample set specific MSs were reported for anions, using samples BRA-PZ-50D, BRA-PZ-64I, BRA-PZ-44, BRA-BRGWA-12S, BRA-PZ-13S, BRA-BRGWC-35S, BRA-PZ-69I and BRA-IW-B-5. Seven sample set specific MS/MSDs were reported for total sulfide, using samples BRA-BRGWC-25I, BRA-BRGWC-50, BRA-BRGWC-33S, BRA-PZ-52D, BRA-BRGWC-33S, BRA-PZ-53D and BRA-BRGWA-2S. Five sample set specific MS/MSDs were reported for total alkalinity, using samples BRA-BRGWC-25I, BRA-PZ-60I, BRA-PZ-68D, BRA-PZ-66I and BRA-PZ-71I. The recovery results were within the laboratory specified acceptance criteria, with the following exceptions

608803: The recovery of chloride in the MS using sample BRA-PZ-50D was high and outside the laboratory specified acceptance criteria. Therefore, the concentration of chloride in sample BRA-PZ-50D was J+ qualified as estimated with a high bias.

608803: The recovery of total sulfide in the MS/MSD pair using sample BRA-BRGWC-25I was low and outside the laboratory specified acceptance criteria. Therefore, the non-detect total sulfide result in sample BRA-BRGWC-25I was UJ qualified as estimated less than the MDL.

608602: The recovery of chloride in the MS using sample BRA-PZ-44 was high and outside the laboratory specified acceptance criteria. Therefore, the concentration of chloride in sample BRA-PZ-44 was J+ qualified as estimated with a high bias.

608418: The recoveries of chloride and sulfate in the MS using sample BRA-BRGWC-35S were high and outside the laboratory specified acceptance criteria. Therefore, the concentrations of chloride and sulfate in sample BRA-BRGWC-35S were J+ qualified as estimated with high biases.

614819: The recovery of chloride in the MS using sample BRA-PZ-69I was high and outside the laboratory specified acceptance criteria. Therefore, the concentration of chloride in sample BRA-PZ-69I was J+ qualified as estimated with a high bias.

614831: The recovery of nitrate-N in the MS using sample BRA-IW-B-5 was high and outside the laboratory specified acceptance criteria. Therefore, the non-detect nitrate-N result in sample BRA-IW-B-5 was UJ qualified as estimated less than the MDL.

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

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-PZ-50D	Chloride	11.5	NA	11.5	J+	4
BRA-BRGWC-25I	Total Sulfide	0.033	U	0.033	UJ	4
BRA-PZ-44	Chloride	5.84	NA	5.84	J+	4
BRA-BRGWC-35S	Sulfate	334	NA	334	J+	4
BRA-BRGWC-35S	Chloride	6.46	NA	6.46	J+	4
BRA-PZ-69I	Chloride	5.71	NA	5.71	J+	4
BRA-IW-B-5	Nitrate-N	0.066	U	0.066	UJ	4

mg/L- milligram per liter

NA-not applicable

U-not detected at or above the MDL

## 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 <u>Laboratory Duplicate</u>

Eight sample set specific laboratory duplicates were reported for anions, using samples BRA-BRGWC-35S, BRA-PZ-50D, BRA-PZ-64I, BRA-PZ-44, BRA-BRGWA-12S, BRA-PZ-13S, BRA-PZ-69I and BRA-IW-B-5. Five sample set specific laboratory duplicates were reported for alkalinity, using samples BRA-BRGWC-25I, BRA-PZ-60I, BRA-PZ-68D, BRA-PZ-66I and BRA-PZ-71I. Six sample set specific laboratory duplicates were reported for TDS using samples BRA-PZ-51D, BRA-PZ-61I, BRA-PZ-57I, BRA-PZ-44, BRA-BRGWC-17S and BRA-BRGWC-17S. The RPD results were within the laboratory specified acceptance criteria.

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

Five field blanks, BRA-APBCD-FB-01, BRA-APBCD-FB-02, BRA-APBCD-FB-03, BRA-APE-FB-07 and BRA-APE-FB-08 were collected with the sample set. The wet chemistry parameters were not detected in the field blanks at or above the MDLs with the following exceptions.

608602: Fluoride was detected in BRA-APBCD-FB-01 at an estimated concentration greater than the MDL and less than the RL. Therefore, based on professional and technical judgment, the concentrations of fluoride in samples BRA-PZ-44, BRA-APBCD-FD-01, BRA-BRGWC-27I and BRA-BRGWC-45 were J+ qualified as estimated with high biases.

608803: Chloride was detected in field blank BRA-APBCD-FB-02 at a concentration greater than the MDL and less than the RL. Since the chloride concentration in the associated samples were greater than the RL and based on technical and professional judgement, no qualifications were applied to the data.

608969: Chloride (0.204 mg/L) was detected in field blank BRA-APBCD-FB-03 at a concentration greater than the RL and bicarbonate alkalinity and total alkalinity were detected at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the concentration of chloride in BRA-APBCD-EB-06 was J+ qualified as estimated with a high bias, and the estimated concentrations of total alkalinity and bicarbonate alkalinity in sample BRA-APBCD-EB-06 were U qualified as not detected at or above the RL.

608422: Total alkalinity and bicarbonate alkalinity were detected at estimated concentrations greater than the MDLs and less than the RLs in field blank BRA-APE-FB-07. Therefore, the estimated concentrations of total alkalinity and bicarbonate alkalinity in sample BRA-APE-FD-04 were U qualified as not detected at or above the RLs.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-PZ-44	Fluoride	0.130	NA	0.130	J+	3
BRA-APBCD-FD- 01	Fluoride	0.151	NA	0.151	J+	3
BRA-BRGWC-27I	Fluoride	0.152	NA	0.152	J+	3
BRA-BRGWC-45	Fluoride	0.163	NA	0.163	J+	3
BRA-APBCD-EB- 06	Chloride	0.667	NA	0.667	J+	3
BRA-APBCD-EB- 06	Bicarbonate alkalinity (CaCO3)	1.80	J	4.00	U	3
BRA-APBCD-EB- 06	Alkalinity, Total as CaCO3	1.80	J	4.00	U	3
BRA-APE-FD-04	Alkalinity, Total as CaCO3	3.40	J	4.00	U	3

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-APE-FD-04	Bicarbonate alkalinity (CaCO3)	3.40	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**

Five equipment blanks, BRA-APBCD-EB-04, BRA-APBCD-EB-05, BRA-APBCD-EB-06, BRA-APE-EB-09 and BRA-APE-EB-10 were collected with the sample set. The wet chemistry parameters were not detected in the equipment blanks at or above the MDLs, with the following exceptions.

608602: Nitrate-n was detected at an estimated concentration greater than the MDL and less than the RL in equipment blank BRA-APBCD-EB-04. Therefore, the estimated concentrations in samples BRA-APBCD-FD-01 and BRA-BRGWC-45 were U qualified as not detected at or above the RL.

608803: Total alkalinity and bicarbonate alkalinity were detected at estimated concentrations greater than the MDLs and less than the RL sin equipment blank BRA-APBCD-EB-05. Since the total and bicarbonate alkalinity concentrations in the associated samples were greater than the RLs and based on technical and professional judgement, no qualifications were applied to the data.

608969: Chloride (0.667 mg/L) was detected in equipment blank BRA-APBCD-EB-06 at a concentration greater than the RL and bicarbonate alkalinity and total alkalinity were detected at estimated concentrations greater than the MDL and less than the RL. Since the total and the bicarbonate alkalinity concentrations in BRA-APBCD-EB-06 were U qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the total and the bicarbonate alkalinity data. However, the chloride concentration in sample BRA-PZ-51S was J+ qualified as estimated with high bias.

608815: Total and bicarbonate alkalinity were detected in equipment blank BRA-APE-EB-10 at estimated concentrations greater than the MDLs and less than the RLs. Since the total and bicarbonate alkalinity concentrations in the associated samples were greater than the RLs and based on technical and professional judgement, no qualifications were applied to the data.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-APBCD- FD-01	Nitrate-N	0.0824	J	0.100	U	3
BRA-BRGWC- 45	Nitrate-N	0.126	J	0.200	U	3
BRA-PZ-51S	Chloride	4.45	NA	4.45	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

#### 3.9 **Field Duplicate**

Five field duplicate samples, BRA-APBCD-FD-01, BRA-APBCD-FD-02, BRA-APBCD-FD03, BRA-APE-FD-04 and BRA-APE-FD-05 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, BRA-BRGWC-45, BRA-PZ-58I, BRA-PZ-62I, BRA-BRGWC-33S and BRA-PZ-13S, respectively.

608969: Fluoride was not detected in BRA-APBCD-FD03 and detected in sample BRA-PZ-62I, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment, the fluoride concentration in sample BRA-PZ-62I was J qualified as estimated and the non-detect results in BRA-APBCD-FD03 was UJ qualified as estimated less than the MDL.

608422/608418: Nitrate-n was not detected in BRA-APE-FD-04 and detected in sample BRA-BRGWC-33S, resulting in a noncalculable RPD. Based on the difference in dilution analyzed and professional and technical judgment, no qualifications were applied to the data.

Sample ID	Compound	Laboratory Result (mg/l)	Laboratory Flag	RPD	Validation Result (mg/l)	Validation Qualifier	Reason Code
BRA-APBCD-FD03	Fluoride	0.100	U	NC	0.100	UJ	7
BRA-PZ-62I	Fluoride	0.161	NA		0.161	J	7

Final Review: K Henderson 07/28/2023

mg/L- milligram per liter

U-not detected at or above the MDL

NA-not applicable

NC-not calculable

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#### 3.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were reported due to dilutions analyzed.

#### 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



Final Review: JK Caprio 07/24/2023



#### Memorandum

Date: July 21, 2023

To: Lauren Fitzgerald

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables - GEL

Laboratories, LLC Work Orders (WOs) 608412, 609213, 608972, 608609, 608813, 608416, 609400, 608420, 608819, 608622, 608423,

614823, 621822 and 624382

**SITE: Plant Branch CCR Groundwater Compliance** 

#### INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of forty-eight groundwater samples, five equipment blanks, five field blanks and five field duplicate samples, collected between 24 January 2023, 2 February 2023, 16 March 2023, 11 and 31 May 2023, and 1 June 2023, 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
608412001	BRA-BRGWA-2S
608412002	BRA-BRGWA-2I
608412003	BRA-BRGWA-5S
608412004	BRA-BRGWA-5I
608412005	BRA-BRGWA-6S
608416001	BRA-BRGWA-12S
608416002	BRA-BRGWA-12I
608416003	BRA-BRGWA-23S
608416004	BRA-BRGWC-32S
608420001	BRA-BRGWC-17S
608420002	BRA-BRGWC-33S
608420003	BRA-BRGWC-34S
608420004	BRA-BRGWC-35S
608423001	BRA-APE-FD-04
608423002	BRA-APE-FB-07
608609001	BRA-PZ-44
608609002	BRA-APBCD-FD-01
608609003	BRA-BRGWC-45
608609004	BRA-APBCD-EB-04
608609005	BRA-APBCD-FB-01
608609006	BRA-BRGWC-50
608609007	BRA-BRGWC-52I
608609008	BRA-BRGWC-27I
608622001	BRA-BRGWC-36S
608622002	BRA-BRGWC-37S
608622003	BRA-BRGWC-38S
608622004	BRA-PZ-53D
608622005	BRA-APE-EB-09
608622006	BRA-APE-FB-08
608813001	BRA-BRGWC-25I
608813002	BRA-BRGWC-29I
608813003	BRA-BRGWC-30I

Laboratory ID	Client ID
608813004	BRA-APBCD-EB-05
608813005	BRA-APBCD-FB-02
608813006	BRA-PZ-51I
608813007	BRA-APBCD-FD-02
608813008	BRA-BRGWC-47
608813009	BRA-PZ-51D
608813010	BRA-PZ-58I
608813011	BRA-PZ-59I
608813012	BRA-PZ-60I
608813013	BRA-PZ-61I
608813014	BRA-PZ-65I
608813015	BRA-PZ-50D
608819001	BRA-PZ-13S
608819002	BRA-PZ-70I
608819003	BRA-APE-FD-05
608819004	BRA-APE-EB-10
608972001	BRA-PZ-66I
608972002	BRA-APBCD-FB-03
608972003	BRA-APBCD-EB-06
608972004	BRA-PZ-57I
608972005	BRA-APBCD-FD03
608972006	BRA-PZ-63I
608972007	BRA-PZ-62I
608972008	BRA-PZ-51S
608972009	BRA-PZ-64I
609213001	BRA-PZ-68D
609213002	BRA-PZ-69I
609400001	BRA-PZ-52D
614823001	BRA-PZ-69I
621822001	BRA-PZ-71I
624382001	BRA-PZ-73I

No sample preservation issues were noted by the laboratory.

WOs 608423, 608609, 608813, 608819 and 608972: The sample collection times were not listed on the chain of custody (COC) for field duplicate samples, BRA-APBCD-FD-01, BRA-APBCD-FD-02, BRA-APBCD-FD03, BRA-APE-FD-04 and BRA-APE-FD-05. Collection times were not documented in the laboratory reports.

Plant Branch Data Validation 21 July 2023 Page 3

WOs 608423, 608622, 608813, 608819 and 608972: Incorrect error corrections were observed on the COCs, instead of the proper procedure of a single strike through, correction, and date and initials of person making the corrections.

#### 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  $(\checkmark)$  indicates an area of review in which the data were acceptable. A preceding crossed circle  $(\otimes)$  signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ⊗ Method Blank
- ✓ Matrix Spike
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ⊗ Field Blank
- ⊗ Equipment Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

#### 1.1 Overall Assessment

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%.

#### 1.2 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.

Final Review: JK Caprio 07/24/2023

#### 1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Nine method blanks were reported for the radium-226 data (batches 2374665, 2377436, 2378760, 2377431, 2377423, 2378777, 2406187, 2430843 and 2438535). Nine method blanks were reported for the radium-228 data (batches 2374674, 2377496, 2378772, 2377475, 2377470, 2378762, 2406247, 2430849 and 2438733). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

608813: Radium-228 was detected in the method blank in batch 2377475 at a concentration greater than the MDC. Therefore, the radium-228 and radium-226+228 concentrations in samples BRA-PZ-51D and BRA-PZ-60I were J+ qualified as estimated with high biases.

624382: Radium-228 was detected in the method blank in batch 2438733 at a concentration greater than the MDC. Since radium-228 was not detected at a concentration greater than the MDC in the associated sample, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
BRA-PZ-51D	Radium-228	2.96	NA	2.96	J+	3
BRA-PZ-51D	Radium-226+228 Sum	3.70	NA	3.70	J+	3
BRA-PZ-60I	Radium-228	3.21	NA	3.21	J+	3
BRA-PZ-60I	Radium-226+228 Sum	5.31	NA	5.31	J+	3

pCi/L-picocuries per liter

NA-not applicable

#### 1.4 Matrix Spike

Four sample set specific MSs were reported for radium-226 using samples BRA-PZ-66I, BRA-PZ-68D, BRA-BRGWC-25I and BRA-PZ-71I. The recovery results were within the laboratory specified acceptance criteria.

Six batch MSs were also reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### 1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Nine LCSs were reported for radium-226 and nine LCSs were reported for radium-228. The recovery results were within the laboratory specified acceptance criteria.

Final Review: JK Caprio 07/24/2023

<sup>\*</sup> Validation qualifiers are defined in Attachment 1 at the end of this report

<sup>\*\*</sup>Reason codes are defined in Attachment 2 at the end of this report

#### 1.6 <u>Laboratory Duplicate</u>

Four sample set specific laboratory duplicates were reported for radium-226 using samples BRA-PZ-66I, BRA-PZ-68D, BRA-BRGWC-25I and BRA-PZ-71I and four sample set specific laboratory duplicates were reported for radium-228 using samples BRA-PZ-66I, BRA-PZ-68D, BRA-BRGWC-25I and BRA-PZ-71I. The relative error ratio (RER) results were within the laboratory specified acceptance criteria.

In addition, six batch laboratory duplicates were reported for radium-226 and six batch laboratory duplicates were reported for radium-228. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

#### 1.7 Tracers and Carriers

Tracers were reported for radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

#### 1.8 Field Blank

Five field blanks, BRA-APBCD-FB-01, BRA-APBCD-FB-02, BRA-APBCD-FB-03, BRA-APE-FB-07 and BRA-APE-FB-08 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.

608609: Radium-226 [0.246 picocuries per liter (pCi/L] was detected in BRA-APBCD-FB-01 at a concentration greater than the MDC. Therefore, the radium-226 concentrations in samples BRA-APBCD-FD-01, BRA-BRGWC-27I and BRA-PZ-44 were J+ qualified as estimated with high biases.

608622: Radium-226+228 (2.11 pCi/L) was detected in BRA-APE-FB-08 at a concentration greater than the MDC. Since radium-226 and radium-228 were not detected in BRA-APE-FB-08 at concentrations greater than the MDCs and based on professional and technical judgment, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRA-APBCD-FD- 01	Radium-226	0.599	NA	0.599	J+	3
BRA-BRGWC-27I	Radium-226	1.27	NA	1.27	J+	3
BRA-PZ-44	Radium-226	1.15	NA	1.15	J+	3

Final Review: JK Caprio 07/24/2023

pCi/L-picocuries per liter

NA-not applicable

#### 1.9 **Equipment Blank**

Five equipment blanks, BRA-APBCD-EB-04, BRA-APBCD-EB-05, BRA-APBCD-EB-06, BRA-APE-EB-09 and BRA-APE-EB-10 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.

608609: Radium-228 (2.59 pCi/L) was detected in BRA-APBCD-EB-04 at a concentration greater than the MDC. Therefore, the radium-228 and radium-226+228 concentrations in samples BRA-PZ-13S and BRA-BRGWC-36S were J+ qualified as estimated with high biases.

608972: Radium-228 (2.97 pCi/L) was detected in BRA-APBCD-EB-06 at a concentration greater than the MDC. Therefore, the radium-228 concentration in sample BRA-PZ-51S was U qualified as not detected at the reported concentration and the radium-228 concentrations in samples BRA-PZ-68D, BRA-PZ-63I and BRA-PZ-64I and radium-226+228 concentrations in samples BRA-PZ-68D, BRA-PZ-51S, BRA-PZ-63I and BRA-PZ-64I were J+ qualified as estimated with high biases.

608622: Radium-228 (3.13 pCi/L) was detected in BRA-APE-EB-10 at concentration greater than the MDCs. Since the radium-228 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.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRA-PZ-68D	Radium-228	3.77	NA	3.77	J+	3
BRA-PZ-68D	Radium-226+228 Sum	4.16	NA	4.16	J+	3
BRA-PZ-51S	Radium-228	2.36	NA	2.36	U	3
BRA-PZ-51S	Radium-226+228 Sum	3.19	NA	3.19	J+	3
BRA-PZ-63I	Radium-228	4.19	NA	4.19	J+	3
BRA-PZ-63I	Radium-226+228 Sum	6.03	NA	6.03	J+	3
BRA-PZ-64I	Radium-228	3.38	NA	3.38	J+	3
BRA-PZ-64I	Radium-226+228 Sum	3.50	NA	3.50	J+	3
BRA-PZ-13S	Radium-228	2.88	NA	2.88	J+	3
BRA-PZ-13S	Radium-226+228 Sum	4.77	NA	4.77	J+	3
BRA-BRGWC- 36S	Radium-228	3.49	NA	3.49	J+	3
BRA-BRGWC- 36S	Radium-226+228 Sum	4.86	NA	4.86	J+	3

Final Review: JK Caprio 07/24/2023

pCi/L-picocuries per liter

NA-not applicable

#### 1.10 Field Duplicate

Five field duplicate samples, BRA-APBCD-FD-01, BRA-APBCD-FD-02, BRA-APBCD-FD03, BRA-APE-FD-04 and BRA-APE-FD-05 were collected with the sample set. Acceptable precision [RER (1σ) < 3] was demonstrated between the field duplicates and the original samples, BRA-BRGWC-45, BRA-PZ-58I, BRA-PZ-62I, BRA-BRGWC-33S and BRA-PZ-13S, respectively, with the following exception.

The RER of radium-226 in field duplicate pair BRA-PZ-13S/BRA-APE-FD-05 was greater than 3; therefore, based on professional and technical judgment, the radium-226 and radium-226+228 concentrations in the field duplicate pair were J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	RER	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRA-PZ-13S	Radium-226	1.88	NA	3.8	1.88	J	7
BRA-APE-FD-05	Radium-226	0.583	NA		0.583	J	7
BRA-PZ-13S	Radium- 226+228	4.77	NA	NA	4.77	J	7
BRA-APE-FD-05	Radium- 226+228	2.70	NA		2.70	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.

Final Review: JK Caprio 07/24/2023

# DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY Assigned by Geosyntec's Data Validation Team

#### DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result."
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated OC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Final Review: JK Caprio 07/24/2023

# 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

Final Review: JK Caprio 07/24/2023

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

## FIELD SAMPLING REPORTS

Fall 2022

**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

#### **Test Notes:**

Cloudy, sample time-1010

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	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:
--	------------	--------------

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

#### **Test Notes:**

Cloudy, sample time-1055

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	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**

Sa	ample ID:	Description:
----	-----------	--------------

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

#### **Test Notes:**

Sample time 1015. Overcast 80s.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	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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**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

#### **Test Notes:**

Sampled at 1000 on 8-23-22. Cloudy 70s.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	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 II	ID:	Description:	
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**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

#### **Test Notes:**

Sampled at 0950. Mostly cloudy 75 degrees

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	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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Test Date / Time: 8/24/2022 11:02:05 AM

**Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-17S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 5.22 ft Total Depth: 10.22 ft

Initial Depth to Water: 5.95 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 7 ft

**Estimated Total Volume Pumped:** 

7700 ml

Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.37 ft Instrument Used: Aqua TROLL 400

Serial Number: 883536

#### **Test Notes:**

Sampled at 1137. Partly cloudy 79 degrees.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/24/2022 11:02 AM	00:00	5.96 pH	26.18 °C	0.46 μS/cm	4.67 mg/L	16.10 NTU	107.1 mV	6.16 ft	220.00 ml/min
8/24/2022 11:07 AM	05:00	6.33 pH	22.06 °C	444.21 μS/cm	4.61 mg/L	14.50 NTU	74.8 mV	6.30 ft	220.00 ml/min
8/24/2022 11:12 AM	10:00	6.45 pH	22.13 °C	479.46 μS/cm	6.28 mg/L	11.50 NTU	75.0 mV	6.32 ft	220.00 ml/min
8/24/2022 11:17 AM	15:00	6.56 pH	22.31 °C	479.22 μS/cm	6.81 mg/L	7.12 NTU	77.0 mV	6.32 ft	220.00 ml/min
8/24/2022 11:22 AM	20:00	6.59 pH	22.34 °C	469.02 μS/cm	6.99 mg/L	5.94 NTU	77.9 mV	6.32 ft	220.00 ml/min
8/24/2022 11:27 AM	25:00	6.60 pH	22.44 °C	482.93 μS/cm	7.04 mg/L	3.88 NTU	79.2 mV	6.32 ft	220.00 ml/min
8/24/2022 11:32 AM	30:00	6.61 pH	22.49 °C	487.38 μS/cm	7.09 mg/L	3.20 NTU	81.5 mV	6.32 ft	220.00 ml/min
8/24/2022 11:37 AM	35:00	6.62 pH	22.62 °C	487.35 μS/cm	7.11 mg/L	3.08 NTU	82.1 mV	6.32 ft	220.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 8/23/2022 1:55:10 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

**Location Name: BRGWC-33S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.8 ft Total Depth: 28.88 ft

Initial Depth to Water: 8.94 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 22 ft Estimated Total Volume Pumped:

13 liter

Flow Cell Volume: 90 ml Final Flow Rate: 275 ml/min

Final Draw Down: 1 in

Instrument Used: Aqua TROLL 400

Serial Number: 728566

#### **Test Notes:**

Sample time 1445. Overcast 80s.

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/23/2022 1:55 PM	00:00	4.67 pH	20.82 °C	739.89 µS/cm	0.07 mg/L	1.43 NTU	100.4 mV	8.94 ft	275.00 ml/min
8/23/2022 2:00 PM	05:00	4.67 pH	20.75 °C	740.18 μS/cm	0.07 mg/L	1.27 NTU	108.1 mV	9.00 ft	275.00 ml/min
8/23/2022 2:05 PM	10:00	4.68 pH	20.75 °C	739.16 µS/cm	0.07 mg/L	1.37 NTU	91.8 mV	9.00 ft	275.00 ml/min
8/23/2022 2:10 PM	15:00	4.68 pH	20.72 °C	740.40 μS/cm	0.08 mg/L	1.36 NTU	101.6 mV	9.00 ft	275.00 ml/min
8/23/2022 2:15 PM	20:00	4.67 pH	20.82 °C	739.48 µS/cm	0.09 mg/L	1.17 NTU	88.9 mV	9.00 ft	275.00 ml/min
8/23/2022 2:20 PM	25:00	4.67 pH	20.75 °C	739.31 µS/cm	0.10 mg/L	1.03 NTU	98.3 mV	9.00 ft	275.00 ml/min
8/23/2022 2:25 PM	30:00	4.67 pH	20.89 °C	746.72 μS/cm	0.10 mg/L	1.07 NTU	87.1 mV	9.00 ft	275.00 ml/min
8/23/2022 2:30 PM	35:00	4.67 pH	20.89 °C	746.30 µS/cm	0.10 mg/L	1.04 NTU	95.7 mV	9.00 ft	275.00 ml/min
8/23/2022 2:35 PM	40:00	4.67 pH	20.93 °C	742.43 μS/cm	0.10 mg/L	1.05 NTU	85.6 mV	9.00 ft	275.00 ml/min
8/23/2022 2:40 PM	45:00	4.67 pH	21.12 °C	742.13 µS/cm	0.10 mg/L	1.04 NTU	84.4 mV	9.00 ft	275.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 8/24/2022 1:50:04 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

**Location Name: BRGWC-34S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 15.7 ft Total Depth: 25.76 ft

Initial Depth to Water: 2.72 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 20 ft Estimated Total Volume Pumped:

13 liter

Flow Cell Volume: 90 ml Final Flow Rate: 280 ml/min Final Draw Down: 1 in Serial Number: 728566

Instrument Used: Aqua TROLL 400

#### **Test Notes:**

Sample time 1440. Overcast 80s. EB-8 here at 1325.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/24/2022 1:50 PM	00:00	5.78 pH	22.63 °C	562.25 μS/cm	1.57 mg/L	3.31 NTU	26.4 mV	2.72 ft	280.00 ml/min
8/24/2022 1:55 PM	05:00	5.79 pH	22.46 °C	562.46 μS/cm	1.64 mg/L	2.92 NTU	31.3 mV	2.80 ft	280.00 ml/min
8/24/2022 2:00 PM	10:00	5.77 pH	22.52 °C	560.29 μS/cm	1.62 mg/L	2.87 NTU	34.3 mV	2.80 ft	280.00 ml/min
8/24/2022 2:05 PM	15:00	5.78 pH	22.58 °C	558.31 μS/cm	1.61 mg/L	2.71 NTU	38.5 mV	2.80 ft	280.00 ml/min
8/24/2022 2:10 PM	20:00	5.77 pH	22.71 °C	556.19 μS/cm	1.63 mg/L	1.84 NTU	40.4 mV	2.80 ft	280.00 ml/min
8/24/2022 2:15 PM	25:00	5.78 pH	22.65 °C	553.86 μS/cm	1.59 mg/L	1.48 NTU	44.0 mV	2.80 ft	280.00 ml/min
8/24/2022 2:20 PM	30:00	5.78 pH	22.61 °C	551.30 μS/cm	1.67 mg/L	1.34 NTU	46.1 mV	2.80 ft	280.00 ml/min
8/24/2022 2:25 PM	35:00	5.77 pH	22.58 °C	550.85 μS/cm	1.60 mg/L	1.39 NTU	49.1 mV	2.80 ft	280.00 ml/min
8/24/2022 2:30 PM	40:00	5.77 pH	22.57 °C	550.20 μS/cm	1.53 mg/L	1.11 NTU	51.6 mV	2.80 ft	280.00 ml/min
8/24/2022 2:35 PM	45:00	5.75 pH	22.44 °C	552.86 μS/cm	1.48 mg/L	0.97 NTU	54.7 mV	2.80 ft	280.00 ml/min

#### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 8/24/2022 1:28:19 PM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-35S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.01 ft Total Depth: 30.01 ft

Initial Depth to Water: 2.03 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 25 ft Estimated Total Volume Pumped:

9000 ml

Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 400

Serial Number: 883536

#### **Test Notes:**

Sampled at 1358. Partly cloudy 83 degrees.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/24/2022 1:28 PM	00:00	6.45 pH	30.90 °C	612.09 µS/cm	4.27 mg/L	1.67 NTU	55.1 mV	2.03 ft	300.00 ml/min
8/24/2022 1:33 PM	05:00	6.06 pH	22.17 °C	615.07 µS/cm	1.29 mg/L	7.71 NTU	63.9 mV	2.03 ft	300.00 ml/min
8/24/2022 1:38 PM	10:00	6.06 pH	21.65 °C	635.07 μS/cm	0.39 mg/L	9.98 NTU	70.7 mV	2.03 ft	300.00 ml/min
8/24/2022 1:43 PM	15:00	6.05 pH	21.43 °C	636.25 μS/cm	0.15 mg/L	5.05 NTU	75.5 mV	2.03 ft	300.00 ml/min
8/24/2022 1:48 PM	20:00	6.05 pH	21.33 °C	639.17 μS/cm	0.18 mg/L	3.28 NTU	79.4 mV	2.03 ft	300.00 ml/min
8/24/2022 1:53 PM	25:00	6.05 pH	21.31 °C	631.59 μS/cm	0.49 mg/L	2.90 NTU	82.1 mV	2.03 ft	300.00 ml/min
8/24/2022 1:58 PM	30:00	6.05 pH	21.27 °C	631.41 µS/cm	0.38 mg/L	2.66 NTU	84.6 mV	2.03 ft	300.00 ml/min

#### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 8/24/2022 9:22:58 AM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-36S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.44 ft Total Depth: 35.44 ft

Initial Depth to Water: 4.07 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 30 ft Estimated Total Volume Pumped:

8700 ml

Flow Cell Volume: 90 ml Final Flow Rate: 290 ml/min Final Draw Down: 0.18 ft Instrument Used: Aqua TROLL 400

Serial Number: 883536

#### **Test Notes:**

Sampled at 0952. Partly cloudy 76 degrees. FD-04 taken here.

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/24/2022 9:22 AM	00:00	5.95 pH	23.14 °C	506.13 μS/cm	2.50 mg/L	0.60 NTU	108.6 mV	4.22 ft	290.00 ml/min
8/24/2022 9:27 AM	05:00	5.60 pH	21.64 °C	534.39 μS/cm	2.04 mg/L	0.68 NTU	94.9 mV	4.25 ft	290.00 ml/min
8/24/2022 9:32 AM	10:00	5.59 pH	21.21 °C	533.95 μS/cm	2.03 mg/L	1.17 NTU	92.5 mV	4.25 ft	290.00 ml/min
8/24/2022 9:37 AM	15:00	5.59 pH	20.95 °C	531.70 μS/cm	2.03 mg/L	1.22 NTU	93.8 mV	4.25 ft	290.00 ml/min
8/24/2022 9:42 AM	20:00	5.58 pH	20.95 °C	521.95 μS/cm	2.01 mg/L	1.76 NTU	90.9 mV	4.25 ft	290.00 ml/min
8/24/2022 9:47 AM	25:00	5.58 pH	20.79 °C	519.24 μS/cm	2.01 mg/L	1.99 NTU	92.9 mV	4.25 ft	290.00 ml/min
8/24/2022 9:52 AM	30:00	5.59 pH	20.76 °C	513.38 μS/cm	1.99 mg/L	1.58 NTU	93.0 mV	4.25 ft	290.00 ml/min

#### **Samples**

	Sample ID:	Description:	
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Test Date / Time: 8/23/2022 11:06:43 AM

**Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-37S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56.25 ft Total Depth: 66.25 ft

Initial Depth to Water: 52.71 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 61 ft Estimated Total Volume Pumped:

4800 ml

Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.75 ft Instrument Used: Aqua TROLL 400

Serial Number: 883536

#### **Test Notes:**

Sampled at 1136. Cloudy 77 degrees.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/23/2022 11:06 AM	00:00	6.91 pH	23.76 °C	47.52 μS/cm	7.76 mg/L	1.16 NTU	101.2 mV	53.08 ft	160.00 ml/min
8/23/2022 11:11 AM	05:00	5.90 pH	20.79 °C	49.06 µS/cm	7.69 mg/L	0.81 NTU	103.0 mV	53.42 ft	160.00 ml/min
8/23/2022 11:16 AM	10:00	5.85 pH	20.52 °C	48.80 μS/cm	7.77 mg/L	0.66 NTU	104.2 mV	53.45 ft	160.00 ml/min
8/23/2022 11:21 AM	15:00	5.85 pH	20.46 °C	48.77 μS/cm	7.75 mg/L	0.58 NTU	105.2 mV	53.46 ft	160.00 ml/min
8/23/2022 11:26 AM	20:00	5.85 pH	20.52 °C	48.80 μS/cm	7.72 mg/L	0.77 NTU	104.4 mV	53.46 ft	160.00 ml/min
8/23/2022 11:31 AM	25:00	5.85 pH	20.57 °C	48.84 μS/cm	7.77 mg/L	0.98 NTU	105.3 mV	53.46 ft	160.00 ml/min
8/23/2022 11:36 AM	30:00	5.82 pH	20.48 °C	48.90 μS/cm	7.71 mg/L	1.12 NTU	106.8 mV	53.46 ft	160.00 ml/min

#### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 8/23/2022 3:30:10 PM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-38S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.64 ft Total Depth: 40.64 ft

Initial Depth to Water: 22.98 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 35 ft Estimated Total Volume Pumped:

5400 ml

Flow Cell Volume: 90 ml Final Flow Rate: 180 ml/min Final Draw Down: 0.83 ft Instrument Used: Aqua TROLL 400

Serial Number: 883536

#### **Test Notes:**

Sampled at 1600. Mostly cloudy 85 degrees.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/23/2022 3:30 PM	00:00	4.31 pH	30.67 °C	557.73 μS/cm	5.60 mg/L	1.09 NTU	128.6 mV	23.52 ft	180.00 ml/min
8/23/2022 3:35 PM	05:00	4.03 pH	22.44 °C	693.27 μS/cm	3.00 mg/L	0.97 NTU	135.3 mV	23.79 ft	180.00 ml/min
8/23/2022 3:40 PM	10:00	4.00 pH	21.96 °C	698.98 μS/cm	2.38 mg/L	0.83 NTU	144.9 mV	23.81 ft	180.00 ml/min
8/23/2022 3:45 PM	15:00	3.99 pH	21.64 °C	697.87 μS/cm	1.94 mg/L	0.92 NTU	146.4 mV	23.81 ft	180.00 ml/min
8/23/2022 3:50 PM	20:00	3.98 pH	21.69 °C	692.66 μS/cm	1.76 mg/L	0.65 NTU	148.0 mV	23.81 ft	180.00 ml/min
8/23/2022 3:55 PM	25:00	3.98 pH	21.68 °C	688.64 μS/cm	1.71 mg/L	0.60 NTU	151.6 mV	23.81 ft	180.00 ml/min
8/23/2022 4:00 PM	30:00	3.97 pH	21.40 °C	690.15 μS/cm	1.63 mg/L	0.55 NTU	153.4 mV	23.81 ft	180.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 8/23/2022 11:35:23 AM

**Project:** Plant Branch Ash Ponds **Operator Name:** A. Schnittker

Location Name: PZ-13S
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 28.17 ft

Total Depth: 38.17 ft

Initial Depth to Water: 28.26 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 32 ft Estimated Total Volume Pumped:

25 liter

Flow Cell Volume: 90 ml Final Flow Rate: 275 ml/min

Final Draw Down: 2 in

Instrument Used: Aqua TROLL 400

Serial Number: 728566

#### **Test Notes:**

Sample time 1315. Overcast 80s.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/23/2022 11:35 AM	00:00	5.54 pH	21.73 °C	208.47 μS/cm	3.79 mg/L	2.11 NTU	80.5 mV	28.26 ft	250.00 ml/min
8/23/2022 11:40 AM	05:00	5.51 pH	20.00 °C	185.67 μS/cm	3.68 mg/L	1.46 NTU	88.4 mV	28.40 ft	250.00 ml/min
8/23/2022 11:45 AM	10:00	5.51 pH	19.71 °C	179.09 μS/cm	3.96 mg/L	1.30 NTU	87.0 mV	28.40 ft	250.00 ml/min
8/23/2022 11:50 AM	15:00	5.49 pH	19.59 °C	171.25 μS/cm	4.24 mg/L	1.65 NTU	87.5 mV	28.40 ft	250.00 ml/min
8/23/2022 11:55 AM	20:00	5.46 pH	19.73 °C	164.95 μS/cm	4.20 mg/L	1.55 NTU	89.0 mV	28.40 ft	250.00 ml/min
8/23/2022 12:00 PM	25:00	5.50 pH	19.79 °C	162.79 μS/cm	4.49 mg/L	1.49 NTU	86.4 mV	28.40 ft	250.00 ml/min
8/23/2022 12:05 PM	30:00	5.45 pH	19.71 °C	159.19 μS/cm	4.81 mg/L	1.43 NTU	89.7 mV	28.40 ft	250.00 ml/min
8/23/2022 12:10 PM	35:00	5.48 pH	19.80 °C	153.14 μS/cm	4.70 mg/L	1.39 NTU	87.3 mV	28.40 ft	250.00 ml/min
8/23/2022 12:15 PM	40:00	5.42 pH	19.82 °C	153.70 μS/cm	4.72 mg/L	1.37 NTU	90.3 mV	28.40 ft	275.00 ml/min
8/23/2022 12:20 PM	45:00	5.47 pH	19.95 °C	149.54 μS/cm	5.03 mg/L	1.39 NTU	88.1 mV	28.40 ft	275.00 ml/min
8/23/2022 12:25 PM	50:00	5.42 pH	19.96 °C	150.98 μS/cm	4.78 mg/L	1.34 NTU	90.2 mV	28.40 ft	275.00 ml/min
8/23/2022 12:30 PM	55:00	5.42 pH	19.90 °C	151.00 μS/cm	4.67 mg/L	1.53 NTU	90.4 mV	28.40 ft	275.00 ml/min
8/23/2022 12:35 PM	01:00:00	5.44 pH	19.90 °C	149.40 μS/cm	5.01 mg/L	1.64 NTU	89.8 mV	28.40 ft	275.00 ml/min
8/23/2022 12:40 PM	01:05:00	5.42 pH	20.04 °C	152.95 μS/cm	4.81 mg/L	1.36 NTU	90.7 mV	28.40 ft	275.00 ml/min
8/23/2022 12:45 PM	01:10:00	5.41 pH	20.17 °C	149.41 µS/cm	4.81 mg/L	1.32 NTU	91.6 mV	28.40 ft	275.00 ml/min

8/23/2022 12:50 PM	01:15:00	5.42 pH	20.02 °C	148.06 μS/cm	4.85 mg/L	1.31 NTU	90.7 mV	28.40 ft	275.00 ml/min
8/23/2022 12:55 PM	01:20:00	5.67 pH	21.64 °C	144.75 μS/cm	4.14 mg/L	1.39 NTU	104.4 mV	28.40 ft	275.00 ml/min
8/23/2022 1:00 PM	01:25:00	5.48 pH	19.68 °C	150.47 μS/cm	4.28 mg/L	1.34 NTU	87.4 mV	28.40 ft	275.00 ml/min
8/23/2022 1:05 PM	01:30:00	5.47 pH	19.73 °C	148.67 μS/cm	4.25 mg/L	1.31 NTU	83.8 mV	28.40 ft	275.00 ml/min
8/23/2022 1:10 PM	01:35:00	5.46 pH	19.80 °C	148.22 μS/cm	4.32 mg/L	1.31 NTU	82.2 mV	28.40 ft	275.00 ml/min

#### Samples

Sample ID:	Description:
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Test Date / Time: 8/23/2022 3:25:23 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

Location Name: PZ-52D
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 52.23 ft

Total Depth: 62.23 ft

Initial Depth to Water: 10.3 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 57 ft
Estimated Total Volume Pumped:

11 liter

Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 249 in Instrument Used: Aqua TROLL 400

Serial Number: 728566

#### **Test Notes:**

Water level not stable. Log 1. Resume on next log.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/23/2022 3:25 PM	00:00	7.48 pH	24.17 °C	1,084.0 μS/cm	4.10 mg/L	2.21 NTU	97.2 mV	10.30 ft	200.00 ml/min
8/23/2022 3:30 PM	05:00	7.58 pH	24.78 °C	1,080.7 μS/cm	4.00 mg/L	1.89 NTU	90.4 mV	14.60 ft	200.00 ml/min
8/23/2022 3:35 PM	10:00	7.61 pH	24.78 °C	1,086.9 μS/cm	3.99 mg/L	1.83 NTU	86.4 mV	15.30 ft	150.00 ml/min
8/23/2022 3:40 PM	15:00	7.63 pH	25.28 °C	1,079.4 μS/cm	3.96 mg/L	1.73 NTU	83.3 mV	15.90 ft	150.00 ml/min
8/23/2022 3:45 PM	20:00	7.64 pH	25.08 °C	1,077.8 μS/cm	3.96 mg/L	1.56 NTU	81.3 mV	17.20 ft	100.00 ml/min
8/23/2022 3:50 PM	25:00	7.64 pH	25.27 °C	1,081.5 μS/cm	3.92 mg/L	1.55 NTU	78.9 mV	17.90 ft	100.00 ml/min
8/23/2022 3:55 PM	30:00	7.65 pH	24.88 °C	1,068.8 μS/cm	3.88 mg/L	1.47 NTU	77.5 mV	18.80 ft	100.00 ml/min
8/23/2022 4:00 PM	35:00	7.66 pH	24.63 °C	1,073.9 μS/cm	3.91 mg/L	1.43 NTU	75.7 mV	19.40 ft	100.00 ml/min
8/23/2022 4:05 PM	40:00	7.65 pH	24.53 °C	1,073.6 μS/cm	3.92 mg/L	1.43 NTU	75.1 mV	20.30 ft	100.00 ml/min
8/23/2022 4:10 PM	45:00	7.67 pH	24.70 °C	1,075.6 μS/cm	3.93 mg/L	1.46 NTU	73.3 mV	21.40 ft	100.00 ml/min
8/23/2022 4:15 PM	50:00	7.67 pH	24.96 °C	1,064.0 μS/cm	4.39 mg/L	1.44 NTU	77.0 mV	22.20 ft	100.00 ml/min
8/23/2022 4:20 PM	55:00	7.67 pH	24.14 °C	1,068.7 μS/cm	4.19 mg/L	2.46 NTU	72.3 mV	22.90 ft	100.00 ml/min
8/23/2022 4:25 PM	01:00:00	7.67 pH	23.75 °C	1,070.9 μS/cm	3.91 mg/L	2.33 NTU	71.7 mV	23.50 ft	100.00 ml/min
8/23/2022 4:30 PM	01:05:00	7.67 pH	23.95 °C	1,081.3 μS/cm	3.95 mg/L	2.92 NTU	70.5 mV	24.60 ft	100.00 ml/min
8/23/2022 4:35 PM	01:10:00	7.66 pH	24.47 °C	1,075.2 μS/cm	3.93 mg/L	2.57 NTU	73.3 mV	25.90 ft	100.00 ml/min

8/23/2022	01:15:00	7.67 pH	24.60 °C	1,078.9	3.86 mg/L	1.94 NTU	69.2 mV	27.00 ft	100.00 ml/min	
4:40 PM				µS/cm						
8/23/2022	01:20:00	7.67 pH	26.64 °C	1,068.4	4.45 mg/L	1.33 NTU	71.4 mV	28.10 ft	100.00 ml/min	
4:45 PM	7.07 pm			μS/cm						
8/23/2022	01:25:00	7.70 pH	22.49 °C	1,046.5	4.45 mg/L	1.77 NTU	73.4 mV	29.20 ft	100.00 ml/min	
4:50 PM	01.25.00			μS/cm						
8/23/2022	01:30:00	7.69 pH	22.06 °C	1,071.7	4.10 mg/L	1.74 NTU	72.7 mV	30.10 ft	100.00 ml/min	
4:55 PM	01.30.00			μS/cm		1.74 N10	12.7 1110		100.00 111/111111	
8/23/2022	01:35:00	01:35:00 7.69 pH	23.14 °C	1,081.1	2.00//	1.73 NTU	71.3 mV	24.40.4	100.00 ml/min	
5:00 PM	5:00 PM		23.14 0	μS/cm	3.88 mg/L	1.73 NTO	7 1.3 1117	31.10 ft	100.00 1111/111111	

#### Samples

Sample ID:	Description:
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Test Date / Time: 8/24/2022 9:50:10 AM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

Location Name: PZ-52D
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 52.23 ft

Total Depth: 62.23 ft

Initial Depth to Water: 32.26 ft

Pump Type: Portable Bladder Pump

**Tubing Type: Poly** 

Pump Intake From TOC: 57 ft
Estimated Total Volume Pumped:

36 liter

Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 339 in Instrument Used: Aqua TROLL 400

Serial Number: 728566

**Test Notes:** Well purged dry. Came back next morning. No recharge observed. Tried to purge, but no sample was produced. Unable to sample.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/24/2022 9:50 AM	00:00	7.14 pH	22.31 °C	1,051.4 μS/cm	0.87 mg/L	61.20 NTU	138.0 mV	31.21 ft	100.00 ml/min
8/24/2022 9:55 AM	05:00	7.24 pH	22.01 °C	1,037.1 μS/cm	0.68 mg/L	63.90 NTU	107.5 mV	32.30 ft	100.00 ml/min
8/24/2022 10:00 AM	10:00	7.25 pH	22.05 °C	1,034.8 μS/cm	0.49 mg/L	65.00 NTU	121.3 mV	33.00 ft	100.00 ml/min
8/24/2022 10:05 AM	15:00	7.26 pH	22.09 °C	1,028.5 μS/cm	0.40 mg/L	54.40 NTU	88.9 mV	34.00 ft	100.00 ml/min
8/24/2022 10:10 AM	20:00	7.26 pH	22.18 °C	1,019.3 μS/cm	0.36 mg/L	14.80 NTU	104.1 mV	34.60 ft	100.00 ml/min
8/24/2022 10:15 AM	25:00	7.26 pH	22.18 °C	1,021.3 μS/cm	0.38 mg/L	12.60 NTU	80.9 mV	35.40 ft	100.00 ml/min
8/24/2022 10:20 AM	30:00	7.27 pH	22.15 °C	1,024.3 μS/cm	0.44 mg/L	11.50 NTU	95.9 mV	36.00 ft	100.00 ml/min
8/24/2022 10:25 AM	35:00	7.28 pH	22.72 °C	1,026.5 μS/cm	0.59 mg/L	9.94 NTU	79.3 mV	36.50 ft	65.00 ml/min
8/24/2022 10:30 AM	40:00	7.30 pH	23.04 °C	1,023.6 μS/cm	0.69 mg/L	7.82 NTU	75.8 mV	37.00 ft	65.00 ml/min
8/24/2022 10:35 AM	45:00	7.31 pH	23.07 °C	1,015.8 μS/cm	0.88 mg/L	6.56 NTU	89.1 mV	37.50 ft	65.00 ml/min
8/24/2022 10:40 AM	50:00	7.33 pH	23.44 °C	1,011.4 µS/cm	0.96 mg/L	6.63 NTU	87.9 mV	37.80 ft	50.00 ml/min
8/24/2022 10:45 AM	55:00	7.34 pH	23.66 °C	1,000.5 μS/cm	1.18 mg/L	6.54 NTU	87.4 mV	38.20 ft	50.00 ml/min
8/24/2022 10:50 AM	01:00:00	7.37 pH	23.52 °C	1,027.6 μS/cm	1.49 mg/L	6.26 NTU	86.5 mV	38.60 ft	50.00 ml/min
8/24/2022 10:55 AM	01:05:00	7.40 pH	23.61 °C	1,023.1 μS/cm	1.69 mg/L	5.93 NTU	85.4 mV	38.90 ft	50.00 ml/min
8/24/2022 11:00 AM	01:10:00	7.42 pH	23.52 °C	1,029.4 μS/cm	2.04 mg/L	5.49 NTU	84.6 mV	39.10 ft	50.00 ml/min

8/24/2022			_	1,028.8	_				
11:05 AM	01:15:00	7.44 pH	23.43 °C	μS/cm	2.20 mg/L	5.39 NTU	71.7 mV	39.70 ft	50.00 ml/min
8/24/2022 11:10 AM	01:20:00	7.45 pH	23.57 °C	1,027.8 μS/cm	2.25 mg/L	5.24 NTU	81.4 mV	40.00 ft	50.00 ml/min
8/24/2022 11:15 AM	01:25:00	7.47 pH	23.75 °C	1,020.6 μS/cm	2.34 mg/L	5.11 NTU	70.3 mV	40.30 ft	50.00 ml/min
8/24/2022 11:20 AM	01:30:00	7.47 pH	23.74 °C	1,019.6 μS/cm	2.43 mg/L	5.30 NTU	79.3 mV	40.70 ft	50.00 ml/min
8/24/2022 11:25 AM	01:35:00	7.48 pH	23.70 °C	1,020.6 μS/cm	2.56 mg/L	5.21 NTU	68.9 mV	41.00 ft	50.00 ml/min
8/24/2022 11:30 AM	01:40:00	7.49 pH	23.90 °C	1,032.5 μS/cm	2.67 mg/L	5.20 NTU	77.1 mV	41.40 ft	50.00 ml/min
8/24/2022 11:35 AM	01:45:00	7.50 pH	24.11 °C	1,029.7 μS/cm	2.63 mg/L	5.30 NTU	67.9 mV	41.80 ft	50.00 ml/min
8/24/2022 11:40 AM	01:50:00	7.49 pH	24.37 °C	1,034.6 μS/cm	2.78 mg/L	5.12 NTU	79.4 mV	42.10 ft	50.00 ml/min
8/24/2022 11:45 AM	01:55:00	7.50 pH	24.54 °C	1,040.4 μS/cm	2.86 mg/L	5.18 NTU	67.1 mV	42.40 ft	50.00 ml/min
8/24/2022 11:50 AM	02:00:00	7.51 pH	24.71 °C	1,038.9 μS/cm	2.81 mg/L	6.73 NTU	66.5 mV	42.70 ft	50.00 ml/min
8/24/2022 11:55 AM	02:05:00	7.51 pH	24.79 °C	1,037.1 μS/cm	2.80 mg/L	7.73 NTU	73.3 mV	43.10 ft	50.00 ml/min
8/24/2022 12:00 PM	02:10:00	7.51 pH	24.80 °C	1,034.7 μS/cm	2.84 mg/L	7.38 NTU	65.8 mV	43.70 ft	50.00 ml/min
8/24/2022 12:05 PM	02:15:00	7.52 pH	24.69 °C	1,036.4 μS/cm	2.87 mg/L	7.61 NTU	65.1 mV	44.00 ft	50.00 ml/min
8/24/2022 12:10 PM	02:20:00	7.54 pH	23.20 °C	1,004.4 μS/cm	3.03 mg/L	7.38 NTU	65.5 mV	44.70 ft	250.00 ml/min
8/24/2022 12:15 PM	02:25:00	7.56 pH	21.82 °C	1,029.7 μS/cm	3.36 mg/L	8.85 NTU	72.3 mV	46.30 ft	250.00 ml/min
8/24/2022 12:20 PM	02:30:00	7.57 pH	21.84 °C	1,033.0 μS/cm	3.51 mg/L	8.27 NTU	72.0 mV	47.90 ft	250.00 ml/min
8/24/2022 12:25 PM	02:35:00	7.57 pH	21.91 °C	1,027.5 μS/cm	3.48 mg/L	8.64 NTU	64.6 mV	49.80 ft	250.00 ml/min
8/24/2022 12:30 PM	02:40:00	7.55 pH	21.90 °C	1,047.0 μS/cm	3.54 mg/L	9.89 NTU	63.5 mV	50.70 ft	250.00 ml/min
8/24/2022 12:35 PM	02:45:00	7.53 pH	22.00 °C	1,049.9 μS/cm	3.45 mg/L	10.70 NTU	61.4 mV	52.50 ft	250.00 ml/min
8/24/2022 12:40 PM	02:50:00	7.53 pH	21.91 °C	1,044.5 μS/cm	3.48 mg/L	11.30 NTU	59.1 mV	53.20 ft	250.00 ml/min
8/24/2022 12:45 PM	02:55:00	7.43 pH	21.86 °C	1,062.2 μS/cm	2.40 mg/L	15.70 NTU	62.1 mV	53.80 ft	250.00 ml/min
8/24/2022 12:50 PM	03:00:00	7.34 pH	21.83 °C	1,065.8 μS/cm	1.13 mg/L	11.30 NTU	61.2 mV	54.20 ft	250.00 ml/min
8/24/2022 12:55 PM	03:05:00	7.30 pH	21.75 °C	1,052.2 μS/cm	0.62 mg/L	14.60 NTU	61.0 mV	55.30 ft	250.00 ml/min
8/24/2022 1:00 PM	03:10:00	7.29 pH	21.73 °C	1,048.3 µS/cm	0.34 mg/L	12.40 NTU	58.7 mV	56.40 ft	250.00 ml/min
8/24/2022 1:05 PM	03:15:00	7.28 pH	21.90 °C	1,034.3 μS/cm	0.54 mg/L	11.50 NTU	39.7 mV	57.80 ft	250.00 ml/min
8/24/2022 1:10 PM	03:20:00	7.31 pH	21.92 °C	1,037.2 μS/cm	0.51 mg/L	11.40 NTU	41.3 mV	59.90 ft	250.00 ml/min
8/24/2022 1:15 PM	03:25:00	7.33 pH	22.77 °C	1,042.9 μS/cm	0.94 mg/L	11.50 NTU	43.6 mV	60.50 ft	250.00 ml/min

#### Samples

Sample ID:	Description:
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**Test Date / Time:** 8/23/2022 1:00:10 PM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

Location Name: PZ-53D
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 132.48 ft
Total Depth: 142.48 ft

Initial Depth to Water: 23.44 ft

Pump Type: Dedicated Bladder

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 137 ft Estimated Total Volume Pumped:

5600 ml

Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.24 ft Instrument Used: Aqua TROLL 400

Serial Number: 883536

#### **Test Notes:**

Sampled at 1355. Mostly cloudy 81 degrees. FB-04 taken here.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/23/2022 1:00 PM	00:00	6.82 pH	29.45 °C	179.44 μS/cm	3.69 mg/L	1.82 NTU	101.1 mV	23.58 ft	120.00 ml/min
8/23/2022 1:05 PM	05:00	7.16 pH	25.87 °C	173.66 μS/cm	2.15 mg/L	1.50 NTU	13.1 mV	23.63 ft	100.00 ml/min
8/23/2022 1:10 PM	10:00	7.17 pH	24.79 °C	196.45 μS/cm	2.21 mg/L	1.36 NTU	-28.4 mV	23.66 ft	100.00 ml/min
8/23/2022 1:15 PM	15:00	7.23 pH	24.38 °C	353.36 μS/cm	1.69 mg/L	1.27 NTU	-22.7 mV	23.68 ft	100.00 ml/min
8/23/2022 1:20 PM	20:00	7.20 pH	24.21 °C	483.54 μS/cm	2.73 mg/L	1.22 NTU	-3.9 mV	23.68 ft	100.00 ml/min
8/23/2022 1:25 PM	25:00	7.17 pH	24.37 °C	596.69 μS/cm	2.02 mg/L	1.35 NTU	3.0 mV	23.68 ft	100.00 ml/min
8/23/2022 1:30 PM	30:00	7.16 pH	24.31 °C	661.05 μS/cm	1.69 mg/L	1.17 NTU	7.9 mV	23.68 ft	100.00 ml/min
8/23/2022 1:35 PM	35:00	7.16 pH	24.48 °C	686.94 μS/cm	2.05 mg/L	1.64 NTU	16.5 mV	23.68 ft	100.00 ml/min
8/23/2022 1:40 PM	40:00	7.17 pH	24.83 °C	690.26 μS/cm	1.96 mg/L	1.53 NTU	21.6 mV	23.68 ft	100.00 ml/min
8/23/2022 1:45 PM	45:00	7.17 pH	24.80 °C	692.71 μS/cm	2.29 mg/L	1.15 NTU	23.7 mV	23.68 ft	100.00 ml/min
8/23/2022 1:50 PM	50:00	7.18 pH	24.82 °C	692.54 μS/cm	2.37 mg/L	0.99 NTU	26.9 mV	23.68 ft	100.00 ml/min
8/23/2022 1:55 PM	55:00	7.18 pH	25.13 °C	689.90 μS/cm	2.10 mg/L	0.95 NTU	28.3 mV	23.68 ft	100.00 ml/min

#### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 9/1/2022 9:23:50 AM **Project:** Plant Branch Ash Ponds

Operator Name: H Auld



Location Name: PZ-70
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 42.9 ft
Total Depth: 52.99 ft

Initial Depth to Water: 28.66 ft

Pump Type: Peri pump Tubing Type: Poly

Pump Intake From TOC: 48 ft Estimated Total Volume Pumped:

15.8 liter

Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 1.1 in Instrument Used: Aqua TROLL 400

Serial Number: 883530

#### **Test Notes:**

Sampled at 1055 on 9-1-22. Fair, 84.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
9/1/2022 9:23 AM	00:00	6.83 pH	26.33 °C	64.48 µS/cm	6.85 mg/L	10.00 NTU	228.8 mV	28.66 ft	150.00 ml/min
9/1/2022 9:28 AM	05:00	6.12 pH	23.79 °C	366.18 μS/cm	0.26 mg/L	22.00 NTU	83.1 mV	28.75 ft	150.00 ml/min
9/1/2022 9:33 AM	10:00	6.09 pH	23.62 °C	363.11 µS/cm	0.15 mg/L	21.00 NTU	84.5 mV	28.75 ft	150.00 ml/min
9/1/2022 9:38 AM	15:00	6.05 pH	23.82 °C	354.78 μS/cm	0.13 mg/L	20.00 NTU	90.4 mV	28.75 ft	150.00 ml/min
9/1/2022 9:43 AM	20:00	6.09 pH	23.71 °C	363.42 μS/cm	0.11 mg/L	15.00 NTU	87.5 mV	28.75 ft	150.00 ml/min
9/1/2022 9:48 AM	25:00	6.13 pH	23.83 °C	367.41 μS/cm	0.10 mg/L	12.60 NTU	84.0 mV	28.75 ft	150.00 ml/min
9/1/2022 9:53 AM	30:00	6.13 pH	23.90 °C	367.40 μS/cm	0.09 mg/L	12.50 NTU	84.0 mV	28.75 ft	150.00 ml/min
9/1/2022 9:58 AM	35:00	6.13 pH	23.98 °C	365.61 μS/cm	0.08 mg/L	12.90 NTU	84.1 mV	28.75 ft	150.00 ml/min
9/1/2022 10:03 AM	40:00	6.14 pH	23.99 °C	367.68 μS/cm	0.07 mg/L	12.10 NTU	82.4 mV	28.75 ft	150.00 ml/min
9/1/2022 10:08 AM	45:00	6.14 pH	24.15 °C	366.51 μS/cm	0.07 mg/L	11.10 NTU	82.6 mV	28.75 ft	150.00 ml/min
9/1/2022 10:13 AM	50:00	6.14 pH	24.16 °C	367.72 μS/cm	0.08 mg/L	8.90 NTU	82.2 mV	28.75 ft	150.00 ml/min
9/1/2022 10:18 AM	55:00	6.14 pH	24.29 °C	368.04 μS/cm	0.08 mg/L	8.70 NTU	82.2 mV	28.75 ft	150.00 ml/min
9/1/2022 10:23 AM	01:00:00	6.14 pH	24.19 °C	366.41 μS/cm	0.09 mg/L	6.90 NTU	83.5 mV	28.75 ft	150.00 ml/min
9/1/2022 10:28 AM	01:05:00	6.15 pH	24.31 °C	368.09 µS/cm	0.09 mg/L	7.40 NTU	82.8 mV	28.75 ft	150.00 ml/min
9/1/2022 10:33 AM	01:10:00	6.16 pH	24.51 °C	366.10 μS/cm	0.09 mg/L	6.80 NTU	83.5 mV	28.75 ft	150.00 ml/min

9/1/2022	01:15:00	6.16 pH	24.20 °C	367.00 µS/cm	0.09 mg/L	6.40 NTU	84.7 mV	28.75 ft	150.00 ml/min
10:38 AM	01.13.00	0.10 pr1	24.20 C	307.00 μ3/cm	0.09 Hig/L	0.40 1110	04.7 1110	20.7511	130.00 111/111111
9/1/2022	01:20:00	6.16 pH	24.47 °C	366.99 µS/cm	0.10 mg/L	5.60 NTU	85.0 mV	28.75 ft	150.00 ml/min
10:43 AM	01.20.00	0.10 pm	24.47	300.99 μ3/cm	0.10 mg/L	3.00 1110	05.0 111	20.7510	130.00 111/111111
9/1/2022	01:25:00	6.15 pH	24.28 °C	367.95 µS/cm	0.11 mg/L	5.20 NTU	85.3 mV	28.75 ft	150.00 ml/min
10:48 AM	01.25.00	0.13 pm	24.20 0	307.93 μ3/6111	0.11 mg/L	3.20 1110	00.5 111	20.7510	130.00 111/111111
9/1/2022	01:30:00	6.13 pH	24.20 °C	365.64 µS/cm	0.11 mg/L	4.78 NTU	88.4 mV	28.75 ft	150.00 ml/min
10:53 AM	01.50.00	0.13 pm	24.20 0	303.04 μο/οπ	0.11 mg/L	4.701110	00.4 111	20.7311	130.00 111/111111

### Samples

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	Sample ID:	Description:

January/February 2023

Test Date / Time: 1/24/2023 10:10:21 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: 54.3 ft Total Depth: 64.3 ft

Initial Depth to Water: 10.63 ft

Pump Type: Ded Bladder Pump

**Tubing Type: Poly** 

Pump Intake From TOC: 59 ft Estimated Total Volume Pumped:

8.2 liter

Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 33 in Instrument Used: Aqua TROLL 400

Serial Number: 965678

#### **Test Notes:**

Sunny, sample time-1105

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 50	+/- 0.3	
1/24/2023 10:10 AM	00:00	6.83 pH	9.42 °C	107.72 μS/cm	3.45 mg/L	3.09 NTU	100.5 mV	10.63 ft	150.00 ml/min
1/24/2023 10:15 AM	05:00	6.67 pH	14.47 °C	105.20 μS/cm	0.75 mg/L	2.21 NTU	53.8 mV	11.80 ft	150.00 ml/min
1/24/2023 10:20 AM	10:00	6.81 pH	15.08 °C	105.35 μS/cm	0.73 mg/L	1.27 NTU	48.9 mV	12.50 ft	150.00 ml/min
1/24/2023 10:25 AM	15:00	6.88 pH	15.39 °C	105.76 μS/cm	0.63 mg/L	1.39 NTU	48.8 mV	13.00 ft	150.00 ml/min
1/24/2023 10:30 AM	20:00	6.90 pH	15.51 °C	105.92 μS/cm	0.49 mg/L	1.64 NTU	49.2 mV	13.20 ft	150.00 ml/min
1/24/2023 10:35 AM	25:00	6.91 pH	15.49 °C	107.98 μS/cm	0.34 mg/L	1.43 NTU	49.0 mV	13.30 ft	150.00 ml/min
1/24/2023 10:40 AM	30:00	6.93 pH	15.62 °C	115.36 μS/cm	0.29 mg/L	1.22 NTU	50.1 mV	13.30 ft	150.00 ml/min
1/24/2023 10:45 AM	35:00	6.91 pH	15.62 °C	114.77 μS/cm	0.37 mg/L	1.83 NTU	44.8 mV	13.30 ft	150.00 ml/min
1/24/2023 10:50 AM	40:00	6.82 pH	15.73 °C	109.74 μS/cm	0.53 mg/L	1.68 NTU	43.7 mV	13.30 ft	150.00 ml/min
1/24/2023 10:55 AM	45:00	6.75 pH	16.02 °C	105.52 μS/cm	0.66 mg/L	1.22 NTU	42.9 mV	13.30 ft	150.00 ml/min
1/24/2023 11:00 AM	50:00	6.72 pH	16.11 °C	103.10 μS/cm	0.74 mg/L	1.77 NTU	42.4 mV	13.30 ft	150.00 ml/min
1/24/2023 11:05 AM	55:00	6.70 pH	15.89 °C	102.25 μS/cm	0.79 mg/L	1.69 NTU	42.8 mV	13.30 ft	150.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 10:15:35 AM

**Project:** Plant Branch Ash Ponds **Operator Name:** Dever Johnson

**Location Name: BRGWA-2S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.6 ft Total Depth: 44.6 ft

Initial Depth to Water: 10.67 ft

**Pump Type: Ded Bladder Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 39.6 ft Estimated Total Volume Pumped:

6.75 liter

Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 0.3 in Instrument Used: Aqua TROLL 400

Serial Number: 714302

#### **Test Notes:**

Sunny, sample time-1045

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
1/24/2023 10:15 AM	00:00	5.69 pH	16.76 °C	67.30 μS/cm	3.71 mg/L	1.08 NTU	116.8 mV	10.69 ft	225.00 ml/min
1/24/2023 10:16 AM	00:30	5.63 pH	16.48 °C	67.03 µS/cm	3.77 mg/L	0.59 NTU	112.3 mV	10.92 ft	225.00 ml/min
1/24/2023 10:20 AM	05:13	5.46 pH	16.42 °C	51.66 μS/cm	3.80 mg/L	0.60 NTU	109.3 mV	10.92 ft	225.00 ml/min
1/24/2023 10:25 AM	10:13	5.39 pH	16.04 °C	65.43 µS/cm	3.94 mg/L	0.50 NTU	108.0 mV	10.92 ft	225.00 ml/min
1/24/2023 10:30 AM	15:13	5.33 pH	15.41 °C	65.70 µS/cm	4.23 mg/L	0.53 NTU	106.6 mV	10.92 ft	225.00 ml/min
1/24/2023 10:35 AM	20:13	5.29 pH	15.71 °C	65.21 µS/cm	4.19 mg/L	0.71 NTU	106.7 mV	10.92 ft	225.00 ml/min
1/24/2023 10:40 AM	25:13	5.27 pH	15.86 °C	64.65 µS/cm	4.23 mg/L	0.54 NTU	105.7 mV	10.92 ft	225.00 ml/min
1/24/2023 10:45 AM	30:13	5.26 pH	15.58 °C	65.34 µS/cm	4.39 mg/L	0.64 NTU	105.1 mV	10.92 ft	225.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 10:10:28 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: 53.89 ft Total Depth: 63.89 ft

Initial Depth to Water: 12.4 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 58 ft Estimated Total Volume Pumped:

10 liter

Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min

Final Draw Down: 4 in

Instrument Used: Aqua TROLL 400

Serial Number: 884186

#### **Test Notes:**

Sample time 10:50. Sunny 40s.

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/24/2023 10:10 AM	00:00	6.59 pH	14.22 °C	125.40 μS/cm	5.07 mg/L	3.04 NTU	158.5 mV	12.40 ft	250.00 ml/min
1/24/2023 10:15 AM	05:00	6.46 pH	16.39 °C	145.68 μS/cm	2.10 mg/L	2.72 NTU	130.1 mV	12.70 ft	250.00 ml/min
1/24/2023 10:20 AM	10:00	6.45 pH	16.64 °C	147.40 μS/cm	1.50 mg/L	2.84 NTU	120.0 mV	12.70 ft	250.00 ml/min
1/24/2023 10:25 AM	15:00	6.45 pH	16.83 °C	145.94 μS/cm	1.89 mg/L	2.35 NTU	134.0 mV	12.70 ft	250.00 ml/min
1/24/2023 10:30 AM	20:00	6.44 pH	16.79 °C	141.85 μS/cm	2.45 mg/L	1.57 NTU	136.5 mV	12.70 ft	250.00 ml/min
1/24/2023 10:35 AM	25:00	6.43 pH	16.75 °C	139.76 μS/cm	2.82 mg/L	1.87 NTU	137.8 mV	12.70 ft	250.00 ml/min
1/24/2023 10:40 AM	30:00	6.40 pH	16.88 °C	138.24 μS/cm	3.00 mg/L	1.58 NTU	138.1 mV	12.70 ft	250.00 ml/min
1/24/2023 10:45 AM	35:00	6.43 pH	16.92 °C	137.16 μS/cm	3.16 mg/L	0.79 NTU	135.5 mV	12.70 ft	250.00 ml/min
1/24/2023 10:50 AM	40:00	6.42 pH	17.02 °C	135.71 µS/cm	3.33 mg/L	1.13 NTU	135.3 mV	12.70 ft	250.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 10:00:50 AM

**Project:** Plant Branch Ash Ponds **Operator Name:** Toby Johnson

**Location Name: BRGWA-5S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.06 ft Total Depth: 43.06 ft

Initial Depth to Water: 12.54 ft

Pump Type: Dedicated Bladder

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 38 ft Estimated Total Volume Pumped:

5 liter

Flow Cell Volume: 90 ml

Final Flow Rate: 175 ml/min Final

Draw Down: 0.72 in

Instrument Used: Aqua TROLL 400

Serial Number: 965658

#### **Test Notes:**

Sunny, sampled at 1031, Fe2+=0.0mg

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
1/24/2023 10:00 AM	00:00	6.68 pH	13.08 °C	160.99 μS/cm	8.96 mg/L	3.99 NTU	161.4 mV	12.54 ft	150.00 ml/min
1/24/2023 10:05 AM	05:00	6.37 pH	14.65 °C	148.88 μS/cm	4.38 mg/L	3.07 NTU	88.3 mV	12.60 ft	150.00 ml/min
1/24/2023 10:10 AM	10:00	6.40 pH	17.14 °C	148.81 μS/cm	2.47 mg/L	4.09 NTU	78.1 mV	12.60 ft	175.00 ml/min
1/24/2023 10:15 AM	15:00	6.42 pH	17.54 °C	153.45 μS/cm	2.25 mg/L	5.11 NTU	69.7 mV	12.60 ft	175.00 ml/min
1/24/2023 10:20 AM	20:00	6.45 pH	17.50 °C	155.42 μS/cm	1.97 mg/L	3.61 NTU	67.1 mV	12.60 ft	175.00 ml/min
1/24/2023 10:25 AM	25:00	6.47 pH	17.63 °C	156.95 μS/cm	1.93 mg/L	4.72 NTU	65.6 mV	12.60 ft	175.00 ml/min
1/24/2023 10:30 AM	30:00	6.47 pH	17.59 °C	157.20 μS/cm	1.90 mg/L	3.61 NTU	65.0 mV	12.60 ft	175.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 10:22:37 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: 42.86 ft Total Depth: 52.86 ft

Initial Depth to Water: 25.69 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 47 ft Estimated Total Volume Pumped:

6900 ml

Flow Cell Volume: 90 ml Final Flow Rate: 230 ml/min Final Draw Down: 0.7 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1053. Sunny 40 degrees.

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/24/2023 10:22 AM	00:00	8.04 pH	17.32 °C	83.76 µS/cm	7.59 mg/L	3.14 NTU	113.7 mV	26.19 ft	230.00 ml/min
1/24/2023 10:27 AM	05:00	6.93 pH	17.45 °C	52.65 µS/cm	6.54 mg/L	3.01 NTU	13.9 mV	26.27 ft	230.00 ml/min
1/24/2023 10:32 AM	10:00	6.66 pH	17.57 °C	52.60 μS/cm	6.38 mg/L	1.40 NTU	15.5 mV	26.39 ft	230.00 ml/min
1/24/2023 10:37 AM	15:00	6.59 pH	17.51 °C	52.57 μS/cm	6.34 mg/L	1.28 NTU	18.2 mV	26.39 ft	230.00 ml/min
1/24/2023 10:42 AM	20:00	6.57 pH	17.63 °C	52.18 µS/cm	6.29 mg/L	1.02 NTU	20.8 mV	26.39 ft	230.00 ml/min
1/24/2023 10:47 AM	25:00	6.56 pH	17.50 °C	52.74 μS/cm	6.34 mg/L	1.07 NTU	22.8 mV	26.39 ft	230.00 ml/min
1/24/2023 10:52 AM	30:00	6.54 pH	17.51 °C	53.27 μS/cm	6.98 mg/L	0.96 NTU	27.6 mV	26.39 ft	230.00 ml/min

#### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 1/24/2023 3:37:52 PM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-17S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 5.22 ft Total Depth: 10.22 ft

Initial Depth to Water: 5.76 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 7.5 ft Estimated Total Volume Pumped:

8800 ml

Flow Cell Volume: 90 ml Final Flow Rate: 220 ml/min Final Draw Down: 0.45 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1618. Clear 51 degrees. Ferrous iron: 0.0 mg/L

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/24/2023 3:37 PM	00:00	6.59 pH	16.70 °C	433.30 μS/cm	5.28 mg/L	10.20 NTU	38.8 mV	5.90 ft	220.00 ml/min
1/24/2023 3:42 PM	05:00	6.37 pH	15.48 °C	442.92 μS/cm	1.98 mg/L	7.90 NTU	30.6 mV	6.03 ft	220.00 ml/min
1/24/2023 3:47 PM	10:00	6.36 pH	15.20 °C	440.47 μS/cm	1.75 mg/L	5.51 NTU	29.5 mV	6.13 ft	220.00 ml/min
1/24/2023 3:52 PM	15:00	6.36 pH	15.08 °C	441.24 μS/cm	1.67 mg/L	2.52 NTU	27.6 mV	6.21 ft	220.00 ml/min
1/24/2023 3:57 PM	20:00	6.36 pH	14.95 °C	440.64 μS/cm	1.61 mg/L	1.70 NTU	26.9 mV	6.21 ft	220.00 ml/min
1/24/2023 4:02 PM	25:00	6.36 pH	14.94 °C	440.20 μS/cm	1.57 mg/L	1.17 NTU	27.3 mV	6.21 ft	220.00 ml/min
1/24/2023 4:07 PM	30:00	6.36 pH	14.84 °C	439.23 μS/cm	1.57 mg/L	0.92 NTU	26.9 mV	6.21 ft	220.00 ml/min
1/24/2023 4:12 PM	35:00	6.37 pH	14.76 °C	436.34 μS/cm	1.57 mg/L	0.60 NTU	26.7 mV	6.21 ft	220.00 ml/min
1/24/2023 4:17 PM	40:00	6.37 pH	14.75 °C	434.81 μS/cm	1.59 mg/L	0.57 NTU	26.8 mV	6.21 ft	220.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 1:10:19 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

**Location Name: BRGWC-33S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.88 ft Total Depth: 28.88 ft

Initial Depth to Water: 10.19 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 23 ft Estimated Total Volume Pumped:

8.2 liter

Flow Cell Volume: 90 ml Final Flow Rate: 275 ml/min Final Draw Down: 13 in Instrument Used: Aqua TROLL 400

Serial Number: 884186

#### **Test Notes:**

Ferrous iron: 0.0 mg/L. Sample time 1340. Sunny 50s.

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/24/2023 1:10 PM	00:00	4.80 pH	19.99 °C	696.91 µS/cm	-0.01 mg/L	1.97 NTU	123.0 mV	10.19 ft	275.00 ml/min
1/24/2023 1:15 PM	05:00	4.79 pH	20.14 °C	675.57 μS/cm	-0.03 mg/L	0.75 NTU	147.9 mV	11.30 ft	275.00 ml/min
1/24/2023 1:20 PM	10:00	4.79 pH	20.17 °C	675.43 μS/cm	-0.03 mg/L	0.39 NTU	159.0 mV	11.30 ft	275.00 ml/min
1/24/2023 1:25 PM	15:00	4.79 pH	20.26 °C	677.86 μS/cm	-0.03 mg/L	0.37 NTU	142.2 mV	11.30 ft	275.00 ml/min
1/24/2023 1:30 PM	20:00	4.79 pH	20.39 °C	674.69 μS/cm	-0.03 mg/L	0.50 NTU	167.7 mV	11.30 ft	275.00 ml/min
1/24/2023 1:35 PM	25:00	4.79 pH	20.41 °C	676.44 μS/cm	-0.04 mg/L	0.41 NTU	173.1 mV	11.30 ft	275.00 ml/min
1/24/2023 1:40 PM	30:00	4.79 pH	20.53 °C	676.33 μS/cm	-0.04 mg/L	0.31 NTU	176.9 mV	11.30 ft	275.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 11:59:31 AM

**Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-34S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 15.76 ft Total Depth: 25.76 ft

Initial Depth to Water: 2.68 ft

Pump Type: Dedicated Bladder

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 20 ft Estimated Total Volume Pumped:

14821.333 ml

Flow Cell Volume: 90 ml Final Flow Rate: 280 ml/min Final Draw Down: 0.04 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1253. Sunny 46 degrees.

### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/24/2023 11:59 AM	00:00	5.95 pH	17.21 °C	576.85 μS/cm	3.85 mg/L	0.52 NTU	-3.4 mV	2.72 ft	280.00 ml/min
1/24/2023 12:04 PM	05:00	5.91 pH	17.72 °C	574.68 μS/cm	2.09 mg/L	0.59 NTU	17.0 mV	2.72 ft	280.00 ml/min
1/24/2023 12:09 PM	10:00	5.91 pH	17.88 °C	572.63 μS/cm	1.58 mg/L	0.53 NTU	21.2 mV	2.72 ft	280.00 ml/min
1/24/2023 12:14 PM	15:00	5.94 pH	17.83 °C	568.63 μS/cm	1.71 mg/L	0.56 NTU	23.7 mV	2.72 ft	280.00 ml/min
1/24/2023 12:19 PM	20:00	5.97 pH	17.89 °C	557.62 μS/cm	2.81 mg/L	0.62 NTU	27.3 mV	2.72 ft	280.00 ml/min
1/24/2023 12:24 PM	25:00	5.93 pH	17.99 °C	568.05 μS/cm	1.71 mg/L	0.45 NTU	27.3 mV	2.72 ft	280.00 ml/min
1/24/2023 12:29 PM	30:00	5.93 pH	18.21 °C	571.08 μS/cm	1.61 mg/L	0.44 NTU	28.4 mV	2.72 ft	280.00 ml/min
1/24/2023 12:32 PM	32:56	5.92 pH	18.17 °C	570.06 μS/cm	1.69 mg/L	0.50 NTU	30.2 mV	2.72 ft	280.00 ml/min
1/24/2023 12:37 PM	37:56	5.93 pH	18.20 °C	386.96 μS/cm	1.67 mg/L	0.52 NTU	31.1 mV	2.72 ft	280.00 ml/min
1/24/2023 12:42 PM	42:56	5.93 pH	18.37 °C	563.45 μS/cm	1.80 mg/L	0.77 NTU	30.6 mV	2.72 ft	280.00 ml/min
1/24/2023 12:47 PM	47:56	5.93 pH	18.24 °C	561.68 μS/cm	1.60 mg/L	0.63 NTU	31.9 mV	2.72 ft	280.00 ml/min
1/24/2023 12:52 PM	52:56	5.93 pH	18.39 °C	561.59 μS/cm	1.65 mg/L	0.65 NTU	32.3 mV	2.72 ft	280.00 ml/min

### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 1/24/2023 2:13:54 PM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

**Location Name: BRGWC-35S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.01 ft Total Depth: 30.01 ft

Initial Depth to Water: 1.85 ft

**Pump Type: Dedicated Bladder** 

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 25 ft Estimated Total Volume Pumped:

9000 ml

Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0.02 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1444. Sunny 50 degrees. Ferrous iron: 0.0 mg/L

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/24/2023 2:13 PM	00:00	6.15 pH	17.23 °C	581.83 μS/cm	3.48 mg/L	1.12 NTU	28.2 mV	1.87 ft	300.00 ml/min
1/24/2023 2:18 PM	05:00	6.07 pH	17.54 °C	586.81 μS/cm	0.44 mg/L	1.06 NTU	34.5 mV	1.87 ft	300.00 ml/min
1/24/2023 2:23 PM	10:00	6.07 pH	17.77 °C	583.14 μS/cm	0.23 mg/L	0.69 NTU	37.1 mV	1.87 ft	300.00 ml/min
1/24/2023 2:28 PM	15:00	6.07 pH	17.73 °C	587.20 μS/cm	0.19 mg/L	0.52 NTU	36.0 mV	1.87 ft	300.00 ml/min
1/24/2023 2:33 PM	20:00	6.07 pH	17.86 °C	591.42 μS/cm	0.18 mg/L	0.33 NTU	36.4 mV	1.87 ft	300.00 ml/min
1/24/2023 2:38 PM	25:00	6.08 pH	17.86 °C	588.47 μS/cm	0.17 mg/L	0.27 NTU	36.4 mV	1.87 ft	300.00 ml/min
1/24/2023 2:43 PM	30:00	6.08 pH	17.86 °C	590.15 μS/cm	0.17 mg/L	0.22 NTU	36.6 mV	1.87 ft	300.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/25/2023 3:22:59 PM Project: Plant Branch Ash Ponds Operator Name: Taylor Goble

**Location Name: BRGWC-36S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.44 ft Total Depth: 35.44 ft

Initial Depth to Water: 3.88 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 30 ft Estimated Total Volume Pumped:

9075 ml

Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 0.07 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1553. Cloudy 63 degrees. Ferrous iron: 0.0 mg/L

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/25/2023 3:22 PM	00:00	5.47 pH	20.86 °C	546.31 μS/cm	4.94 mg/L	2.04 NTU	115.5 mV	3.93 ft	300.00 ml/min
1/25/2023 3:27 PM	05:00	5.64 pH	14.82 °C	586.08 μS/cm	2.07 mg/L	2.37 NTU	99.7 mV	3.95 ft	300.00 ml/min
1/25/2023 3:32 PM	10:00	5.65 pH	14.83 °C	585.41 μS/cm	2.03 mg/L	2.82 NTU	116.5 mV	3.95 ft	300.00 ml/min
1/25/2023 3:37 PM	15:00	5.64 pH	15.05 °C	589.09 μS/cm	2.02 mg/L	3.06 NTU	91.3 mV	3.95 ft	300.00 ml/min
1/25/2023 3:42 PM	20:00	5.64 pH	15.45 °C	588.47 μS/cm	1.99 mg/L	3.11 NTU	105.9 mV	3.95 ft	300.00 ml/min
1/25/2023 3:47 PM	25:00	5.64 pH	15.71 °C	586.62 μS/cm	1.99 mg/L	3.17 NTU	103.6 mV	3.95 ft	300.00 ml/min
1/25/2023 3:53 PM	30:15	5.64 pH	15.80 °C	598.90 μS/cm	2.00 mg/L	3.34 NTU	93.0 mV	3.95 ft	300.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/25/2023 12:50:04 PM

**Project:** Plant Branch Ash Ponds **Operator Name:** A. Schnittker

**Location Name: BRGWC-37S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 56.25 ft Total Depth: 66.25 ft

Initial Depth to Water: 53.66 ft

Pump Type: Dedicated Bladder

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 61 ft Estimated Total Volume Pumped:

4.8 liter

Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min

Final Draw Down: 8 in

Instrument Used: Aqua TROLL 400

Serial Number: 884186

Test Notes:

Ferrous Iron: 0.0mg/L. Sample time 13:20. Cloudy 60s.

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/25/2023 12:50 PM	00:00	5.90 pH	18.66 °C	48.33 μS/cm	7.25 mg/L	1.94 NTU	147.3 mV	53.66 ft	160.00 ml/min
1/25/2023 12:55 PM	05:00	5.84 pH	18.68 °C	48.35 µS/cm	7.17 mg/L	1.53 NTU	174.1 mV	54.30 ft	160.00 ml/min
1/25/2023 1:00 PM	10:00	5.83 pH	18.71 °C	48.15 μS/cm	7.14 mg/L	1.14 NTU	170.6 mV	54.30 ft	160.00 ml/min
1/25/2023 1:05 PM	15:00	5.83 pH	18.75 °C	48.00 μS/cm	7.14 mg/L	0.91 NTU	166.8 mV	54.30 ft	160.00 ml/min
1/25/2023 1:10 PM	20:00	5.84 pH	18.87 °C	47.79 μS/cm	7.12 mg/L	0.97 NTU	135.5 mV	54.30 ft	160.00 ml/min
1/25/2023 1:15 PM	25:00	5.83 pH	18.83 °C	47.93 μS/cm	7.14 mg/L	0.23 NTU	156.4 mV	54.30 ft	160.00 ml/min
1/25/2023 1:20 PM	30:00	5.84 pH	18.88 °C	47.92 μS/cm	7.14 mg/L	0.19 NTU	156.2 mV	54.30 ft	160.00 ml/min

### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/25/2023 1:03:24 PM Project: Plant Branch Ash Ponds Operator Name: Taylor Goble

**Location Name: BRGWC-38S** 

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.64 ft Total Depth: 40.64 ft

Initial Depth to Water: 22.16 ft

Pump Type: Dedicated Bladder

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 35 ft Estimated Total Volume Pumped:

9500 ml

Flow Cell Volume: 90 ml Final Flow Rate: 190 ml/min Final Draw Down: 0.96 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1353. Cloudy 65 degrees. Ferrous iron: 0.0 mg/L

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/25/2023 1:03 PM	00:00	5.91 pH	18.17 °C	731.79 µS/cm	7.73 mg/L	0.44 NTU	193.2 mV	22.70 ft	190.00 ml/min
1/25/2023 1:08 PM	05:00	4.40 pH	18.61 °C	753.91 µS/cm	2.56 mg/L	0.39 NTU	153.4 mV	22.83 ft	190.00 ml/min
1/25/2023 1:13 PM	10:00	4.38 pH	18.72 °C	715.05 µS/cm	2.04 mg/L	0.41 NTU	187.2 mV	22.94 ft	190.00 ml/min
1/25/2023 1:18 PM	15:00	4.36 pH	18.77 °C	710.28 µS/cm	1.66 mg/L	0.56 NTU	181.6 mV	23.03 ft	190.00 ml/min
1/25/2023 1:23 PM	20:00	4.37 pH	18.79 °C	699.31 μS/cm	1.59 mg/L	0.50 NTU	144.8 mV	23.09 ft	190.00 ml/min
1/25/2023 1:28 PM	25:00	4.43 pH	18.70 °C	681.40 μS/cm	1.62 mg/L	0.66 NTU	141.0 mV	23.12 ft	190.00 ml/min
1/25/2023 1:33 PM	30:00	4.52 pH	18.68 °C	671.46 μS/cm	1.66 mg/L	0.64 NTU	136.2 mV	23.12 ft	190.00 ml/min
1/25/2023 1:38 PM	35:00	4.63 pH	18.65 °C	669.13 µS/cm	1.70 mg/L	0.68 NTU	132.4 mV	23.12 ft	190.00 ml/min
1/25/2023 1:43 PM	40:00	4.69 pH	18.52 °C	668.07 μS/cm	1.72 mg/L	0.75 NTU	154.5 mV	23.12 ft	190.00 ml/min
1/25/2023 1:48 PM	45:00	4.73 pH	18.55 °C	670.75 μS/cm	1.71 mg/L	0.71 NTU	152.9 mV	23.12 ft	190.00 ml/min
1/25/2023 1:53 PM	50:00	4.75 pH	18.53 °C	675.19 μS/cm	1.71 mg/L	0.88 NTU	124.2 mV	23.12 ft	190.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/26/2023 9:50:13 AM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

Location Name: PZ-13S
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 28.17 ft

Total Depth: 38.17 ft

Initial Depth to Water: 28.17 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 33 ft Estimated Total Volume Pumped:

24.7 liter

Flow Cell Volume: 90 ml Final Flow Rate: 275 ml/min

Final Draw Down: 1 in

Instrument Used: Aqua TROLL 400

Serial Number: 884186

#### **Test Notes:**

Ferrous iron: 0.0 mg/L. Sample time 1120. Cloudy 40s.

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/26/2023 9:50 AM	00:00	5.56 pH	11.62 °C	184.64 μS/cm	3.99 mg/L	2.11 NTU	188.5 mV	28.17 ft	275.00 ml/min
1/26/2023 9:55 AM	05:00	5.51 pH	13.12 °C	171.29 μS/cm	3.62 mg/L	1.92 NTU	157.8 mV	28.20 ft	275.00 ml/min
1/26/2023 10:00 AM	10:00	5.53 pH	13.47 °C	166.12 μS/cm	3.44 mg/L	1.85 NTU	171.8 mV	28.20 ft	275.00 ml/min
1/26/2023 10:05 AM	15:00	5.53 pH	13.63 °C	161.45 μS/cm	3.32 mg/L	1.63 NTU	161.2 mV	28.20 ft	275.00 ml/min
1/26/2023 10:10 AM	20:00	5.53 pH	14.15 °C	155.47 μS/cm	3.53 mg/L	1.36 NTU	122.2 mV	28.20 ft	275.00 ml/min
1/26/2023 10:15 AM	25:00	5.53 pH	14.00 °C	154.87 μS/cm	3.67 mg/L	1.29 NTU	140.9 mV	28.20 ft	275.00 ml/min
1/26/2023 10:20 AM	30:00	5.54 pH	14.04 °C	154.41 μS/cm	3.36 mg/L	1.21 NTU	138.7 mV	28.20 ft	275.00 ml/min
1/26/2023 10:25 AM	35:00	5.55 pH	14.11 °C	154.43 μS/cm	3.44 mg/L	0.93 NTU	135.6 mV	28.20 ft	275.00 ml/min
1/26/2023 10:30 AM	40:00	5.56 pH	14.50 °C	152.87 μS/cm	3.32 mg/L	0.98 NTU	133.1 mV	28.20 ft	275.00 ml/min
1/26/2023 10:35 AM	45:00	5.56 pH	14.78 °C	149.99 μS/cm	3.36 mg/L	0.72 NTU	130.9 mV	28.20 ft	275.00 ml/min
1/26/2023 10:40 AM	50:00	5.57 pH	14.56 °C	152.77 μS/cm	3.39 mg/L	0.85 NTU	128.6 mV	28.20 ft	275.00 ml/min
1/26/2023 10:45 AM	55:00	5.56 pH	14.72 °C	150.94 μS/cm	4.14 mg/L	0.76 NTU	127.0 mV	28.20 ft	275.00 ml/min
1/26/2023 10:50 AM	01:00:00	5.56 pH	15.04 °C	149.45 μS/cm	4.06 mg/L	0.52 NTU	126.0 mV	28.20 ft	275.00 ml/min
1/26/2023 10:55 AM	01:05:00	5.55 pH	15.36 °C	149.26 μS/cm	3.80 mg/L	0.58 NTU	125.3 mV	28.20 ft	275.00 ml/min
1/26/2023 11:00 AM	01:10:00	5.56 pH	15.26 °C	150.02 μS/cm	3.62 mg/L	0.45 NTU	124.3 mV	28.20 ft	275.00 ml/min

1/26/2023	01:15:00	5.56 pH	15.40 °C	149.23 µS/cm	3.62 mg/L	0.36 NTU	123.5 mV	28.20 ft	275.00 ml/min
11:05 AM	01.15.00	5.56 PH	15.40 C	149.25 μο/οπ	3.62 Hig/L	0.36 N10	123.51117	20.20 11	275.00 1111/111111
1/26/2023	01:20:00	5.56 pH	15.41 °C	148.63 µS/cm	3.87 mg/L	0.41 NTU	122.9 mV	28.20 ft	275.00 ml/min
11:10 AM	01.20.00	3.30 pm	13.41 C	140.03 μ3/6111	3.07 Hig/L	0.411110	122.5 111	20.20 10	27 3.00 111/111111
1/26/2023	01:25:00	5.56 pH	15.49 °C	147.81 µS/cm	3.53 mg/L	0.34 NTU	122.2 mV	28.20 ft	275.00 ml/min
11:15 AM	01.25.00	3.30 pm	15.49 0	147.01 μο/οπ	3.33 Hig/L	0.54 1110	122.2 111 V	20.20 10	27 3.00 111/111111
1/26/2023	01:30:00	5.56 pH	15.52 °C	147.80 uS/cm	3.59 mg/L	0.36 NTU	121.8 mV	28.20 ft	275.00 ml/min
11:20 AM	01.50.00	0.00 pr i	10.02	147.00 μο/cm	3.55 Hig/L	0.50 1110	121.01110	20.2010	27 0.00 1111/111111

### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/24/2023 2:50:14 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

Location Name: PZ-52D
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 52.23 ft

Total Depth: 62.23 ft

Initial Depth to Water: 35.25 ft

**Pump Type: Portable Bladder Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 57 ft
Estimated Total Volume Pumped:

16 liter

Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 285 in Instrument Used: Aqua TROLL 400

Serial Number: 884186

**Test Notes:** Purged dry.

### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/24/2023 2:50 PM	00:00	7.28 pH	21.25 °C	573.90 μS/cm	5.83 mg/L	2.86 NTU	138.3 mV	35.25 ft	50.00 ml/min
1/24/2023 2:55 PM	05:00	7.43 pH	20.13 °C	577.52 μS/cm	5.06 mg/L	1.94 NTU	118.9 mV	35.70 ft	50.00 ml/min
1/24/2023 3:00 PM	10:00	7.48 pH	20.00 °C	566.74 μS/cm	4.85 mg/L	1.07 NTU	108.7 mV	36.40 ft	50.00 ml/min
1/24/2023 3:05 PM	15:00	7.50 pH	19.77 °C	575.45 μS/cm	5.05 mg/L	1.28 NTU	102.7 mV	36.90 ft	50.00 ml/min
1/24/2023 3:10 PM	20:00	7.50 pH	20.03 °C	573.67 μS/cm	5.03 mg/L	1.38 NTU	111.2 mV	37.20 ft	50.00 ml/min
1/24/2023 3:15 PM	25:00	7.51 pH	20.15 °C	569.88 μS/cm	4.96 mg/L	1.33 NTU	110.9 mV	37.60 ft	50.00 ml/min
1/24/2023 3:20 PM	30:00	7.51 pH	20.26 °C	568.42 μS/cm	4.86 mg/L	1.19 NTU	110.4 mV	38.20 ft	50.00 ml/min
1/24/2023 3:25 PM	35:00	7.51 pH	20.13 °C	564.26 μS/cm	4.85 mg/L	1.38 NTU	109.8 mV	38.20 ft	50.00 ml/min
1/24/2023 3:30 PM	40:00	7.51 pH	20.22 °C	561.97 μS/cm	4.80 mg/L	1.31 NTU	109.1 mV	38.90 ft	50.00 ml/min
1/24/2023 3:35 PM	45:00	7.51 pH	20.11 °C	558.49 μS/cm	4.80 mg/L	1.21 NTU	108.7 mV	39.20 ft	50.00 ml/min
1/24/2023 3:40 PM	50:00	7.51 pH	20.31 °C	555.53 μS/cm	4.77 mg/L	1.29 NTU	108.2 mV	39.60 ft	50.00 ml/min
1/24/2023 3:45 PM	55:00	7.51 pH	20.25 °C	551.98 μS/cm	4.77 mg/L	1.38 NTU	108.3 mV	40.00 ft	50.00 ml/min
1/24/2023 3:50 PM	01:00:00	7.51 pH	20.04 °C	551.44 μS/cm	4.79 mg/L	1.36 NTU	108.1 mV	40.40 ft	50.00 ml/min
1/24/2023 3:55 PM	01:05:00	7.51 pH	19.79 °C	549.47 μS/cm	4.78 mg/L	1.54 NTU	96.1 mV	40.70 ft	50.00 ml/min
1/24/2023 4:00 PM	01:10:00	7.51 pH	19.68 °C	554.95 μS/cm	4.82 mg/L	1.34 NTU	104.9 mV	41.00 ft	50.00 ml/min

1/24/2023 4:05 PM	01:15:00	7.52 pH	19.43 °C	555.53 μS/cm	4.82 mg/L	1.32 NTU	105.4 mV	41.40 ft	50.00 ml/min
1/24/2023 4:10 PM	01:20:00	7.52 pH	19.17 °C	557.89 μS/cm	4.77 mg/L	1.43 NTU	92.7 mV	41.70 ft	50.00 ml/min
1/24/2023 4:15 PM	01:25:00	7.52 pH	17.96 °C	552.66 μS/cm	5.20 mg/L	1.66 NTU	90.7 mV	42.00 ft	50.00 ml/min
1/24/2023 4:20 PM	01:30:00	7.52 pH	18.59 °C	555.55 μS/cm	5.12 mg/L	1.74 NTU	87.4 mV	42.30 ft	50.00 ml/min
1/24/2023 4:25 PM	01:35:00	7.52 pH	18.35 °C	550.31 μS/cm	5.06 mg/L	1.34 NTU	95.3 mV	42.80 ft	150.00 ml/min
1/24/2023 4:30 PM	01:40:00	7.53 pH	17.84 °C	546.57 μS/cm	4.98 mg/L	1.59 NTU	95.8 mV	43.30 ft	150.00 ml/min
1/24/2023 4:35 PM	01:45:00	7.53 pH	17.55 °C	549.24 μS/cm	4.92 mg/L	1.43 NTU	86.0 mV	43.70 ft	150.00 ml/min
1/24/2023 4:40 PM	01:50:00	7.52 pH	18.12 °C	557.37 μS/cm	5.02 mg/L	1.58 NTU	93.0 mV	46.00 ft	150.00 ml/min
1/24/2023 4:45 PM	01:55:00	7.52 pH	19.72 °C	562.72 μS/cm	5.31 mg/L	4.99 NTU	95.8 mV	47.10 ft	150.00 ml/min
1/24/2023 4:50 PM	02:00:00	7.52 pH	19.80 °C	568.81 μS/cm	5.32 mg/L	5.13 NTU	97.9 mV	49.00 ft	150.00 ml/min
1/24/2023 4:55 PM	02:05:00	7.52 pH	19.65 °C	569.91 μS/cm	5.40 mg/L	7.88 NTU	89.8 mV	51.40 ft	150.00 ml/min
1/24/2023 5:00 PM	02:10:00	7.51 pH	19.60 °C	583.73 μS/cm	4.93 mg/L	15.90 NTU	94.7 mV	52.00 ft	150.00 ml/min
1/24/2023 5:05 PM	02:15:00	7.51 pH	19.42 °C	589.39 μS/cm	5.33 mg/L	14.60 NTU	86.1 mV	52.90 ft	150.00 ml/min
1/24/2023 5:10 PM	02:20:00	7.49 pH	19.37 °C	590.52 μS/cm	5.43 mg/L	14.20 NTU	34.2 mV	54.00 ft	150.00 ml/min
1/24/2023 5:15 PM	02:25:00	7.52 pH	18.82 °C	591.78 μS/cm	5.30 mg/L	11.80 NTU	35.5 mV	54.00 ft	0.00 ml/min
1/24/2023 5:20 PM	02:30:00	7.51 pH	19.02 °C	599.70 μS/cm	5.56 mg/L	8.28 NTU	43.1 mV	54.50 ft	150.00 ml/min
1/24/2023 5:25 PM	02:35:00	7.52 pH	19.33 °C	596.36 μS/cm	5.07 mg/L	8.79 NTU	59.9 mV	55.10 ft	150.00 ml/min
1/24/2023 5:30 PM	02:40:00	7.53 pH	19.18 °C	599.97 μS/cm	5.22 mg/L	15.00 NTU	68.4 mV	56.00 ft	150.00 ml/min
1/24/2023 5:35 PM	02:45:00	7.54 pH	19.18 °C	555.30 μS/cm	4.56 mg/L	19.50 NTU	73.0 mV	56.70 ft	150.00 ml/min
1/24/2023 5:40 PM	02:50:00	7.54 pH	19.11 °C	535.27 μS/cm	3.65 mg/L	17.90 NTU	74.2 mV	57.30 ft	150.00 ml/min
1/24/2023 5:45 PM	02:55:00	7.57 pH	18.26 °C	535.89 μS/cm	3.43 mg/L	16.80 NTU	74.5 mV	59.00 ft	150.00 ml/min

### Samples

Sample ID:	Description:
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Test Date / Time: 1/25/2023 2:22:04 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

**Location Name: PZ-52D** Well Diameter: 2 in **Casing Type: PVC** Screen Length: 10 ft Top of Screen: 52.23 ft Total Depth: 62.23 ft

Initial Depth to Water: 56.61 ft

**Pump Type: Portable Bladder Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 57 ft **Estimated Total Volume Pumped:** 

0.1 liter

Flow Cell Volume: 90 ml Final Flow Rate: 50 ml/min Final Draw Down: 2 in

Instrument Used: Aqua TROLL 400

Serial Number: 884186

#### **Test Notes:**

Ferrous iron: 0.0 mg/L. Sample time 1424. Rainy 60s.

#### **Low-Flow Readings:**

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/25/2023 2:22 PM	00:00	6.69 pH	18.96 °C	635.18 μS/cm	7.58 mg/L	4.46 NTU	150.6 mV	56.61 ft	50.00 ml/min
1/25/2023 2:23 PM	01:00	6.97 pH	18.48 °C	650.03 μS/cm	6.96 mg/L	4.80 NTU	135.7 mV	56.70 ft	50.00 ml/min
1/25/2023 2:24 PM	02:00	7.14 pH	18.47 °C	651.81 μS/cm	7.16 mg/L	3.79 NTU	146.5 mV	56.80 ft	50.00 ml/min

#### **Samples**

Sample ID:	Description:
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Test Date / Time: 1/25/2023 3:35:05 PM Project: Plant Branch Ash Ponds Operator Name: A. Schnittker

Location Name: PZ-53D
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 132.48 ft
Total Depth: 142.48 ft

Initial Depth to Water: 22.55 ft

Pump Type: Dedicated Bladder

**Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 137 ft Estimated Total Volume Pumped:

4 liter

Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 5 in Instrument Used: Aqua TROLL 400 Serial Number: 884186

**Test Notes:** 

Ferrous iron: 0.0 mg/L. Sample time 1615. Rainy 50s.

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
1/25/2023 3:35 PM	00:00	7.43 pH	16.70 °C	682.37 μS/cm	7.29 mg/L	1.16 NTU	143.4 mV	22.55 ft	100.00 ml/min
1/25/2023 3:40 PM	05:00	6.98 pH	17.72 °C	687.36 μS/cm	2.24 mg/L	1.12 NTU	-103.8 mV	22.80 ft	100.00 ml/min
1/25/2023 3:45 PM	10:00	7.03 pH	18.08 °C	673.83 μS/cm	1.67 mg/L	0.94 NTU	-132.8 mV	22.80 ft	100.00 ml/min
1/25/2023 3:50 PM	15:00	7.08 pH	18.00 °C	674.58 μS/cm	1.55 mg/L	1.36 NTU	-93.2 mV	22.80 ft	100.00 ml/min
1/25/2023 3:55 PM	20:00	7.09 pH	17.77 °C	673.58 μS/cm	1.56 mg/L	1.73 NTU	-106.9 mV	23.00 ft	100.00 ml/min
1/25/2023 4:00 PM	25:00	7.08 pH	18.70 °C	668.27 μS/cm	1.97 mg/L	1.89 NTU	-32.6 mV	23.00 ft	100.00 ml/min
1/25/2023 4:05 PM	30:00	7.09 pH	18.80 °C	676.53 μS/cm	2.04 mg/L	2.86 NTU	-9.8 mV	23.00 ft	100.00 ml/min
1/25/2023 4:10 PM	35:00	7.10 pH	18.82 °C	680.82 μS/cm	2.09 mg/L	2.93 NTU	-1.7 mV	23.00 ft	100.00 ml/min
1/25/2023 4:15 PM	40:00	7.10 pH	18.79 °C	675.06 μS/cm	2.16 mg/L	2.83 NTU	0.6 mV	23.00 ft	100.00 ml/min

### **Samples**

Sample ID:	Description:
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**Test Date / Time:** 1/26/2023 9:52:11 AM **Project:** Plant Branch Ash Ponds **Operator Name:** Taylor Goble

Location Name: PZ-70I
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 44.72 ft
Total Depth: 54.72 ft

Initial Depth to Water: 28.47 ft

**Pump Type: Peristaltic Pump** 

**Tubing Type: Poly** 

Pump Intake From TOC: 49 ft Estimated Total Volume Pumped:

6000 ml

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.27 ft Instrument Used: Aqua TROLL 400

Serial Number: 877800

#### **Test Notes:**

Sampled at 1022. Cloudy 43 degrees. Ferrous iron: 0.0 mg/L

#### Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 4	+/- 5 %	+/- 10 %	+/- 10	+/- 30	+/- 0.1	
1/26/2023 9:52 AM	00:00	7.35 pH	13.28 °C	397.89 μS/cm	6.30 mg/L	1.70 NTU	180.3 mV	28.68 ft	200.00 ml/min
1/26/2023 9:57 AM	05:00	5.86 pH	15.44 °C	399.51 μS/cm	1.69 mg/L	0.91 NTU	96.7 mV	28.72 ft	200.00 ml/min
1/26/2023 10:02 AM	10:00	5.64 pH	16.20 °C	400.11 μS/cm	1.69 mg/L	0.66 NTU	109.2 mV	28.74 ft	200.00 ml/min
1/26/2023 10:07 AM	15:00	5.64 pH	16.38 °C	394.09 μS/cm	1.59 mg/L	0.62 NTU	78.7 mV	28.74 ft	200.00 ml/min
1/26/2023 10:12 AM	20:00	5.63 pH	16.76 °C	392.89 μS/cm	1.60 mg/L	0.40 NTU	75.1 mV	28.74 ft	200.00 ml/min
1/26/2023 10:17 AM	25:00	5.63 pH	17.30 °C	393.43 μS/cm	1.60 mg/L	0.45 NTU	71.7 mV	28.74 ft	200.00 ml/min
1/26/2023 10:22 AM	30:00	5.60 pH	16.95 °C	396.73 μS/cm	1.56 mg/L	0.55 NTU	79.8 mV	28.74 ft	200.00 ml/min

### **Samples**

Sample II	ID:	Description:	
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# **CALIBRATION REPORTS**

Fall 2022



SITE:		Plant Branch		
TECHNICIAN:		) Benstord		
WATER LEVEL:		Soluit		
WATER LEVEL S/N:		267304		
WATER LEVEL SIN.		2011 3-		
INSTRUMENT S/N:		850751		
INSTRUMENT TYPE:	AquaTroll			
CAL. SOLUTION/S:	ID: P1+ 4	LOT #: 21470032 EXP. DATE: 4	123	
	10: PH 7		73	
	1D: PY 10	LOT#: 2008605 EXP. DATE: 4/	23	
	ID: Lord	LOT#: 1610805 EXP. DATE: 11	122	
	1D: 627	LOT # : 7146143 EXP. DATE: 4/	75	Midday pH check
	ID:	LOT #: EXP. DATE:		Must be less that .10
	ID:	LOT #: EXP. DATE:		(6.90-7.10 range)
n a tari sambibi siti	2/22/22			Recalibrate if not within range
Calibration Date: 3	8153/15	4.3		
RDO	: 100% sat. = 10	0.7	- 001	Midday pH check
	: 4.00 = 9.66	7.00= 7.02	10,00 = 991	7.0 = 7.04
PH Recal (if needed)		7.00 =	10,00 =	7.0= post recal check
CONDUCTIVITY	: 1413	= 144(		
ORP (mV	778	= 228	_	
Calibration Date:	chales			
	: 100% sat. = 96	9 0		and an area
	: 4.00 = 4,03	7.00 = 7.64	10.00 = 9.74	Midday pH check
PH Recal (if needed)		7.00 = 9.0°[	10.00 = 777 /	7.0 = 7.0 post recal check
CONDUCTIVITY	-	= 1423	10,00 =	7.0=
	727	= 229	_	
		- (2.1	_	
Calibration Date:	8/25/12	1		
RDO	: 100% sat. = 99.	.0		Midday pH check
PH	: 4.00 = 4,00	7.00 = 6-44	10.00 = 10.18	7.0=7.02
PH Recal (if needed)		7.00 =	10.00 =	7.0≈ post recal check
CONDUCTIVITY		= 1406		
ORP (mV	- 4	= 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:				
	100% est =			Midden all street
	: 100% sat. =	7.00 -	10.00	Midday pH check
	4.00 =	7.00 =	10.00 =	7.0 =
PH Recal (if needed) CONDUCTIVITY		7,00 =	10.00 =	7.0= post recal check
ORP (mV)			_	
Ethe Mild				



Plant Branch 1 Projected			
171206663767			
	EXP. DATE: NA		
	EXP. DATE: 11/22		
20 NTU - LOT # 412 67	EXP. DATE: 11/22		
	Hach 2100Q O NTU - LOT # P2 /1-6 10 NTU - LOT # \$1 20112		

C

Calibation Solution	Instrument Reading	
0.0	6.27	NTU
10.0	10.2	NTU
20.0	20.6	NTU

Calibration Date: 2/2-1/22

Calibation Solution	Instrument Reading	
0.0	0.19	NTU
10.0	4.98	NTU
20.0	2014	NTU

Calibration Date: 8/15/12

Calibation Solution	Instrument Reading	
0.0	617	NTU
10.0	10.1	NTU
20.0	20.3	NTU

Calibration Date:

	Instrument Reading	Calibation Solution
NTU		0.0
NTU		10.0
NTU		20.0

Calibration Date:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU



SITE:			Plant Branch			
TECHNICIAN:	4.	Anid				
WATER LEVEL:	Solik	<\				
WATER LEVEL S/N:		832				
INSTRUMENT S/N:	88353	30				
INSTRUMENT TYPE:	AquaTroll					
CAL. SOLUTION/S:	1D: 0744	LOT#: 25 E 87	O EXP. DATE: 5	45/8		
	10: OH 7	LOT#:21010086	EXP. DATE: 9	5/2022		
	1D: OH 10	LOT # : Z00860 5		4/23		
	ID: Cond.	LOT#: 26 B1062	The second secon	123	<u> </u>	
	ID: ORP	LOT#:21140143	EXP. DATE: 04	1/23	Midday pH c	<u>heck</u>
	ID:	LOT#1	EXP. DATE:		Must be less th	
	ID:	LOT#:	EXP. DATE:		(6.90-7.10 r	
Calibration Date:	2 72 - 77				Recalibrate if not v	vithin range
		14 106%			12015-050	E.
RDO	: 100% sat. = \$			- 000	Midday pH che	
			1.01	10.00 = 9,99	7.0 = 7.0	
PH Recal (if needed)	32777.5	7.00 =		10.00 =	7.0= P	ost recal check
CONDUCTIVITY		= 1660		_		
ORP (mV	228	= 226		_		
Calibration Date: 4	8-24-22					
	: 100% sat. = 9	8.4			Midday pH che	ck
	: 4.00 = 4.01	7.00 = 6	.94	10.00 = 9, 91	7.0 = 7.0	
PH Recal (if needed)		7.00 =		10.00 =	a ma _ X ana	ost recal check
CONDUCTIVITY	1 11 2	= 1390	-			
ORP (mV		= 730				
	2 25 27	1000				
Calibration Date:	6-13-60	10 0/				
	: 100% sat. = 98	0.10		- 000	Midday pH che	
	: 4.00 = 4.02	7.00 = (	1,99	10.00 = 9,97	7.0 = 7.0	4
PH Recal (if needed)	No. of Contract of	7.00 =		10.00 =	7.0= P	ost recal check
CONDUCTIVITY		= 1428				
ORP (mV	128	= 229				
Calibration Date:						
	: 100% sat. =				Midday pH che	ck
	: 4.00 =	7.00 =		10.00 =	7.0 =	<u> </u>
PH Recal (if needed)	-	7.00 =		10.00 =		ost recal check
CONDUCTIVITY	1144	7.00 =		10,00 =		
ORP (mV	)	F				
Calibration Date:						
	100% est =				Adlebata contable to	ols.
	: 100% sat. =	7.00 =		10.00 =	Midday pH che	<u>rv</u>
PH Recal (if needed)	: 4.00 =			10.00 =	7.0 =	ost recal check
CONDUCTIVITY	10000	7.00 =		10.00 =	7.0= P	an incom critical
ORP (mV		•				



DI

SITE:		Plant Branch			
TECHNICIAN:	+.	H. Aulch			
INSTRUMENT S/N:	12050CO1770S	7			
INSTRUMENT TYPE:	Hach 2100Q				
CAL. SOLUTION:	O NTU - LOT# —	EXP. DATE: New			
	10 NTU - LOT # AZIZ	21			
	20 NTU - LOT # AZIZ4	EXP. DATE: 8/23			
Calibration Date:	8-23-22				
	Calibation Solution	Instrument Reading			
	0.0	0,3 NTU			
	10.0	9.7 NTU			
	20.0	19,9 NTU			
	0 211 2 2				
Calibration Date:	Calibation Solution	Instrument Reading			
	0.0	0.7 NTU			
	10.0	9.9/ NTU			
	20.0	9.91 NTU			
Calibration Date:	8-25 - ZZ Calibation Solution	Instrument Reading			
	0.0	0.3 NTU			
	10.0	19.6 NTU			
	20.0	20.9 NTU			
Calibration Date:					
cambration bate.	Calibation Solution	Instrument Reading			
	0.0	NTU			
	10.0	NTU			
	20.0	NTU			
Calibration Date:					
300000000000000000000000000000000000000	Calibation Solution	Instrument Reading			
	0.0	NTU			
	10.0	NTU			
	20.0	NTU			
Calibration Date:					
	Calibation Solution	Instrument Reading			
	0.0	NTU			
	10.0	NTU			
	20.0	NTU			



SITE:		Plant B	Branch	
TECHNICIAN:	A Sch	nighter		
WATER LEVEL:	Sal	nietleur		
WATER LEVEL S/N:	361	377060		
111,0-11-12-12-23		01,000		
INSTRUMENT S/N:		728566		
INSTRUMENT TYPE:	AquaTroll		nie lika	
CAL. SOLUTION/S:	ID: OH H	101-21	DATE: 123	
	ID: OH ID		DATE: 7/23	
	ID: Cond		DATE: 6/73.	
	ID: OBP		DATE: 4/23	Midday pH check
	ID:		. DATE:	Must be less that .10
	ID:	LOT#: EXP	DATE:	(6.90-7.10 range)
en et d'Ette	0/22/22			Recalibrate if not within range
alibration Date:	8/25/2001	11)		and the second
	: 100% sat. = 96		090	Midday pH check 7.0 = 6.98
	4.00 = 3.89	7.00 = 7.00	10.00 = 9.98 10.00 = NA	7.0 = VA post recal check
PH Recal (if needed)		7.00 = NA	10.00 = ///	7.0= 70A post recal check
CONDUCTIVITY	1413	= 1142		
ORP (mv	228	= 221.9		
alibration Date:	x12412Z			
		100		Midday all chack
RDO	: 100% sat. = 102 : 4.00 = 4.05		10.00 = 10.01	Midday pH check
		7.00 = 7,00	10.00 = 10.00	7.0 = 6.99 7.0 = NA post recal check
PH Recal (if needed)		7.00 = <b>NA</b>	10.00 = /4/4	7,0= 7,0= 7,0=
CONDUCTIVITY		= 142Z = 2.33	-	
	228	= 7.53		
Calibration Date:	9/25/22			
alibration Date:	: 100% sat. = 99	0		Midday pH check
RDO	: 4.00 = 4,00	7.00 = 7.07	2 10.00 = 9.96	7.0 = <b>7.00</b>
PH Recal (if needed)		7.00 =	10.00 =	7.0= post recal check
CONDUCTIVITY	1147.00	= 1447.6	10,00 -	
		= 228.3		
ORP (mV	260	- 220.3		
Calibration Date:				
	: 100% sat. =			Midday pH check
	: 4.00 =	7.00 =	10.00 =	7.0 =
PH Recal (if needed)	-	7.00 =	10.00 =	7.0= post recal check
CONDUCTIVITY		=	13033	
ORP (mV	)	-		
Calibration Date:				Walter Street Co.
	): 100% sat. ⇒		3.000	Midday pH check
	l: 4.00 =	7.00 =	10.00 =	7.0 = post recal check
PH Recal (if needed) CONDUCTIVITY		7.00 =	10.00 =	7.0= post recal check
ORP (mV				



OUTE		Diamet Dans als			
SITE: TECHNICIAN:	A Colonis	Plant Branch	_		
PEGNINIGIAN.	A Schnittker				
		- 440			
INSTRUMENT S/N:	11090001	2353			
INSTRUMENT TYPE:	Hach 2100Q	EVE DATE #			
CAL. SOLUTION:	0 NTU - LOT # 10 7 10	EXP. DATE: (1)			
	10 NTU - LOT # A Z   20 20 NTU - LOT # A Z   20	1	3		
	20 NTU - LOT # A212	T EAF. DAIL. 3/2	5_		
Calibration Date:	8/23/22				
	Calibation Solution	Instrument Reading			
	0.0	0.57	NTL		
	10.0	10.1	NTL		
	20.0	20.8	NTL		
	alaulaa				
Calibration Date:	8/24/22				
	Calibation Solution	Instrument Reading	=		
	0.0	0.58	NTU		
	10.0	10.7	NTL		
	20.0	19.5	NTL		
	8/25/22				
Calibration Date:		= 2 (-1) + 1 = 0 = 0 = 0 = 0 = 0 = 0			
	Calibation Solution	Instrument Reading	-		
	0.0	0.23	_NTL		
	10.0	9.88	_NTL		
	20.0	20.5	_NTL		
and the state of the state of					
Calibration Date:	Calibation Salution	Instrument Booding			
	Calibation Solution	Instrument Reading	-		
	10.0		-NTL		
	20.0		- NTL		
	20.0		NTL		
Calibration Date:					
	Calibation Solution	Instrument Reading			
	0.0		NTL		
	10.0		NTL		
	20.0		NTL		
Calibration Date:	Automorphism I	Torrandous & Char			
	Calibation Solution	Instrument Reading	=		
	0.0		_NTU		
	10.0		- NTU		
	20.0		NTL		



SITE:			Plant Branch			_		
TECHNICIAN:		144	T. G051e					
WATER LEVEL:			501.10st					
WATER LEVEL S/N:			2369	86				
INSTRUMENT S/N:		8	\$3534					
INSTRUMENT TYPE:	AquaTroll							
CAL. SOLUTION/S:	ID: OH4	LOT#: 21470	3ZEXP. DATE:	4/23				
	ID: ext 7	LOT#: 21380	02 EXP. DATE:	4/23				
	1D: pH 10	LOT#: 200400	56 EXP. DATE:	4123				
	ID: Cand	LOT#: 214700	32 EXP. DATE:	4/23				
	ID: ORS	LOT#: 211404	3 EXP. DATE:	4123		Midday p		
	ID:	LOT#:	EXP. DATE:			Must be les		
	ID:	LOT#:	EXP. DATE:				10 range) I not within range	
Calibration Date:	8-23-22							
	: 100% sat. = 10	02.18				Midday pH	check	
	4.00 = 4.12		7.01	10.00 =	1.93	7.0 = 7	10.	
PH Recal (if needed)		7.00 =		10.00 =		7.0=	post recal check	44
CONDUCTIVITY	4490	= 4410						
	22-6	= 217.7						
Calibration Date:	V-24-22							
	100% sat. = 10	1 93				Midday pH	check	
	: 4.00 = H.O		7.01	10.00 =	10.09	7.0 = 7		
PH Recal (if needed)		7.00 =	1.01	10.00 =		7.0=	post recal check	MX
CONDUCTIVITY	-							
	228	= 227.1						
Calibration Date:	8-15-22							
	: 100% sat. = 10	0.14				Midday pH	check	
	: 4.00 = 4,0		6.99	10.00 =	9.97	7.0 = 7.		
PH Recal (if needed)		7.00 =		10.00 =		7.0=	post recal check	NA
CONDUCTIVITY	: 4490	= 4470						
ORP (mV								
Calibration Date:								
Contraction of the Contraction	: 100% sat. =					Midday pH	l check	
	: 4.00 =	7.00 =		10.00 =		7.0 =	Check	
PH Recal (if needed)		7.00 =		10.00 =		7.0=	post recal check	
CONDUCTIVITY		=		10.00 =			· Crowder or District	
ORP (mV	)	-						
Calibration Date:								
	: 100% sat. =					Midday pH	l check	
	4.00 =	7.00 =		10.00 =		7.0 =		
PH Recal (if needed)		7.00 =		10.00 =		7.0=	post recal check	
CONDUCTIVITY	:			77177		- UY C		
ORP (mV	)	-						



SITE; TECHNICIAN:		Plant Branch T. Goble				
INSTRUMENT S/N:	15040C Hach 2100Q	040490				
CAL. SOLUTION:	O NTU - LOT #	-	EXP. DATE:	New DI		
	10 NTU - LOT #	2961401	EXP. DATE:	10/22		
	20 NTU - LOT #			10/22		

Calibration Date	7-	23	-22
oundidition but		-	

Calibation Solution	Instrument Reading		10.1
0.0	0.31	NTU	100= 101
10.0	10.9	NTU	X00 - 795
20.0	21.2	NTU	100

### Calibration Date: 8-24-22

Calibation Solution	Instrument Reading	_ / 1.	72.1
0.0	0.27	NTU	100- 101
10.0	10.8	NTU	500= 802
20.0	20.2	NTU	100- 002

### Calibration Date: 8-25-22

Calibation Solution	Instrument Reading		
0.0	0.24	NTU	100 = 100
10.0	10.6	NTU	800 = 703
20.0	20.0	NTU	800 - 103

### Calibration Date:

	Instrument Reading	Calibation Solution
NTU		0.0
NTU		10.0
NTU		20.0

### Calibration Date:

Calibation Se	olution	Instrument Reading	
0.0			NTU
10.0			NTU
20.0			NTU

### Calibration Date:

Calibation Solution	Instrument Reading	_
0.0		NTU
10.0		NTU
20.0		NTU



SITE:	Plant Branch	
TECHNICIAN:	H. Auld	
INSTRUMENT S/N:	12050001 77	705
INSTRUMENT TYPE:		
CAL. SOLUTION:	O NTU - LOT# -	EXP. DATE: New
	10 NTU - LOT # # 212 2	
	20 NTU - LOT # AZIZY	
		7
	2 ho/2-	
Calibration Date:	8/29/22 Calibation Solution	Instrument Deading
		Instrument Reading
	0.0	0, 3 NT
	10.0	10.0 NTU
	20.0	17, 9 NT
Calibertian Data	9/1/22	
Calibration Date:	7 /	(
	Calibation Solution	Instrument Reading
	0.0	0.3 NTU
	10.0	20. Z NTL
	20.0	W. C NTU
4.00		
Calibration Date:	1	
	Calibation Solution	Instrument Reading
	0.0	NTU
	10.0	NTU
	20.0	NTU
4.604.414		
Calibration Date:	Same Francis III	200 mary 200 to 12
	Calibation Solution	Instrument Reading
	0.0	NTC
	10.0	NTU
	20.0	NTU NTU
0-1111 D-1		
Calibration Date:	0.01.00.00.00.00.00.00.00.00.00	tentional Beautiful
	Calibation Solution	Instrument Reading
	0.0	NTU
	10.0	NTU
	20.0	NTU
Callbooklass Datas		
Calibration Date:	Collibation Calcition	Instrument Predict
	Calibation Solution	Instrument Reading
	0.0	NTU
	10.0	NTO
	20.0	NTO



### **Daily Instrument Calibration Log**

SITE:		PI	ant Branch				
TECHNICIAN:		H. Antel					
		S / 1					
WATER LEVEL:	-	Solihst			***************************************		
WATER LEVEL S/N:		48832					
		_					
INSTRUMENT S/N:	883530	D					
INSTRUMENT TYPE:	AquaTroll						
CAL. SOLUTION/S:	10: PH 4	LOT#: 26E870	EXP. DATE:	8/24	/- A		
	ID: PH 7	LOT#: 210 1 008 6	EXP. DATE:	9/12 9	fir the	_	
	ID: 6H 10	LOT #: 2008 UUS &		04/69		_	
	ID: ORP	LOT#: 25B1062 LOT#: 21140143	EXP. DATE:	02/23		— Midday	pH check
	ID:	LOT#:	EXP. DATE:	04/05			ess that .10
	ID:	LOT#:	EXP. DATE:				'.10 range)
							if not within range
Calibration Date: 2	3/29/22						
RDO:	100% sat. = /0	6.4%				Midday p	H check
PH:	4.00 = 9.01	7.00 = 7	00	10.00 =	9.96	_ 7.0 = 🖊	14
PH Recal (if needed):	4.00 =	7.00 =		10.00 =		7.0=	post recal check
CONDUCTIVITY:	1413	= 1561					
ORP (mV)	228	= 224					
	0/1/22						
	9/1/22	- 1 0/					
	100% sat. = /0	,	2.6		0 09	Midday p	
	4.00 = 4.02	7.00 = 6	99	10.00 =	9,98	7.0 =	
PH Recal (if needed):	1/1/2	7.00 =		10.00 =		7.0=	post recal check
CONDUCTIVITY:		= 1497					
ORP (mV)	228	= 226					
Calibration Date:							
	100% sat. =					Midday p	H shook
	4.00 =	7.00 =		10.00 =		7.0 =	H CHECK
PH Recal (if needed):		7.00 =		10.00 =		7.0=	post recal check
CONDUCTIVITY:		=		10.00		_ 1.0-	postrodal dilodit
ORP (mV)		=					
Ora (iiiv)							
Calibration Date:							
	100% sat. =					Midday p	H check
	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 p	H check
	4.00 =	7.00 =		10.00 =		7.0 =	
PH Recal (if needed):		7.00 =		10.00 =		7.0=	post recal check
CONDUCTIVITY: ORP (mV)		=					
, , , , ,							

January/February 2023

## **Calibration Report**

Instrument Aqua TROLL 400

Serial Number 877800 Created 1/25/2023

Sensor RDO

Serial Number 878537 Last Calibrated 1/24/2023

Calibration Details

Slope 0.9834183 Offset 0.00 mg/L

Calibration point 100%

Concentration 13.16 mg/L Temperature 4.51 °C

Barometric Pressure 1,013.9 mbar

Sensor Conductivity

Serial Number 877800 Last Calibrated 1/24/2023

Calibration Details

Cell Constant 0.964
Reference Temperature 20.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level

Serial Number 850056

Last Calibrated Factory Defaults

Sensor	pH/ORP
Serial Number	21624

Serial Number 21624 Last Calibrated 1/24/2023

#### Calibration Details

Total Calibration Points 3

#### Calibration Point 1

pH of Buffer 4.00 pH pH mV 139.7 mV Temperature 7.35 °C

#### Calibration Point 2

pH of Buffer 7.06 pH pH mV -27.9 mV 7.12 °C

#### Calibration Point 3

pH of Buffer 10.14 pH pH mV -195.0 mV 7.51 °C

#### Slope and Offset 1

Slope -54.78 mV/pH Offset -24.6 mV

#### Slope and Offset 2

Slope -54.24 mV/pH Offset -24.7 mV

#### ORP

ORP Solution ORP Standard

Offset 3.2 mV Temperature 7.90 °C

## **Calibration Report**

Instrument Aqua TROLL 400

Serial Number 877800 Created 1/25/2023

Sensor RDO

Serial Number 878537 Last Calibrated 1/25/2023

Calibration Details

Slope 1.006794 Offset 0.00 mg/L

Calibration point 100%

Concentration 8.98 mg/L
Temperature 19.43 °C
Barometric Pressure 996.26 mbar

Sensor Conductivity

Serial Number 877800 Last Calibrated 1/25/2023

Calibration Details

Cell Constant1.123Reference Temperature20.00 °CTDS Conversion Factor (ppm)0.65

Sensor Level

Serial Number 850056

Last Calibrated Factory Defaults

Sensor	pH/ORP
Sorial Number	21624

Serial Number 21624 Last Calibrated 1/25/2023

#### Calibration Details

Total Calibration Points 3

#### Calibration Point 1

pH of Buffer 4.00 pH pH mV 141.5 mV Temperature 17.37 °C

#### Calibration Point 2

pH of Buffer 7.04 pH pH mV -29.3 mV Temperature 16.02 °C

#### Calibration Point 3

pH of Buffer 10.11 pH pH mV -196.6 mV Temperature 15.59 °C

#### Slope and Offset 1

Slope -56.19 mV/pH Offset -27.1 mV

#### Slope and Offset 2

Slope -54.5 mV/pH Offset -27.1 mV

#### ORP

ORP Solution ORP Standard

Offset 17.2 mV Temperature 15.75 °C

## **Calibration Report**

Instrument Aqua TROLL 400

Serial Number 877800 Created 1/26/2023

Sensor RDO

Serial Number 878537 Last Calibrated 1/26/2023

Calibration Details

Slope 0.9668001 Offset 0.00 mg/L

Calibration point 100%

Concentration 12.82 mg/L Temperature 5.91 °C

Barometric Pressure 1,006.9 mbar

Sensor Conductivity

Serial Number 877800 Last Calibrated 1/26/2023

Calibration Details

Cell Constant 1.107
Reference Temperature 20.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level

Serial Number 850056

Last Calibrated Factory Defaults

Sensor	pH/ORP
Serial Number	21624

Serial Number 21624 Last Calibrated 1/26/2023

#### Calibration Details

Total Calibration Points 3

#### Calibration Point 1

pH of Buffer 4.00 pH pH mV 138.6 mV Temperature 7.90 °C

#### Calibration Point 2

pH of Buffer 7.06 pH pH mV -27.5 mV Temperature 8.86 °C

#### Calibration Point 3

pH of Buffer 10.14 pH pH mV -194.9 mV Temperature 9.19 °C

#### Slope and Offset 1

Slope -54.29 mV/pH Offset -24.3 mV

#### Slope and Offset 2

Slope -54.36 mV/pH Offset -24.2 mV

#### ORP

ORP Solution ORP Standard

Offset 6.8 mV Temperature 9.18 °C



## **Daily Instrument Calibration Log**

SITE:		Plant Brand	h			
TECHNICIAN:		T. Goble				
WATER LEVEL:		Solinst				
WATER LEVEL S/N:		236986				
INSTRUMENT S/N:		877800				
INSTRUMENT TYPE:	AquaTroll				_	
CAL, SOLUTION/S:		#:21470032 EXP. DATE			_	
		#: 21470037 EXP. DATE			_	
		#: 22140169 EXP. DATE			_	
		#: 2008CO56 EXP. DATE				
		#: 211-1014 3 EXP. DATE				oH check
	ID: LOT				Must be le	
	ID: LOT	#: EXP. DATE			and the latest winds	10 range) I not within range
Calibration Date:					40000	2000
	: 100% sat. = 10% . 3 (			10 311	Midday ph	1 check
		7.00 = 7.08		10.24	7.0 =	
PH Recal (if needed)		7.00 =	10.00 =		7.0= 7.	03 post recal check
CONDUCTIVITY		4403				
ORP (mV)	228 =	244				
Calibration Date:	1-25-23					
	: 100% sat. = 97.6	040			Midday ph	l check
	: 4.00 = 4 - 0 (0	7.00 = 7.07	10.00 =	10.06	7.0 =	
PH Recal (if needed)		7.00 =	10.00 =			of post recal check ATA
CONDUCTIVITY		3946				
	228 =	215.9				
	1 24 23					
Calibration Date:						
	: 100% sat. = 104 .94			10.15	Midday ph	i check
	: 4.00 = 3.97	7.00 = 7.02		10.17	7.0 =	and socil shorts
PH Recal (if needed)		7.00 =	10.00 =		7.0=	post recal check
CONDUCTIVITY		4561				
ORP (mV	228 =	238.1	_			
Calibration Date:						
RDO	: 100% sat. =				Midday ph	d check
PH	: 4.00 =	7.00 =	10,00 =		7.0 =	
PH Recal (if needed)		7.00 =	10,00 =		7.0=	post recal check
CONDUCTIVITY	National Control of the Control of t					
ORP (mV	)					
Calibration Date:						
RDO	: 100% sat. =				Midday ph	d check
	: 4.00 =	7.00 =	10.00 =		7.0 =	The state of the s
PH Recal (if needed)	: 4.00 =	7.00 =	10.00 =		7.0=	post recal check
CONDUCTIVITY	-					
ORP (mV	) =					



#### **Daily Instrument Calibration Log**

Plant Branch SITE: TECHNICIAN:

INSTRUMENT S/N: INSTRUMENT TYPE: 220900000108

CAL. SOLUTION:

O NTU - LOT#	_	EXP. DATE:	New DI
10 NTU - LOT #	2961301	EXP. DATE:	
20 NTU - LOT #	2684801	EXP. DATE:	12/23

Calibration Date: 1-24-23

Calibation Solution	Instrument Reading		
0.0	0.19	NTU	100=107
10.0	10.9	NTU	Von - 700
20.0	20.9	NTU	100 - 503

Calibration Date: 1-25-23

Calibation Solution	Instrument Reading			107
0.0	0.17	NTU	180 =	102
10.0	10.7	NTU	erms =	404
20.0	20.4	NTU	800 -	00 1

Calibration Date: |-26-23

Calibation Solution	Instrument Reading		
0.0	0.14	NTU	100 - 103
10.0	10.5	NTU	50 801
20.0	20.8	NTU	808 = 001

Calibration Date:

	Calibation Solution	Instrument Reading	
-	0.0		NTU
	10.0		NTU
	20.0		NTU

Calibration Date:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

Calibration Date:

_	Instrument Reading	Calibation Solution
NT		0.0
NT		10.0
NT		20.0

## **Calibration Report**

Instrument Aqua TROLL 400

Serial Number 884186 Created 1/24/2023

Sensor RDO

Serial Number 884407 Last Calibrated 1/24/2023

Calibration Details

Slope 0.9488781 Offset 0.00 mg/L

Calibration point 100%

Concentration 13.75 mg/L Temperature 4.25 °C

Barometric Pressure 1,015.4 mbar

Sensor Conductivity

Serial Number 884186 Last Calibrated 1/24/2023

Calibration Details

Cell Constant 0.85
Reference Temperature 20.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level

Serial Number 879252 Last Calibrated 3/1/2022

Calibration Details

Zero Offset -0.13 psi Reference Depth 0.00 ft Reference Offset 0.00 psi

Sensor	pH/ORP
Serial Number	21630
Last Calibrated	1/24/2023

#### Calibration Details

Total Calibration Points 3

#### Calibration Point 1

pH of Buffer 4.00 pH pH mV 152.4 mV Temperature 4.63 °C

#### Calibration Point 2

pH of Buffer 7.06 pH pH mV -12.5 mV Temperature 3.25 °C

#### Calibration Point 3

pH of Buffer 10.14 pH pH mV -182.2 mV Temperature 2.43 °C

#### Slope and Offset 1

Slope -53.89 mV/pH Offset -9.3 mV

#### Slope and Offset 2

Slope -55.07 mV/pH Offset -9.2 mV

#### ORP

ORP Solution Zobell's
Offset 22.9 mV
Temperature 4.87 °C

## **Calibration Report**

Instrument Aqua TROLL 400

Serial Number 884186 Created 1/26/2023

Sensor RDO
Serial Number 884407
Last Calibrated 1/26/2023

Calibration Details

Slope 0.9747226 Offset 0.00 mg/L

Calibration point 100%

Concentration 12.16 mg/L Temperature 7.70 °C

Barometric Pressure 1,007.2 mbar

Sensor Conductivity

Serial Number 884186 Last Calibrated 1/26/2023

Calibration Details

Cell Constant 0.703
Reference Temperature 20.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level
Serial Number 879252
Last Calibrated 3/1/2022

Calibration Details

Zero Offset -0.13 psi Reference Depth 0.00 ft Reference Offset 0.00 psi

Sensor	pH/ORP
Serial Number	21630
Last Calibrated	1/26/2023

#### Calibration Details

Total Calibration Points 3

#### Calibration Point 1

pH of Buffer 4.00 pH pH mV 145.4 mV Temperature 6.59 °C

#### Calibration Point 2

pH of Buffer 7.06 pH pH mV -15.8 mV Temperature 5.56 °C

#### Calibration Point 3

pH of Buffer 10.14 pH pH mV -182.0 mV Temperature 5.85 °C

#### Slope and Offset 1

Slope -52.68 mV/pH Offset -12.6 mV

#### Slope and Offset 2

Slope -53.96 mV/pH Offset -12.6 mV

#### ORP

ORP Solution Zobell's
Offset 22.5 mV
Temperature 5.41 °C



## **Daily Instrument Calibration Log**

SITE:			Plant Branch			_	
TECHNICIAN:		A Schnittke	W				
WATER LEVEL:	S	olinst					
WATER LEVEL S/N:	3	77060					
	-						
INSTRUMENT S/N:		4146					
INSTRUMENT TYPE:	AquaTroll			1011		-	
CAL. SOLUTION/S:	ID: PHI	LOT#: 266870 LOT#: 168200	EXP. DATE: 5	124		_	
	1D: 0H10	LOT#: 266018	EXP. DATE:	7/24			
	ID: Cond	LOT#: 261 642	EXP. DATE:	04/23			12.
	ID: OKP	LOT#: 26L072		09/23		Midday pH	ACC. TV
	ID:	LOT#:	EXP. DATE:		-	Must be less	
	ID:	LOT#:	EXP. DATE:			(6.90-7.10 Recalibrate if no	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Calibration Date:	124 23	à -					
	: 100% sat. = [3,		150	-	11 0 7	Midday pH c	7. 4
	: 4.00 = 4,02		.15		1	7.0 = 7. 0	
PH Recal (if needed)			VA	10.00 =	NA	7.0= <b>N</b> /A	post recal check
CONDUCTIVITY		= 1220,9	711/0	_			
ORP (mV	228	= 240.69	246.9	-			
Calibration Date:	1/25/23						
		0.22				Midday pH c	heck
	1: 4.00 = 4.08		.03	10.00 =	10.01	7.0 = 7.0	
PH Recal (if needed)		7.00 = ^		10.00 =		7.0=	post recal check
CONDUCTIVITY	: 1413	= 1217.8					
ORP (mV	128	=136.0					
Calibration Date:	1/26/23						
PDO	100% sat. = 96	. 98				Midday pH c	hack
	1: 4.00 = 4.07	7.00 = 7.	.13	10.00 =	10.20	7.0 = 7.0	
PH Recal (if needed)		7.00 =	12	10.00 =	10:00	7.0=	post recal check
CONDUCTIVITY	: 1413	= 1460					
ORP (mV	- 0	= 255					
Calibration Data:							
Calibration Date:	): 100% sat. =					Midday pH c	hack
	1: 4.00 =	7.00 =		10.00 =		7.0 =	HOUN
PH Recal (if needed)		7.00 =		10.00 =		7.0=	post recal check
CONDUCTIVITY	The state of the s	7.00 =		10.00			• 100 - 100
ORP (mV	)	₹					
Calibration Date:							
	); 100% sat. =					Midday pH c	heck
	1: 4.00 =	7.00 =		10.00 =		7.0 =	
PH Recal (if needed)		7.00 =		10.00 =		7.0=	post recal check
CONDUCTIVITY		=					
ORP (mV	)	=					



## **Daily Instrument Calibration Log**

SITE:		Plant Branch	
TECHNICIAN:	A Schnittkeen		
INSTRUMENT S/N:	2207000	000463	
INSTRUMENT TYPE:	Hach 2100Q	100	_
CAL. SOLUTION:	A	Water EXP. DATE: New	1)
	10 NTU - LOT # A7		4
	20 NTU - LOT # A77	3) EXP. DATE: 12/	7
Calibration Date:			
	Calibation Solution	Instrument Reading	1
	0.0	0.00	רא
	10.0	15/1-	N
	20.0	24,7	N.
Calibration Date:	1/25/23		
	Calibation Solution	Instrument Reading	
	0.0	0,00	N.
	10.0	1.0.2	N.
	20.0	20.0	N.
Calibration Date:	1/26/23	C was a series of the series of	
	Calibation Solution	Instrument Reading	
	0.0	0.16	N
	10.0	9.52	N.
	20.0	20.6	N'
Calibration Date:	Calibatian Salutian	I trateumont Donding	
	Calibation Solution	Instrument Reading	
	0.0	1	N.
	10.0		N.
	20.0		N.
Calibration Date:	Calibation Solution	Instrument Reading	
	0.0		N'
	10.0		N'
	20.0		NT
Calibration Date:			
	Calibation Solution	Instrument Reading	
	0.0		NT
	10.0		NT
	10.0		N

20.0

## APPENDIX D

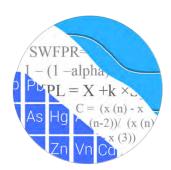
Statistical Analyses: August 2022 and January 2023

Fall 2022

## 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 Pond E – August/September 2022 Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, 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 Pond E. 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 for the Appendix III parameters began in 2016, and at least 8 background samples were collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of Appendix IV constituents has been performed for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. A list of all parameters is provided below.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- Upgradient well: BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, and BRGWA-6S
- o **Downgradient wells:** BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, and BRGWC-38S
- o Assessment wells: PZ-13S, PZ-52D, PZ-53D, and PZ-70

Data from assessment wells are evaluated using confidence intervals when a minimum of 4 samples are available. Note that PZ-52D was only sampled for boron, calcium, chloride, cobalt, fluoride, sulfate, and TDS during the August 2022 sample event due to the well going dry.

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) monitoring 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. 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). 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 methods were 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.

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.</li>
- 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 (Figure C). Although outliers were screened for all wells, only outliers in upgradient wells will affect the interwell prediction limits.

When suspected outliers were evaluated using the Tukey box plot method during the previous screening, a few 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 were 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.

#### <u>Seasonality</u>

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.

#### <u>Trend Test Evaluation</u>

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 in upgradient wells 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 showed a number of statistically significant decreasing and increasing trends for the Appendix III parameters. All trends noted were relatively low in magnitude when compared to average concentrations and were in downgradient wells; therefore, they did not affect the interwell limits, and no adjustments were made to the data sets. Trend test results were included with the background screening report.

#### <u>Appendix III – Determination of Spatial Variation</u>

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for 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. Note that the interwell prediction limit for boron decreased from 0.04 mg/L to 0.0187 mg/L as a result of a reporting limit change from 0.04 mg/L to 0.015 mg/L.

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 and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. A summary table of the background prediction limits follows this letter. Exceedances were identified for the following well/constituent pairs:

Boron: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

Calcium: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

Chloride: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

Fluoride: BRGWC-17S, BRGWC-36S, and BRGWC-38S

pH (lower limit): BRGWC-33S, BRGWC-34S, BRGWC-36S, BRGWC-37S,

and BRGWC-38S

Sulfate: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

TDS: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

#### <u>Trend Test Evaluation – Appendix III</u>

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level 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. While several statistically significant decreasing trends were noted for upgradient and downgradient wells, statistically significant increasing trends were identified for boron in downgradient well BRGWC-35S, calcium in upgradient well BRGWA-6S and downgradient well BRGWC-17S, and chloride in downgradient well BRGWC-36S. A summary of the trend test results follows this letter.

#### **Evaluation of Appendix IV Parameters – August/September 2022**

For Appendix IV parameters, confidence intervals for each downgradient well/constituent 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, which includes all downgradient wells for molybdenum. 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 State and Federal well/constituent pairs:

• Beryllium: BRGWC-38S

• Cobalt: BRGWC-33S and BRGWC-38S

#### <u>Trend Test Evaluation – Appendix IV</u>

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level 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. While no statistically significant increasing trends were identified, statistically significant decreasing trends were noted for the following well/constituent pairs:

Beryllium: BRGWC-38S

• Cobalt: BRGWA-2S (upgradient), BRGWC-33S, and BRGWC-38S

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Branch Pond E. 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

Kristina Rayner

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

#### 100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 11/4/2022 1:22 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Antimony (mg/L) BRGWC-33S, BRGWC-34S, BRGWC-35S, PZ-13S, PZ-53D, PZ-70

Arsenic (mg/L)

BRGWC-34S, PZ-13S, PZ-53D, PZ-70

Beryllium (mg/L)

BRGWC-17S, BRGWC-37S, PZ-53D, PZ-70

Cadmium (mg/L)

BRGWC-17S, BRGWC-35S, BRGWC-37S, PZ-53D, PZ-70

Chromium (mg/L)

BRGWC-34S, PZ-53D, PZ-70

Cobalt (mg/L)

BRGWC-17S, BRGWC-36S, BRGWC-37S, PZ-53D

Lead (mg/L)

PZ-53D, PZ-70

Lithium (mg/L) BRGWC-37S

Mercury (mg/L)

PZ-13S, PZ-53D, PZ-70

Molybdenum (mg/L)

BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, BRGWC-38S, PZ-13S

Selenium (mg/L)

BRGWC-34S, BRGWC-35S, BRGWC-37S, PZ-53D

Thallium (mg/L)

BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, PZ-13S, PZ-53D, PZ-70

## Appendix III Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:18 PM

				•	•								
Constituent	Well	Upper Lir	n. Lower Lir	n. <u>Date</u>	Observ.	Sig. Bg	N Bg Mean	Std. Dev.	%ND:	s ND Adj.	Transform	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-17S	0.0187	n/a	8/24/2022	0.0273	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-33S	0.0187	n/a	8/23/2022	0.975	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-34S	0.0187	n/a	8/24/2022	2.45	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-35S	0.0187	n/a	8/24/2022	2.23	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-36S	0.0187	n/a	8/24/2022	1.1	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-38S	0.0187	n/a	8/23/2022	1.67	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-17S	24	n/a	8/24/2022	43.6	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-33S	24	n/a	8/23/2022	119	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-34S	24	n/a	8/24/2022	75	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-35S	24	n/a	8/24/2022	68.5	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-36S	24	n/a	8/24/2022	48.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-38S	24	n/a	8/23/2022	37.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-17S	4.8	n/a	8/24/2022	5	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-33S	4.8	n/a	8/23/2022	30.3	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-34S	4.8	n/a	8/24/2022	6.17	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-35S	4.8	n/a	8/24/2022	6.53	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-36S	4.8	n/a	8/24/2022	7.96	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-38S	4.8	n/a	8/23/2022	6.42	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-17S	0.19	n/a	8/24/2022	0.274	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-36S	0.19	n/a	8/24/2022	0.194	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-38S	0.19	n/a	8/23/2022	0.609	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-33S	7.057	5.907	8/23/2022	4.67	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-34S	7.057	5.907	8/24/2022	5.75	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-36S	7.057	5.907	8/24/2022	5.59	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-37S	7.057	5.907	8/23/2022	5.82	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-38S	7.057	5.907	8/23/2022	3.97	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-17S	7.5	n/a	8/24/2022	157	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-33S	7.5	n/a	8/23/2022	385	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-34S	7.5	n/a	8/24/2022	268	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-35S	7.5	n/a	8/24/2022	279	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-36S	7.5	n/a	8/24/2022	224	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-38S	7.5	n/a	8/23/2022	389	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-17S	299	n/a	8/24/2022	370	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-33S	299	n/a	8/23/2022	614	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-34S	299	n/a	8/24/2022	452	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-35S	299	n/a	8/24/2022	507	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-36S	299	n/a	8/24/2022	418	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-38S	299	n/a	8/23/2022	568	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	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, 4:18 PM

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Constituent	Well		n. Lower Lim		Observ.		N Bg Mean	Std. Dev.		<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-17S	0.0187	n/a	8/24/2022	0.0273	Yes 80	n/a	n/a	63.75		n/a	0.0002983	` ,
Boron (mg/L)	BRGWC-33S	0.0187	n/a	8/23/2022	0.975	Yes 80	n/a	n/a	63.75		n/a		, ,
Boron (mg/L)	BRGWC-34S	0.0187	n/a	8/24/2022		Yes 80	n/a	n/a	63.75		n/a	0.0002983	` ,
Boron (mg/L)	BRGWC-35S	0.0187	n/a	8/24/2022	2.23	Yes 80	n/a	n/a	63.75		n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-36S	0.0187	n/a		1.1	Yes 80	n/a	n/a	63.75		n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-37S	0.0187	n/a	8/23/2022	0.015ND	No 80	n/a	n/a	63.75		n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-38S	0.0187	n/a		1.67	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-17S	24	n/a	8/24/2022	43.6	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-33S	24	n/a	8/23/2022	119	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-34S	24	n/a	8/24/2022	75	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-35S	24	n/a	8/24/2022	68.5	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-36S	24	n/a	8/24/2022	48.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-37S	24	n/a	8/23/2022	3.7	No 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-38S	24	n/a	8/23/2022	37.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-17S	4.8	n/a	8/24/2022	5	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-33S	4.8	n/a	8/23/2022	30.3	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-34S	4.8	n/a	8/24/2022	6.17	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-35S	4.8	n/a	8/24/2022	6.53	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-36S	4.8	n/a	8/24/2022	7.96	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-37S	4.8	n/a	8/23/2022	1.97	No 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-38S	4.8	n/a	8/23/2022	6.42	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-17S	0.19	n/a	8/24/2022	0.274	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-33S	0.19	n/a	8/23/2022	0.187	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-34S	0.19	n/a	8/24/2022	0.14	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-35S	0.19	n/a	8/24/2022	0.1ND	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-36S	0.19	n/a	8/24/2022	0.194	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-37S	0.19	n/a	8/23/2022	0.105	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-38S	0.19	n/a	8/23/2022	0.609	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-17S	7.057	5.907	8/24/2022	6.62	No 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-33S	7.057	5.907	8/23/2022	4.67	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-34S	7.057	5.907	8/24/2022	5.75	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-35S	7.057	5.907	8/24/2022	6.05	No 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-36S	7.057	5.907	8/24/2022	5.59	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-37S	7.057	5.907	8/23/2022	5.82	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-38S	7.057	5.907	8/23/2022	3.97	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-17S	7.5	n/a	8/24/2022	157	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-33S	7.5	n/a	8/23/2022	385	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-34S	7.5	n/a	8/24/2022	268	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-35S	7.5	n/a	8/24/2022	279	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-36S	7.5	n/a	8/24/2022	224	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-37S	7.5	n/a	8/23/2022	0.307J	No 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-38S	7.5	n/a	8/23/2022	389	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-17S	299	n/a	8/24/2022	370	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-33S	299	n/a	8/23/2022	614	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-34S	299	n/a	8/24/2022	452	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-35S	299	n/a	8/24/2022	507	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-36S	299	n/a	8/24/2022	418	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-37S	299	n/a	8/23/2022	40	No 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-38S	299	n/a	8/23/2022	568	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2

## Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

	Plant Branch Client: Southern Compar	ny Data: Plan	t Branch A	AP Printe	d 9/30	/2022, 4	:23 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-35S	0.1822	98	58	Yes	16	0	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-17S	1.937	71	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-34S	-4.253	-82	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-38S	-1.655	-76	-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-34S	-0.2582	-80	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-36S	0.8757	80	58	Yes	16	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
pH, Field (S.U.)	BRGWC-38S	-0.1382	-105	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-32.85	-103	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-14.52	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-38S	-33.08	-85	-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-34S	-49.48	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.15	-92	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.84	-96	-58	Yes	16	0	n/a	n/a	0.01	NP

#### Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM Plant Branch Constituent Calc. Critical Sig. N <u>%NDs</u> <u>Normality</u> <u>Xform</u> <u>Alpha</u> Method Boron (mg/L) BRGWA-2I (bg) 0.001506 18 58 No 16 25 n/a n/a 0.01 NP BRGWA-2S (bg) 0 -3 16 0.01 NP Boron (mg/L) -58 No 87.5 n/a n/a 0 BRGWA-5I (bg) NP Boron (mg/L) -6 No 16 75 0.01 -58 n/a n/a Boron (mg/L) BRGWA-5S (bg) 0 -8 -58 No 16 56.25 n/a n/a 0.01 NΡ BRGWA-6S (bg) 58 16 75 0.01 NP Boron (mg/L) No n/a n/a BRGWC-17S -0.001021 -29 41 0.01 ΝP Boron (mg/L) -63 No 17 Boron (mg/L) BRGWC-33S -0.01268 -18 -58 No 16 0 0.01 NP Boron (mg/L) BRGWC-34S 0.001241 13 58 No 16 0 n/a n/a 0.01 NP Boron (mg/L) BRGWC-35S 0.1822 98 58 Yes 16 0 n/a n/a 0.01 NP BRGWC-36S 0.03171 0 NP Boron (mg/L) 58 63 No 17 n/a n/a 0.01 NP Boron (mg/L) BRGWC-38S -0.04809 -58 16 0 0.01 -40 No n/a n/a BRGWA-2I (bg) 0.5425 43 16 6.25 0.01 NP Calcium (mg/L) 58 No n/a n/a Calcium (mg/L) BRGWA-2S (bg) 0.073 30 No 16 0 n/a n/a 0.01 NP Calcium (mg/L) BRGWA-5I (bg) 0.03321 5 58 16 6.25 0.01 ΝP No Calcium (mg/L) BRGWA-5S (bg) -0.5076 -36 -58 No 16 6.25 n/a 0.01 NΡ Calcium (mg/L) BRGWA-6S (bg) 0.1657 69 58 Yes 16 0 n/a 0.01 NP BRGWC-17S Calcium (mg/L) 1.937 71 58 Yes 16 0 n/a n/a 0.01 NP Calcium (mg/L) BRGWC-33S -2.525 0 NP -38 -58 No 16 n/a n/a 0.01 BRGWC-34S -4.253 -82 0 NP Calcium (mg/L) -58 16 n/a 0.01 Yes n/a Calcium (mg/L) BRGWC-35S 2.067 57 58 16 0 0.01 NP No n/a n/a Calcium (mg/L) BRGWC-36S -0.4386 -29 -58 16 0 0.01 NΡ No n/a n/a Calcium (mg/L) BRGWC-38S -1.655 -76 -58 16 0 0.01 ΝP n/a Chloride (mg/L) BRGWA-2I (bg) -0.04825 -38 -58 No 16 0 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 BRGWA-5S (ba) -0.07499 NP Chloride (mg/L) 16 0 0.01 -48 -58 No n/a n/a BRGWA-6S (bg) -0.01997 -21 0 0.01 NP Chloride (mg/L) -58 No 16 n/a n/a BRGWC-17S 0.1812 53 16 0 NP Chloride (mg/L) 58 No n/a 0.01 n/a BRGWC-33S 0.1438 ΝP Chloride (mg/L) 8 No 16 0 n/a n/a 0.01 Chloride (mg/L) BRGWC-34S -0.2582 NP -80 16 0 0.01 Chloride (mg/L) BRGWC-35S 0.05257 26 58 No 16 0 n/a n/a 0.01 NP Chloride (mg/L) BRGWC-36S 0.8757 80 58 Yes 16 0 n/a n/a 0.01 NP Chloride (mg/L) BRGWC-38S 0.1162 16 58 No 16 0 n/a n/a 0.01 NP BRGWA-2I (bg) 0 NP Fluoride (mg/L) -17 -68 No 18 50 n/a n/a 0.01 NP BRGWA-2S (bg) 0 49 Fluoride (mg/L) 68 No 18 61.11 0.01 n/a n/a Fluoride (mg/L) BRGWA-5I (bg) 0 54 68 No 18 72.22 0.01 NP n/a n/a Fluoride (mg/L) BRGWA-5S (bg) 0 -20 -68 No 18 38.89 n/a 0.01 NP BRGWA-6S (bg) 0 55 68 18 61.11 0.01 ΝP Fluoride (mg/L) No Fluoride (mg/L) BRGWC-17S -0.002182 -11 -68 No 18 5.556 n/a n/a 0.01 NP Fluoride (mg/L) BRGWC-36S 0 17 68 No 18 50 n/a n/a 0.01 NP 0.008753 Fluoride (mg/L) BRGWC-38S 16 68 No 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 NP pH. Field (S.U.) BRGWA-2S (ba) -0.0368 -71 0 -68 Yes 18 n/a n/a 0.01 pH, Field (S.U.) BRGWA-5I (bg) -0.02765 -47 -68 0 0.01 NP 18 No n/a n/a BRGWA-5S (bg) -0.05383 -81 0 NP pH, Field (S.U.) -68 Yes n/a 0.01 pH, Field (S.U.) BRGWA-6S (bg) 0 0 63 No 17 0 n/a 0.01 ΝP pH, Field (S.U.) BRGWC-33S -0.01085 -46 -74 No 19 0 n/a 0.01 NP n/a pH, Field (S.U.) BRGWC-34S 0.003222 10 68 No 18 0 n/a n/a 0.01 NP pH, Field (S.U.) BRGWC-36S 0 NP 1 63 No 17 0 n/a n/a 0.01 BRGWC-37S 0.009624 NP pH, Field (S.U.) 10 53 No 15 0 n/a n/a 0.01 pH, Field (S.U.) BRGWC-38S -0.1382 0 NP -105 -68 Yes 18 n/a n/a 0.01

# Appendix III Trend Tests - Prediction Limit Exceedances - All Results Plant Branch Olient: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

	Plant Branch Client: Southern Compar	ny Data: Plan	t Branch A	AP Printe	d 9/30	/2022, 4	1:23 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
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-17S	4.317	47	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-33S	-20.1	-51	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-32.85	-103	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-35S	-1.61	-17	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-14.52	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-38S	-33.08	-85	-58	Yes	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-17S	2.861	19	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-33S	-31.32	-47	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-34S	-49.48	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-35S	2.399	12	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.15	-92	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.84	-96	-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, 11:44 AM

Constituent	Well	Upper Lin	n. Lower Lin	n. Date	Observ.	Sig.Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transforn	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	n/a 85	n/a	n/a	91.76	n/a	n/a	0.01278	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 85	n/a	n/a	76.47	n/a	n/a	0.01278	NP Inter(NDs)
Barium (mg/L)	n/a	0.063	n/a	n/a	n/a	n/a 85	n/a	n/a	0	n/a	n/a	0.01278	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)
Chromium (mg/L)	n/a	0.016	n/a	n/a	n/a	n/a 85	n/a	n/a	15.29	n/a	n/a	0.01278	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0034	n/a	n/a	n/a	n/a 83	n/a	n/a	45.78	n/a	n/a	0.01416	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	1.649	n/a	n/a	n/a	n/a 85	0.7756	0.2603	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	n/a	0.19	n/a	n/a	n/a	n/a 90	n/a	n/a	56.67	n/a	n/a	0.009888	NP Inter(NDs)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 85	n/a	n/a	80	n/a	n/a	0.01278	NP Inter(NDs)
Lithium (mg/L)	n/a	0.089	n/a	n/a	n/a	n/a 85	n/a	n/a	43.53	n/a	n/a	0.01278	NP Inter(normality)
Mercury (mg/L)	n/a	0.00021	n/a	n/a	n/a	n/a 75	n/a	n/a	86.67	n/a	n/a	0.02134	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.008	n/a	n/a	n/a	n/a 85	n/a	n/a	68.24	n/a	n/a	0.01278	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)

# Confidence Intervals - Significant Results Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

		Plant Dranch	Cherit. Southern	Company	Data. I	Piani	I DIAIICII AP	Printed 11/4/20.	22, 1.25	PIVI			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	0.009374	0.007986	0.004	Yes	18	0.00868	0.001148	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-33S	0.05266	0.03803	0.006	Yes	18	0.04534	0.01209	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-38S	0.2539	0.2042	0.006	Yes	17	0.2291	0.03971	0	None	No	0.01	Param.

## Confidence Intervals - All Results

		Plant Branch	Client: Souther	rn Company	Data:	Plai	nt Branch AP	Printed 11/4/20	022, 1:2	5 PM			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	<u>Mean</u>	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	BRGWC-17S	0.003	0.0009	0.006	No	17	0.002876	0.0005093	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-36S	0.003	0.0016	0.006	No	17	0.002473	0.00101	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-37S	0.003	0.0006	0.006	No	17	0.002706	0.000831	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-38S	0.003	0.0009	0.006	No	17	0.002741	0.0007315	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-17S	0.005	0.0033	0.01	No	17	0.00413	0.001717	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-33S	0.005	0.00262	0.01	No	18	0.004377	0.00149	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-35S	0.005	0.0006	0.01	No	17	0.004202	0.001777	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-36S	0.005	0.001	0.01	No	17	0.004244	0.001686	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-37S	0.005	0.00078	0.01	No	17	0.004212	0.001757	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-38S	0.003693	0.001937	0.01	No	17	0.002815	0.001401	11.76	None	No	0.01	Param.
Barium (mg/L)	BRGWC-17S	0.04399	0.039	2	No	17	0.04149	0.00398	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-33S	0.023	0.02	2	No	18	0.02246	0.004934	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-34S	0.03293	0.02469	2	No	17	0.02925	0.007023	0	None	ln(x)	0.01	Param.
Barium (mg/L)	BRGWC-35S	0.0518	0.034	2	No	17	0.04765	0.01902	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-36S	0.0415	0.03	2	No	17	0.03781	0.01045	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-37S	0.02521	0.02321	2	No	17	0.02421	0.001601	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-38S	0.0247	0.0141	2	No	17	0.02122	0.009821	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-33S	0.001987	0.001506	0.004	No	18	0.001698	0.0004897	5.556	None	x^2	0.01	Param.
Beryllium (mg/L)	BRGWC-34S	0.0002	0.00012	0.004	No	17	0.0001571	0.00005047	17.65	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-35S	0.0001748	0.0001173	0.004	No	17	0.0001488	0.00004897	11.76	None	x^(1/3)	0.01	Param.
Beryllium (mg/L)	BRGWC-36S	0.00025	0.000084	0.004	No	18	0.0001367	0.00007288	27.78	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-38S	0.009374	0.007986	0.004	Yes	18	0.00868	0.001148	0	None	No	0.01	Param.
Cadmium (mg/L)	BRGWC-33S	0.0005007	0.0003031	0.005	No	18	0.0004116	0.0001832	5.556	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	BRGWC-34S	0.0005515	0.0002222	0.005	No	17	0.0004234	0.0003035	11.76	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	BRGWC-36S	0.001	0.0001	0.005	No	18	0.0008989	0.0002943	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-38S	0.0006571	0.0004921	0.005	No	17	0.0005788	0.0001407	5.882	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	BRGWC-17S	0.01278	0.01004	0.1	No	17	0.01147	0.002307	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	BRGWC-33S	0.01	0.00049	0.1	No	18	0.009472	0.002242	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-35S	0.007139	0.004557	0.1	No	17	0.005848	0.00206	5.882	None	No	0.01	Param.
Chromium (mg/L)	BRGWC-36S	0.008297	0.007177	0.1	No	17	0.007737	0.0008931	0	None	No	0.01	Param.
Chromium (mg/L)	BRGWC-37S	0.01	0.0014	0.1	No	17	0.003506	0.003718	23.53	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-38S	0.004136	0.00349	0.1	No	17	0.003722	0.0007425	0	None	x^3	0.01	Param.
Cobalt (mg/L)	BRGWC-33S	0.05266	0.03803	0.006	Yes	18	0.04534	0.01209	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-34S	0.00438	0.0029	0.006	No	17	0.003811	0.001305	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-35S	0.0012	0.0008	0.006	No	17	0.001	0.0004047	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-38S	0.2539	0.2042	0.006	Yes	17	0.2291	0.03971	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-17S	0.7634	0.3342	5	No	17	0.5488	0.3425	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-33S	1.276	0.6673	5	No	17	0.9716	0.4857	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-34S	1.176	0.7451	5	No	17	0.9605	0.3438	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-35S	1.178	0.4487	5	No	17	0.8735	0.6993	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-36S	1.267	0.7139	5	No	17	0.9905	0.4415	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-37S	0.9215	0.3675	5	No	17	0.6882	0.5156	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-38S	3.563	1.94	5	No	17	2.837	1.466	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-17S	0.1403	0.08203	4	No	18	0.1183	0.05866	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-33S	0.2244	0.1072	4	No	19	0.1753	0.1115	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-34S	0.1433	0.07674	4	No	18	0.1214	0.08229	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-35S	0.1134	0.05857	4	No	18	0.1026	0.07216	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-36S	0.15	0.054	4	No	18	0.1194	0.1078	50	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-37S	0.1	0.055	4	No		0.08083	0.02744		None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-38S	0.9342	0.7224	4	No	18	0.8405	0.2015	0	None	ln(x)	0.01	Param.
Lead (mg/L)	BRGWC-17S	0.002	0.0001	0.015	No		0.001774	0.0006387	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-33S	0.002	0.00007	0.015	No		0.0007376	0.0009194		None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-34S	0.002	0.0003	0.015	No		0.001676	0.0007229		None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-35S	0.002	0.0002	0.015	No		0.00156	0.0008179		None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-36S	0.002	0.000047	0.015	No		0.001885	0.0004737		None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-37S	0.002	0.0001	0.015	No		0.001776	0.000631		None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-38S	0.0005	0.00034	0.015	No		0.0006765	0.000634		None	No	0.01	NP (normality)
													. ,,

## Confidence Intervals - All Results

		Plant Branch	Client: Souther	n Company	Data:	Pla	nt Branch AP	Printed 11/4/20	022, 1:2	5 PM			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Lithium (mg/L)	BRGWC-17S	0.01	0.00097	0.089	No	17	0.006285	0.004577	58.82	None	No	0.01	NP (NDs)
Lithium (mg/L)	BRGWC-33S	0.01028	0.009171	0.089	No	18	0.009728	0.0009209	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-34S	0.01	0.00089	0.089	No	17	0.006776	0.004499	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BRGWC-35S	0.0023	0.002	0.089	No	17	0.0026	0.001909	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-36S	0.0026	0.0023	0.089	No	17	0.003341	0.00251	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-38S	0.02235	0.02036	0.089	No	17	0.02135	0.001591	0	None	No	0.01	Param.
Mercury (mg/L)	BRGWC-17S	0.0002	0.0001	0.002	No	15	0.0001763	0.00004972	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-33S	0.0002	0.00012	0.002	No	16	0.0001769	0.00005186	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-34S	0.0002	0.00012	0.002	No	15	0.000172	0.00005321	73.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-35S	0.0002	0.00013	0.002	No	15	0.0001807	0.00004166	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-36S	0.0002	0.00013	0.002	No	15	0.00018	0.00004293	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-37S	0.0002	0.00014	0.002	No	15	0.0001807	0.00004284	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-38S	0.000176	0.0001096	0.002	No	15	0.0001428	0.00004902	13.33	None	No	0.01	Param.
Selenium (mg/L)	BRGWC-17S	0.002547	0.001775	0.05	No	17	0.002969	0.001325	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Selenium (mg/L)	BRGWC-33S	0.005	0.0028	0.05	No	18	0.0041	0.001294	50	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-36S	0.005033	0.002974	0.05	No	17	0.004098	0.001795	0	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	BRGWC-38S	0.04086	0.03255	0.05	No	17	0.03671	0.006628	0	None	No	0.01	Param.
Thallium (mg/L)	BRGWC-17S	0.002	0.000066	0.002	No	17	0.001886	0.0004691	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BRGWC-33S	0.00024	0.00018	0.002	No	18	0.0004961	0.0006923	16.67	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-38S	0.002	0.00019	0.002	No	17	0.0007606	0.0008266	29.41	None	No	0.01	NP (normality)

## Appendix IV Trend Tests - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:21 PM

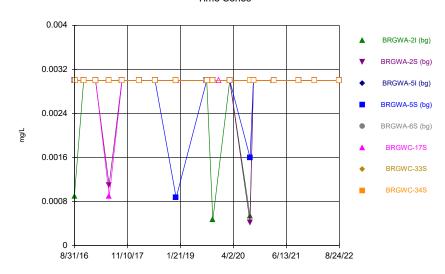
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality Normality	<u>Xform</u>	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	-0.0004476	-77	-68	Yes	18	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0004021	-70	-63	Yes	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-33S	-0.006188	-105	-68	Yes	18	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-38S	-0.01947	-98	-63	Yes	17	0	n/a	n/a	0.01	NP

## Appendix IV Trend Tests - All Results

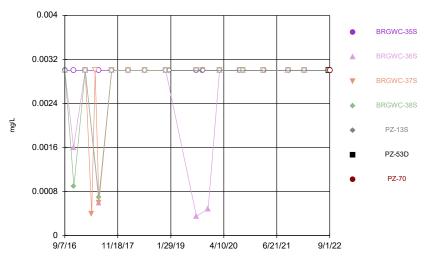
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:21 PM Well Calc. Critical Method Constituent Slope Sig. N <u>%NDs</u> <u>Normality</u> <u>Xform</u> <u>Alpha</u> BRGWA-2I (bg) 0 Beryllium (mg/L) 0 63 No 17 100 n/a n/a 0.01 NP 0 Beryllium (mg/L) BRGWA-2S (bg) 0 63 No 17 100 0.01 NP n/a n/a Beryllium (mg/L) BRGWA-5I (bg) 0 0 63 No 17 100 0.01 NP n/a n/a Beryllium (mg/L) BRGWA-5S (bg) 0 0 63 No 17 100 n/a 0.01 NP n/a BRGWA-6S (bg) 0 Beryllium (mg/L) NP 0 63 No 17 100 n/a n/a 0.01 Beryllium (mg/L) BRGWC-38S 0 0.01 NP -0.0004476 -77 -68 Yes 18 n/a n/a Cobalt (mg/L) BRGWA-2I (bg) NP 17 70.59 n/a 0.01 -16 -63 No n/a Cobalt (mg/L) BRGWA-2S (bg) -0.0004021 -70 Yes 17 NP -63 11.76 n/a n/a 0.01 Cobalt (mg/L) BRGWA-5I (bg) -0.0001378 -49 -53 No 15 0 0.01 NP n/a n/a Cobalt (mg/L) BRGWA-5S (bg) 26 63 17 70.59 n/a 0.01 NP No n/a Cobalt (mg/L) BRGWA-6S (bg) 0 9 0.01 NP 63 17 70.59 No n/a n/a Cobalt (mg/L) BRGWC-33S -0.006188 -105 -68 Yes 18 0 n/a n/a 0.01 NP Cobalt (mg/L) BRGWC-38S -0.01947 NP -98 -63 Yes 17 0 n/a n/a 0.01

# FIGURE A.



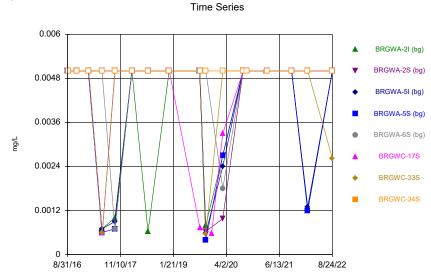


Constituent: Antimony Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



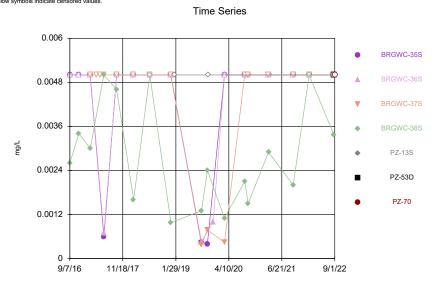
Constituent: Antimony Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

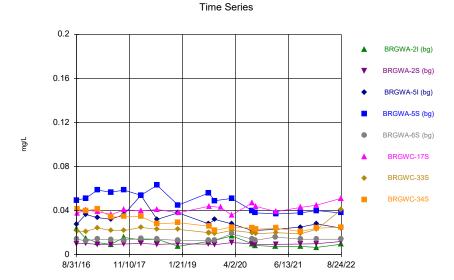


Constituent: Arsenic Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

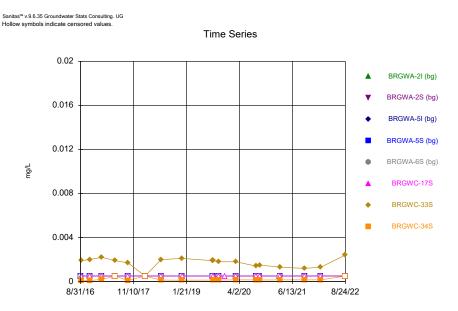
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



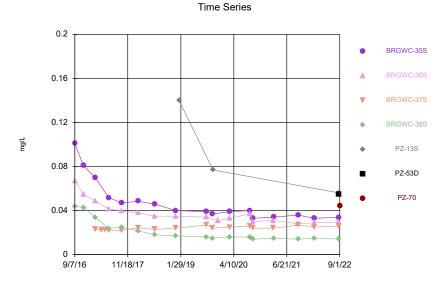
Constituent: Arsenic Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



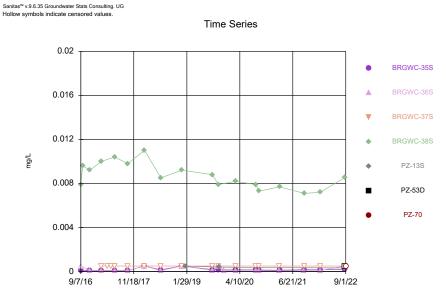
Constituent: Barium Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Beryllium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

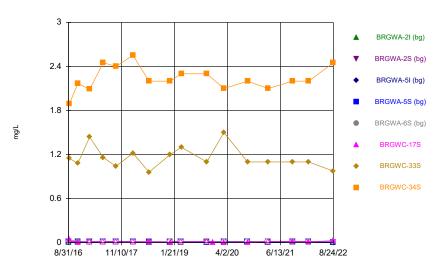


Constituent: Barium Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



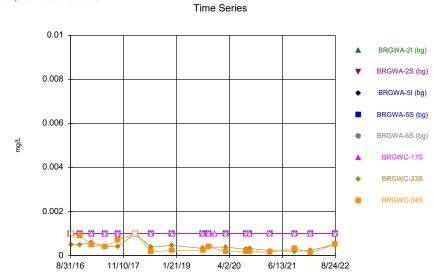
Constituent: Beryllium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP





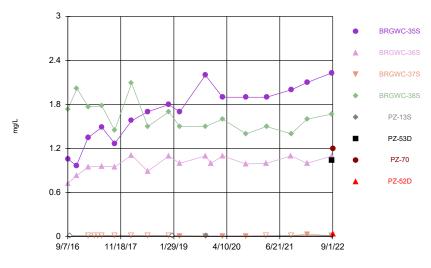
Constituent: Boron Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



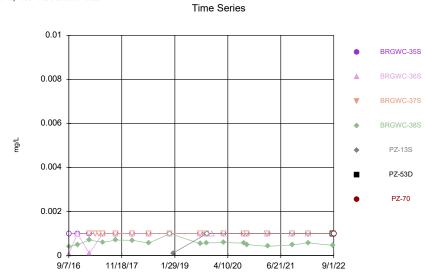
Constituent: Cadmium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series

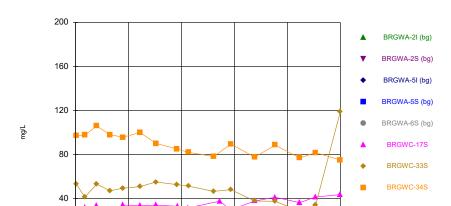


Constituent: Boron Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

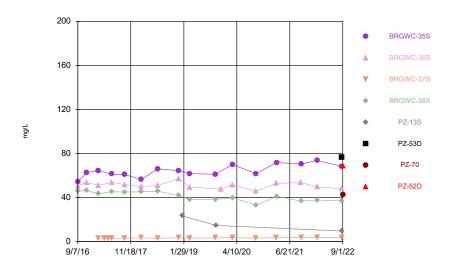


Constituent: Calcium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

6/13/21

8/24/22

1/21/19



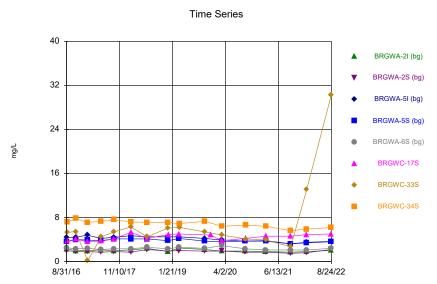
Time Series

Constituent: Calcium Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



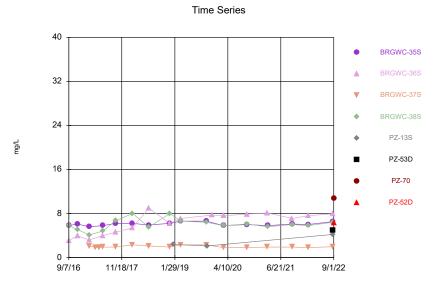
8/31/16

11/10/17



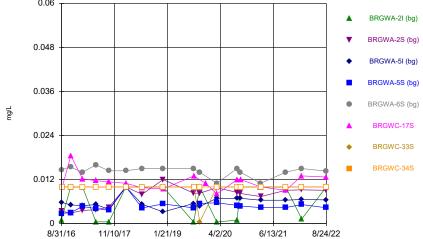
Constituent: Chloride Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG



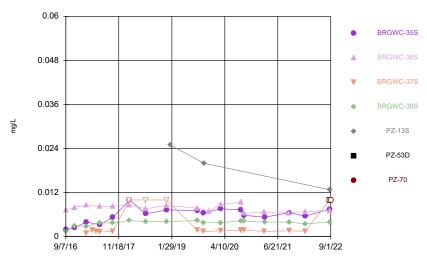
Constituent: Chloride Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP





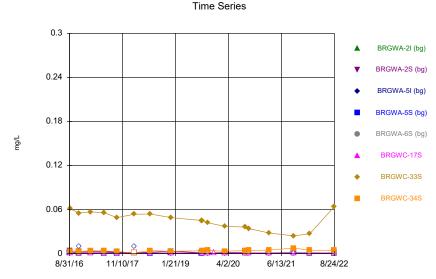
Constituent: Chromium Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series



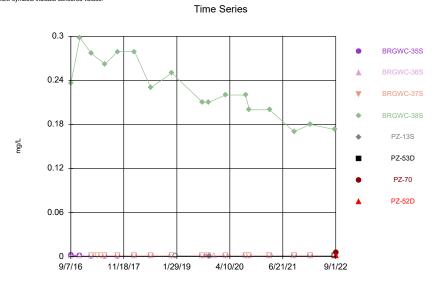
Constituent: Chromium Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values

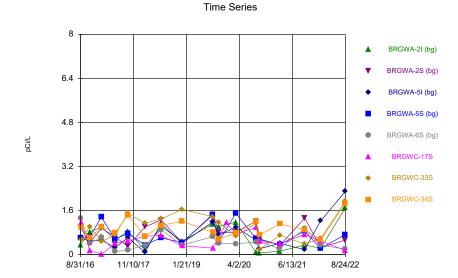


Constituent: Cobalt Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

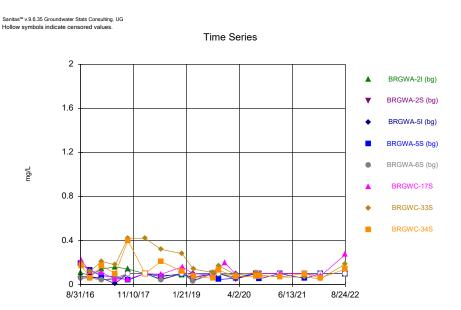
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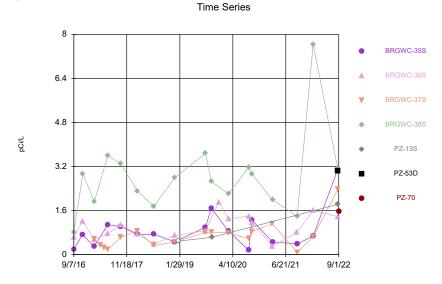
Constituent: Cobalt Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



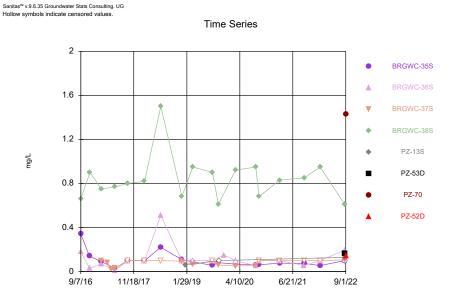
Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Fluoride Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

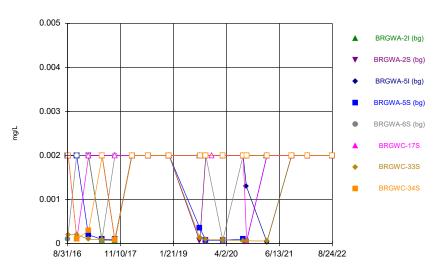


Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

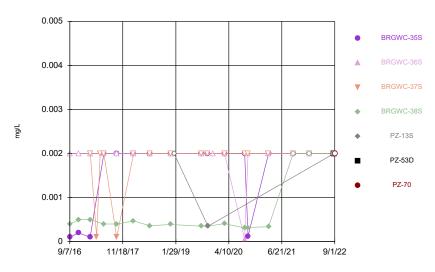


Constituent: Fluoride Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



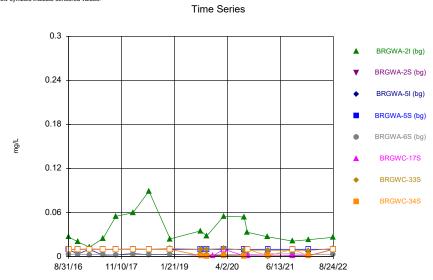


Constituent: Lead Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



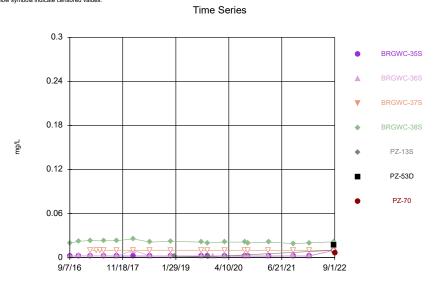
Constituent: Lead Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



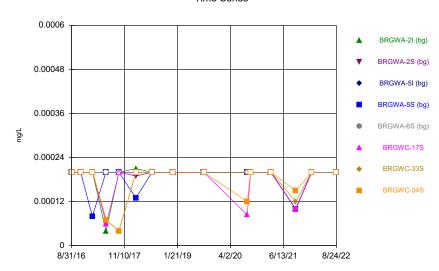
Constituent: Lithium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



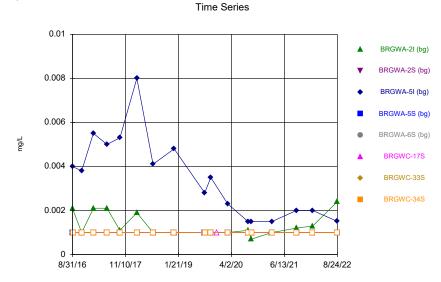
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Plant Branch Client: Southern Company Data: Plant Branch AP





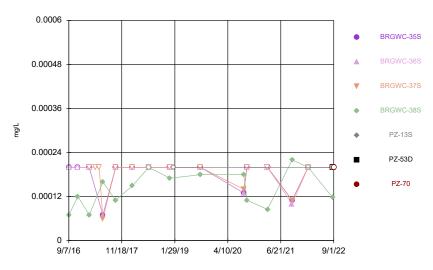
Constituent: Mercury Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



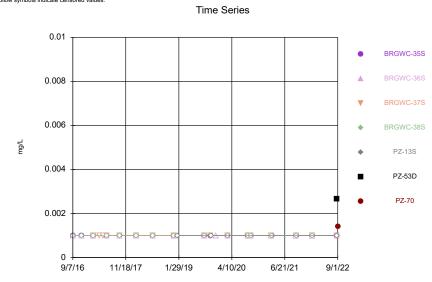
Constituent: Molybdenum Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series



Constituent: Mercury Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

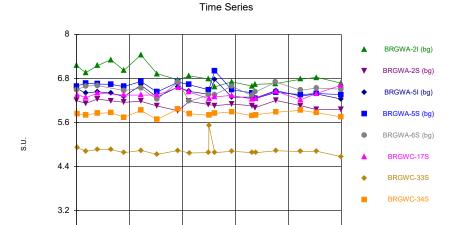
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Molybdenum Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/16

11/10/17



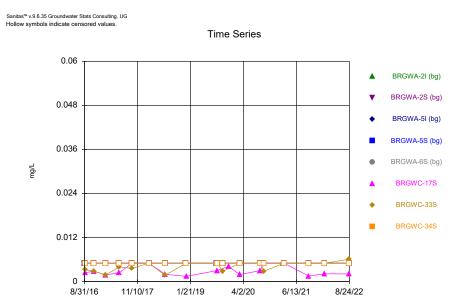
Constituent: pH, Field Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

4/2/20

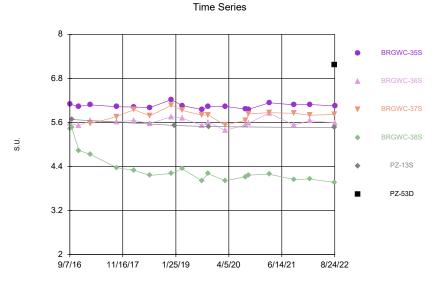
1/21/19

6/13/21

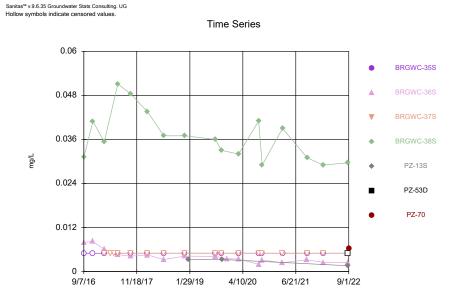
8/24/22



Constituent: Selenium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

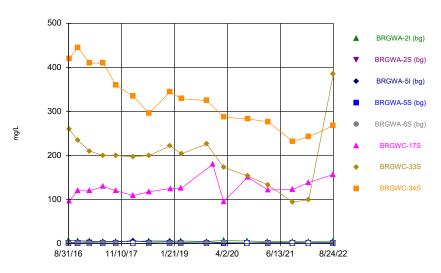


Constituent: pH, Field Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



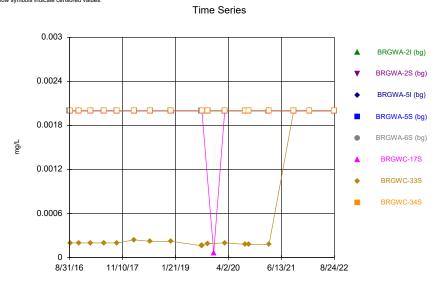
Constituent: Selenium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP





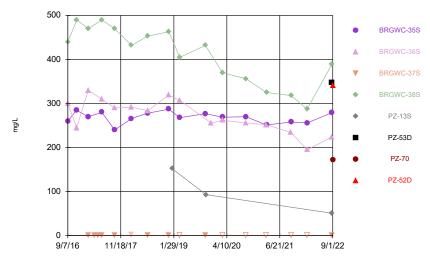
Constituent: Sulfate Analysis Run 11/4/2022 11:27 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



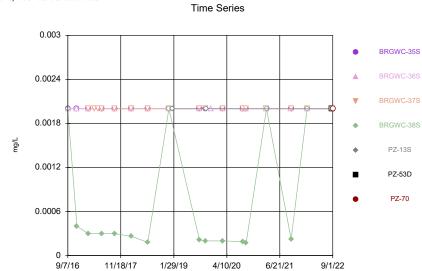
Constituent: Thallium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series



Constituent: Sulfate Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

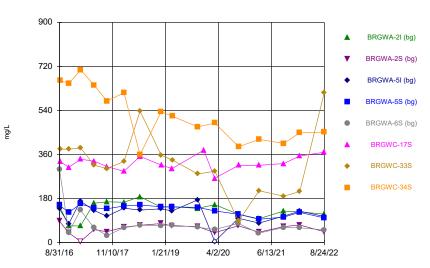
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

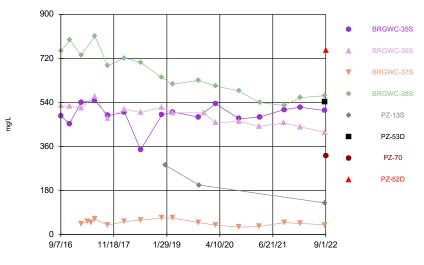
Time Series



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

#### Time Series



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 0.0009 (J)	BRGWA-2S (bg) <0.003	BRGWA-5I (bg) <0.003	BRGWA-5S (bg) <0.003	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.0009 (3)	<b>~</b> 0.003	<b>~</b> 0.003	<b>~</b> 0.003	<0.003			
9/7/2016					10.000	<0.003	<0.003	
9/8/2016						<b>~</b> 0.003	<b>~</b> 0.003	<0.003
11/15/2016				<0.003	<0.003			<0.003
11/16/2016	<0.003	<0.003	<0.003	<0.003	<0.003			
11/17/2016	<0.003	<0.003	<0.003			<0.003	<0.003	<0.003
			<0.002	<b>~</b> 0.002	<0.002	<0.003	<0.003	<0.003
2/20/2017	-0.000	-0.000	<0.003	<0.003	<0.003			
2/21/2017	<0.003	<0.003				<0.002	<0.002	<0.002
2/22/2017 6/12/2017	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	<0.003	0.0011 (1)	<0.003	<0.003	<0.003			
6/13/2017		0.0011 (J)					<0.002	<0.002
6/14/2017						0.0000 (1)	<0.003	<0.003
6/15/2017	.0.000		0.000		0.000	0.0009 (J)		
9/26/2017	<0.003	<0.003	<0.003	<0.003	<0.003		.0.000	
9/27/2017						0.000	<0.003	<0.003
9/28/2017						<0.003		
2/13/2018	<0.003	<0.003	<0.003	<0.003	<0.003			
2/15/2018						<0.003	<0.003	<0.003
6/26/2018	<0.003	<0.003	<0.003	<0.003	<0.003			
6/27/2018						<0.003	<0.003	<0.003
12/18/2018	<0.003	<0.003	<0.003	0.00087 (J)	<0.003		<0.003	<0.003
12/19/2018						<0.003		
8/27/2019	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	
8/28/2019						<0.003	<0.003	<0.003
10/15/2019	0.00047 (J)	<0.003	<0.003	<0.003	<0.003			
10/16/2019							<0.003	<0.003
12/3/2019						<0.003		
3/3/2020	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		
3/5/2020							<0.003	<0.003
8/18/2020	0.00054 (J)	0.00042 (J)	<0.003	0.0016 (J)	<0.003			
8/19/2020						<0.003	<0.003	<0.003
9/15/2020	<0.003	<0.003	<0.003	<0.003	<0.003			
9/16/2020						<0.003	<0.003	<0.003
3/1/2021	<0.003				<0.003			
3/2/2021		<0.003	<0.003	<0.003				
3/3/2021							<0.003	<0.003
3/4/2021						<0.003		
9/21/2021			<0.003	<0.003				
9/22/2021	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003
2/1/2022	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/23/2022	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	
8/24/2022						<0.003		<0.003

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	<0.003	<0.003		<0.003			
11/17/2016	<0.003						
11/18/2016		0.0016 (J)					
11/21/2016				0.0009 (J)			
2/22/2017	<0.003						
2/23/2017		<0.003	<0.003	<0.003			
4/17/2017			0.0004 (J)				
5/15/2017			<0.003				
6/15/2017	<0.003	0.0006 (J)	0.0006 (J)	0.0007 (J)			
9/28/2017	<0.003	<0.003	<0.003	<0.003			
2/15/2018	<0.003	<0.003	<0.003	<0.003			
6/27/2018	<0.003						
6/28/2018		<0.003	<0.003	<0.003			
12/19/2018	<0.003	<0.003	<0.003				
12/20/2018				<0.003			
1/15/2019					<0.003		
8/28/2019	<0.003	0.00035 (J)	<0.003				
8/29/2019				<0.003			
10/16/2019	<0.003		<0.003	<0.003			
10/22/2019					<0.003		
12/3/2019		0.00049 (J)					
3/5/2020	<0.003	<0.003	<0.003	<0.003			
8/19/2020	<0.003	<0.003	<0.003	<0.003			
9/16/2020	<0.003	<0.003	<0.003				
9/17/2020				<0.003			
3/3/2021		<0.003	<0.003				
3/4/2021	<0.003			<0.003			
9/22/2021		<0.003					
9/23/2021	<0.003		<0.003	<0.003			
2/1/2022	<0.003	<0.003		<0.003			
2/2/2022			<0.003				
8/23/2022			<0.003	<0.003	<0.003	<0.003	
8/24/2022	<0.003	<0.003					
9/1/2022							<0.003

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.005	BRGWA-2S (bg) <0.005	BRGWA-5I (bg) <0.005	BRGWA-5S (bg) <0.005	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	<0.005	<0.005	<0.005	<0.005	<0.005			
9/7/2016					<b>~</b> 0.003	<0.005	<0.005	
9/8/2016						<0.005	<0.005	<0.005
11/15/2016				<0.005	<0.005			<0.005
11/16/2016	<0.005	<0.005	<0.005	<0.005	<0.005			
11/17/2016	10.000	10.000	10.000			<0.005	<0.005	<0.005
2/20/2017			<0.005	<0.005	<0.005	<b>~</b> 0.003	<b>~</b> 0.003	<b>~0.003</b>
2/21/2017	<0.005	<0.005	10.000	10.000	10.000			
2/22/2017	<b>~</b> 0.003	<0.003				<0.005	<0.005	<0.005
6/12/2017	0.0007 (J)		0.0007 (J)	0.0006 (J)	<0.005	-0.000	-0.000	10.000
6/13/2017	0.0007 (0)	<0.005	0.0007 (0)	0.0000 (0)	-0.000			
6/14/2017		-0.000					0.0006 (J)	<0.005
6/15/2017						0.0006 (J)	0.0000 (0)	10.000
9/26/2017	0.001 (J)	<0.005	0.0009 (J)	0.0007 (J)	0.0007 (J)	0.0000 (0)		
9/27/2017	0.001 (0)	0.000	0.0000 (0)	0.0007 (0)	0.0007 (0)		<0.005	<0.005
9/28/2017						<0.005	0.000	0.000
2/13/2018	<0.005	<0.005	<0.005	<0.005	<0.005			
2/15/2018	0.000	0.000	0.000	0.000	0.000	<0.005	<0.005	<0.005
6/26/2018	0.00062 (J)	<0.005	<0.005	<0.005	<0.005			
6/27/2018	(-,					<0.005	<0.005	<0.005
12/18/2018	<0.005	<0.005 (X)	<0.005 (X)	<0.005 (X)	<0.005 (X)		<0.005 (X)	<0.005
12/19/2018						<0.005		
8/27/2019	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	
8/28/2019						0.00073 (J)	<0.005	<0.005
10/15/2019	0.0008 (J)	0.00063 (J)	0.00058 (J)	0.00039 (J)	<0.005			
10/16/2019							0.00056 (J)	<0.005
12/3/2019						0.00058 (J)		
3/3/2020	0.0027 (J)	0.00098 (J)	0.0024 (J)	0.0027 (J)	0.0018 (J)	0.0033 (J)		
3/5/2020							<0.005	<0.005
8/18/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
8/19/2020						<0.005	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
9/16/2020						<0.005	<0.005	<0.005
3/1/2021	<0.005				<0.005			
3/2/2021		<0.005	<0.005	<0.005				
3/3/2021							<0.005	<0.005
3/4/2021						<0.005		
9/21/2021			<0.005	<0.005				
9/22/2021	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005
2/1/2022	0.0012 (J)	<0.005	0.0013 (J)	0.0012 (J)	<0.005	<0.005	<0.005	<0.005
8/23/2022	<0.005	<0.005	<0.005	<0.005	<0.005		0.00262 (J)	
8/24/2022						<0.005		<0.005

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	<0.005	<0.005		0.0026 (J)			
11/17/2016	<0.005						
11/18/2016		<0.005					
11/21/2016				0.0034 (J)			
2/22/2017	<0.005						
2/23/2017		<0.005	<0.005	0.003 (J)			
4/17/2017			<0.005				
5/15/2017			<0.005				
6/15/2017	0.0006 (J)	0.0007 (J)	<0.005	0.005 (J)			
9/28/2017	<0.005	<0.005	<0.005	0.0046 (J)			
2/15/2018	<0.005	<0.005	<0.005	0.0016 (J)			
6/27/2018	<0.005						
6/28/2018		<0.005 (X)	<0.005 (X)	<0.005 (X)			
12/19/2018	<0.005	<0.005	<0.005				
12/20/2018				0.00098 (J)			
1/15/2019					<0.005		
8/28/2019	0.00044 (J)	0.00045 (J)	0.00038 (J)				
8/29/2019				0.0013 (J)			
10/16/2019	0.0004 (J)		0.00078 (J)	0.0024 (J)			
10/22/2019					<0.005		
12/3/2019		0.001 (J)					
3/5/2020	<0.005	<0.005	0.00044 (J)	0.0011 (J)			
8/19/2020	<0.005	<0.005	<0.005	0.0021 (J)			
9/16/2020	<0.005	<0.005	<0.005				
9/17/2020				0.0015 (J)			
3/3/2021		<0.005	<0.005				
3/4/2021	<0.005			0.0029 (J)			
9/22/2021		<0.005					
9/23/2021	<0.005		<0.005	0.002 (J)			
2/1/2022	<0.005	<0.005		<0.005			
2/2/2022			<0.005				
8/23/2022			<0.005	0.00337 (J)	<0.005	<0.005	
8/24/2022	<0.005	<0.005					
9/1/2022							<0.005

Constituent: Barium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0239	0.0099 (J)	0.0273	0.0495				
9/1/2016					0.0142			
9/7/2016						0.0377	0.0214	
9/8/2016								0.0415
11/15/2016				0.0512	0.0126			
11/16/2016	0.0147	0.0102	0.0365					
11/17/2016						0.0405	0.0211	0.04
2/20/2017			0.0336	0.0586	0.0142			
2/21/2017	0.0109	0.0094 (J)						
2/22/2017						0.0392	0.0243	0.0415
6/12/2017	0.0094 (J)		0.0322	0.0567	0.0134			
6/13/2017		0.0094 (J)						
6/14/2017							0.0218	0.0341
6/15/2017						0.0364		
9/26/2017	0.0156	0.0096 (J)	0.0364	0.0586	0.0133			
9/27/2017							0.0219	0.0347
9/28/2017						0.0408		
2/13/2018	0.0134	0.0102	0.054	0.054	0.0145			
2/15/2018						0.0396	0.0248	0.0346
6/26/2018	0.014	0.0093 (J)	0.032	0.063	0.014			
6/27/2018						0.041	0.023	0.028
12/18/2018	0.0076 (J)	0.01	0.038	0.045	0.013		0.023	0.029
12/19/2018						0.038		
8/27/2019	0.012	0.0095 (J)	0.028	0.056	0.013		0.02	
8/28/2019						0.044	0.02	0.026
10/15/2019	0.013	0.0091 (J)	0.032	0.049	0.013			
10/16/2019							0.019	0.022
12/3/2019						0.043		
3/3/2020	0.017	0.011	0.028	0.051	0.019	0.036		
3/5/2020							0.022	0.025
8/18/2020	0.01 (J)	0.01	0.022	0.04	0.014			
8/19/2020						0.047	0.02	0.024
9/15/2020	0.0083 (J)	0.0094 (J)	0.022	0.038	0.013			
9/16/2020						0.044	0.019	0.023
3/1/2021	0.0074				0.016			
3/2/2021		0.0094	0.023	0.037				
3/3/2021							0.02	0.024
3/4/2021						0.039		
9/21/2021			0.025	0.038				
9/22/2021	0.0075	0.0097			0.014	0.043	0.019	0.021
2/1/2022	0.0066	0.01	0.028	0.04	0.014	0.045	0.023	0.024
8/23/2022	0.00954	0.012	0.0241	0.0379	0.014		0.0409	
8/24/2022						0.0512		0.0249

Constituent: Barium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	0.101	0.0674		0.044			
11/17/2016	0.0808						
11/18/2016		0.0546					
11/21/2016				0.0428 (J)			
2/22/2017	0.0701						
2/23/2017		0.0489	0.0229	0.0338			
4/17/2017			0.0227				
5/15/2017			0.0227				
6/15/2017	0.0518	0.0415	0.0218	0.0239			
9/28/2017	0.047	0.0397	0.0222	0.0247			
2/15/2018	0.0485	0.038	0.0243	0.0215			
6/27/2018	0.046						
6/28/2018		0.035	0.023	0.018			
12/19/2018	0.04	0.035	0.024				
12/20/2018				0.017			
1/15/2019					0.14		
8/28/2019	0.039	0.034	0.027				
8/29/2019				0.016			
10/16/2019	0.037		0.024	0.015			
10/22/2019					0.077		
12/3/2019		0.031					
3/5/2020	0.039	0.033	0.025	0.016			
8/19/2020	0.04	0.037	0.026	0.016			
9/16/2020	0.033	0.03	0.024				
9/17/2020				0.014			
3/3/2021		0.031	0.024				
3/4/2021	0.034			0.015			
9/22/2021		0.028					
9/23/2021	0.036		0.027	0.014			
2/1/2022	0.033	0.029		0.015			
2/2/2022			0.025				
8/23/2022			0.026	0.0141	0.0562	0.0547	
8/24/2022	0.0339	0.0296					
9/1/2022							0.0444

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005				
9/1/2016					<0.0005			
9/7/2016						<0.0005	0.0019 (J)	
9/8/2016								0.0001 (J)
11/15/2016				<0.0005	<0.0005			
11/16/2016	<0.0005	<0.0005	<0.0005					
11/17/2016						<0.0005	0.002 (J)	0.0001 (J)
2/20/2017			<0.0005	<0.0005	<0.0005			
2/21/2017	<0.0005	<0.0005						
2/22/2017						<0.0005	0.0022 (J)	0.0002 (J)
6/12/2017	<0.0005		<0.0005	<0.0005	<0.0005			
6/13/2017		<0.0005						
6/14/2017							0.0019 (J)	<0.0005
6/15/2017						<0.0005		
9/26/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
9/27/2017							0.0017 (J)	0.0001 (J)
9/28/2017						<0.0005		
2/13/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
2/15/2018						<0.0005	<0.0005	<0.0005
6/26/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
6/27/2018						<0.0005	0.002 (J)	0.00013 (J)
12/18/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.0021 (J)	0.00012 (J)
12/19/2018						<0.0005		
8/27/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.0019 (J)	
8/28/2019						<0.0005	0.0019 (J)	0.00014 (J)
10/15/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
10/16/2019							0.0018 (J)	0.00014 (J)
10/17/2019						<0.0005		
12/3/2019						<0.0005		
3/3/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
3/5/2020							0.0018 (J)	0.00015 (J)
8/18/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
8/19/2020						<0.0005	0.0014 (J)	0.00015 (J)
9/15/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
9/16/2020						<0.0005	0.0015 (J)	0.00014 (J)
3/1/2021	<0.0005				<0.0005			
3/2/2021		<0.0005	<0.0005	<0.0005				
3/3/2021							0.0013	0.00015 (J)
3/4/2021						<0.0005		
9/21/2021			<0.0005	<0.0005				
9/22/2021	<0.0005	<0.0005			<0.0005	<0.0005	0.0012	0.00015 (J)
2/1/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	0.00015 (J)
8/23/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.00241	
8/24/2022						<0.0005		<0.0005

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	9E-05 (J)	<0.0005		0.0079			
9/23/2016				0.0096 (R)			
11/17/2016	0.0001 (J)						
11/18/2016		0.0001 (J)					
11/21/2016				0.0092			
2/22/2017	0.0001 (J)						
2/23/2017		0.0001 (J)	<0.0005	0.01			
4/17/2017			<0.0005				
5/15/2017			<0.0005				
6/15/2017	0.0001 (J)	9E-05 (J)	<0.0005	0.0104			
9/28/2017	0.0001 (J)	0.0001 (J)	<0.0005	0.0098			
2/15/2018	<0.0005	<0.0005	<0.0005	0.011 (J)			
6/27/2018	0.00015 (J)						
6/28/2018		8.1E-05 (J)	<0.0005	0.0085			
12/19/2018	<0.0005 (X)	<0.0005 (X)	<0.0005				
12/20/2018				0.0092			
1/15/2019					0.0005 (J)		
8/28/2019	0.00016 (J)	0.00011 (J)	<0.0005				
8/29/2019				0.0088			
10/16/2019	0.00015 (J)		<0.0005	0.0079			
10/17/2019		<0.0005					
10/22/2019					0.0004 (J)		
12/3/2019		9.7E-05 (J)					
3/5/2020	0.00015 (J)	9.2E-05 (J)	<0.0005	0.0082			
8/19/2020	0.00015 (J)	0.00011 (J)	<0.0005	0.0079			
9/16/2020	0.00014 (J)	8E-05 (J)	<0.0005				
9/17/2020				0.0073			
3/3/2021		7.9E-05 (J)	<0.0005				
3/4/2021	0.00012 (J)			0.0077			
9/22/2021		8.4E-05 (J)					
9/23/2021	0.00016 (J)		<0.0005	0.0071			
2/1/2022	0.00015 (J)	8.7E-05 (J)		0.0072			
2/2/2022			<0.0005				
8/23/2022			<0.0005	0.00854	0.000331 (J)	<0.0005	
8/24/2022	0.00021 (J)	<0.0005					
9/1/2022							<0.0005
	9/23/2016 11/17/2016 11/18/2016 11/18/2016 11/21/2016 2/22/2017 2/23/2017 4/17/2017 5/15/2017 6/15/2017 9/28/2017 2/15/2018 6/27/2018 6/27/2018 12/19/2018 12/19/2018 12/19/2019 10/16/2019 10/16/2019 10/17/2019 10/17/2019 10/22/2019 12/3/2019 3/5/2020 8/19/2020 9/16/2020 9/16/2020 9/17/2020 3/3/2021 3/4/2021 9/22/2021 9/23/2021 2/1/2022 8/23/2022 8/23/2022 8/24/2022	9/7/2016 9E-05 (J) 9/23/2016 11/17/2016 0.0001 (J) 11/18/2016 11/21/2016 2/22/2017 0.0001 (J) 2/23/2017 4/17/2017 5/15/2017 6/15/2017 0.0001 (J) 9/28/2017 0.0001 (J) 9/28/2017 0.0001 (J) 9/28/2018 0.0005 6/27/2018 0.0005 (X) 12/20/2018 12/19/2018 <0.0005 (X) 12/20/2018 1/15/2019 8/28/2019 0.00016 (J) 8/29/2019 10/16/2019 0.00015 (J) 10/17/2019 10/22/2019 12/3/2019 3/5/2020 0.00015 (J) 9/16/2020 0.00015 (J) 9/16/2020 0.00015 (J) 9/17/2020 3/3/2021 0.00012 (J) 9/22/2021 9/23/2021 0.00016 (J) 2/1/2022 8/23/2022 8/23/2022 8/24/2022 0.00021 (J)	9/7/2016 9E-05 (J) <0.0005 9/23/2016 11/17/2016 0.0001 (J) 11/18/2016 0.0001 (J) 11/18/2016 2/22/2017 0.0001 (J) 2/23/2017 0.0001 (J) 4/17/2017 5/15/2017 0.0001 (J) 9E-05 (J) 9/28/2017 0.0001 (J) 0.0001 (J) 2/15/2018 <0.0005 <0.0005 6/27/2018 0.00015 (J) 6/28/2018 8.1E-05 (J) 12/19/2018 <0.0005 (X) <0.0005 (X) 12/20/2018 12/19/2018 <0.0005 (X) <0.0005 (X) 12/20/2018 1/15/2019 8/28/2019 0.00016 (J) 0.00011 (J) 8/29/2019 10/16/2019 0.00015 (J) 10/17/2019 10/22/2019 11/23/2019 9.7E-05 (J) 8/19/2020 0.00015 (J) 0.00011 (J) 9/16/2020 0.00015 (J) 0.00011 (J) 9/17/2020 3/3/2021 7.9E-05 (J) 3/4/2021 0.00015 (J) 8.7E-05 (J) 9/23/2021 0.00015 (J) 8.7E-05 (J) 9/23/2022 8/23/2022 8/23/2022 8/24/2022 0.00021 (J) <0.0005	97/72016 9E-05 (J) < 0.0005 9/23/2016 11/17/2016 0.0001 (J) 11/18/2016 0.0001 (J) 11/21/2016 2/22/2017 0.0001 (J) 2/23/2017 0.0001 (J) 2/23/2017 0.0001 (J) 2/23/2017 0.0005 4/17/2017 0.0005 5/15/2017 0.0001 (J) 9E-05 (J) 0.0005 6/15/2017 0.0001 (J) 0.0001 (J) 0.0005 9/28/2017 0.0001 (J) 0.0001 (J) 0.0005 9/28/2017 0.0001 (J) 0.0001 (J) 0.0005 6/27/2018 0.0005 0.0005 6/27/2018 0.00015 (J) 0.0005 12/19/2018 0.00015 (J) 0.0005 (J) 0.0005 12/20/2018 0.00016 (J) 0.00011 (J) 0.0005 12/20/2018 0.00016 (J) 0.00011 (J) 0.0005 12/20/2019 0.00015 (J) 0.00011 (J) 0.0005 10/17/2019 0.00015 (J) 0.00011 (J) 0.0005 10/17/2019 0.00015 (J) 0.00011 (J) 0.0005 8/19/2020 0.00015 (J) 0.2E-05 (J) 0.0005 8/19/2020 0.00015 (J) 0.00011 (J) 0.0005 9/16/2020 0.00015 (J) 0.00011 (J) 0.0005 9/17/2020 0.00015 (J) 8.FE-05 (J) 0.0005 13/4/2021 0.00016 (J) 0.00015 (J) 0.00015 12/1/2022 0.00015 (J) 8.7E-05 (J) 0.0005	97/2016       9E-05 (J)       <0.0005	9/7/2016         9E-05 (J)         < 0.0005	9772016         \$E-05 (J)         \$0.0005         0.00079         ************************************

Constituent: Boron (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

0/04/0040	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0072 (J)	<0.015	<0.015	<0.015				
9/1/2016					<0.015			
9/7/2016						0.0449 (J)	1.15	
9/8/2016								1.89
11/15/2016				0.0085 (J)	0.0123 (J)			
11/16/2016	0.0117 (J)	0.0109 (J)	0.0187 (J)					
11/17/2016						0.0067 (J)	1.08	2.17
2/20/2017			0.0066 (J)	0.0093 (J)	0.0157 (J)			
2/21/2017	0.0088 (J)	<0.015						
2/22/2017						<0.015	1.44	2.09
6/12/2017	0.0133 (J)		<0.015	<0.015	<0.015			
6/13/2017		<0.015						
6/14/2017							1.16	2.45
6/15/2017						<0.015		
9/26/2017	0.0093 (J)	<0.015	<0.015	<0.015	<0.015			
9/27/2017							1.04	2.4
9/28/2017						<0.015		
2/13/2018	0.0141 (J)	<0.015	<0.015	<0.015	<0.015			
2/15/2018						<0.015	1.22	2.55
6/26/2018	0.012 (J)	<0.015	0.0042 (J)	0.0056 (J)	0.0041 (J)			
6/27/2018						0.0088 (J+X)	0.96 (J+X)	2.2 (J+X)
12/18/2018	0.0086 (J)	<0.015	<0.015	0.0062 (J)	<0.015		1.2	2.2
12/19/2018	. ,			. ,		0.0045 (J)		
3/19/2019	0.00565 (JD)	<0.015	<0.015	<0.015	<0.015	<0.015		
3/20/2019	,						1.3	2.3
10/15/2019	0.0067 (J)	<0.015	<0.015	0.006 (J)	0.01 (J)			
10/16/2019	(0)				(5)		1.1	2.3
10/17/2019						<0.015		
12/3/2019						0.0063 (J)		
3/3/2020	0.0082 (J)	<0.015	<0.015	<0.015	<0.015	0.0075 (J)		
3/5/2020	0.0002 (0)	-0.010	-0.010	10.010	-0.010	0.0070 (0)	1.5	2.1
9/15/2020	<0.015	<0.015	<0.015	<0.015	<0.015		1.0	2.1
9/16/2020	-0.010	-0.010	-0.010	10.010	-0.010	0.0066 (J)	1.1	2.2
3/1/2021	<0.015				<0.015	0.0000 (3)	1.1	2.2
3/2/2021	<b>~0.013</b>	<0.015	0.0053 (J)	0.0071 (J)	<b>~0.013</b>			
3/3/2021		<b>~</b> 0.013	0.0055 (5)	0.0071(3)			1.1	2.1
						<0.01E	1.1	۷.1
3/4/2021			<0.01E	<0.01E		<0.015		
9/21/2021	-0.015	-0.015	<0.015	<0.015	10.015	0.00 (1)	4.4	2.2
9/22/2021	<0.015	<0.015	.0.045	.0.045	<0.015	0.02 (J)	1.1	2.2
2/1/2022	<0.015	<0.015	<0.015	<0.015	<0.015	0.013 (J)	1.1	2.2
8/23/2022	0.00592 (J)	0.00532 (J)	<0.015	0.00538 (J)	<0.015		0.975	
8/24/2022						0.0273		2.45

Constituent: Boron (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	1.06	0.725		1.73				
9/26/2016					<0.015			
11/17/2016	0.967							
11/18/2016		0.831						
11/21/2016				2.02				
2/22/2017	1.35							
2/23/2017		0.949	<0.015	1.77				
4/17/2017			<0.015					
5/15/2017			<0.015					
6/15/2017	1.49	0.961	<0.015	1.78				
9/28/2017	1.27	0.948	<0.015	1.45				
2/15/2018	1.58	1.11	<0.015	2.09				
6/27/2018	1.7 (J+X)							
6/28/2018		0.89	<0.015 (X)	1.5				
12/19/2018	1.8	1.1	<0.015					
12/20/2018				1.7				
1/15/2019					<0.015			
3/19/2019		1						
3/20/2019	1.7		0.004 (J)	1.5				
10/16/2019	2.2		0.0055 (J)	1.5				
10/17/2019		1.1						
10/22/2019					0.0098 (J)			
12/3/2019		1						
3/5/2020	1.9	1.1	0.0076 (J)	1.6				
9/16/2020	1.9	0.99	0.0062 (J)					
9/17/2020				1.4				
3/3/2021		1	<0.015					
3/4/2021	1.9			1.5				
9/22/2021		1.1						
9/23/2021	2		<0.015	1.4				
2/1/2022	2.1	1		1.6				
2/2/2022			0.032 (J)					
8/23/2022			<0.015	1.67	<0.015	1.04		
8/24/2022	2.23	1.1						
9/1/2022							1.2	0.0403

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	<0.001	<0.001	<0.001	<0.001				
9/1/2016					<0.001			
9/7/2016						<0.001	0.0005 (J)	
9/8/2016								<0.001
11/15/2016				<0.001	<0.001			
11/16/2016	<0.001	<0.001	<0.001					
11/17/2016						<0.001	0.0005 (J)	0.0009 (J)
2/20/2017			<0.001	<0.001	<0.001			
2/21/2017	<0.001	<0.001						
2/22/2017						<0.001	0.0006 (J)	0.0005 (J)
6/12/2017	<0.001		<0.001	<0.001	<0.001			
6/13/2017		<0.001						
6/14/2017							0.0004 (J)	0.0004 (J)
6/15/2017						<0.001		
9/26/2017	<0.001	<0.001	<0.001	<0.001	<0.001			
9/27/2017							0.0004 (J)	0.0007 (J)
9/28/2017						<0.001		
2/13/2018	<0.001	<0.001	<0.001	<0.001	<0.001			
2/15/2018						<0.001	<0.001	<0.001
6/26/2018	<0.001	<0.001	<0.001	<0.001	<0.001			
6/27/2018						<0.001	0.00038 (J)	0.00017 (J)
12/18/2018	<0.001	<0.001	<0.001	<0.001	<0.001		0.00046 (J)	0.00023 (J)
12/19/2018						<0.001		
8/27/2019	<0.001	<0.001	<0.001	<0.001	<0.001		0.00032 (J)	
8/28/2019						<0.001	0.00032 (J)	0.00025 (J)
10/15/2019	<0.001	<0.001	<0.001	<0.001	<0.001			
10/16/2019							0.00039 (J)	0.0004 (J)
10/17/2019						<0.001		
12/3/2019						<0.001		
3/3/2020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
3/5/2020							0.00038 (J)	0.00018 (J)
8/18/2020	<0.001	<0.001	<0.001	<0.001	<0.001			
8/19/2020						<0.001	0.00029 (J)	0.00018 (J)
9/15/2020	<0.001	<0.001	<0.001	<0.001	<0.001			
9/16/2020						<0.001	0.00032 (J)	0.00017 (J)
3/1/2021	<0.001				<0.001			
3/2/2021		<0.001	<0.001	<0.001				
3/3/2021							0.00022 (J)	0.00015 (J)
3/4/2021						<0.001		
9/21/2021			<0.001	<0.001				
9/22/2021	<0.001	<0.001			<0.001	<0.001	0.00019 (J)	0.00033 (J)
2/1/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00023 (J)	0.00012 (J)
8/23/2022	<0.001	<0.001	<0.001	<0.001	<0.001		0.000509 (J)	
8/24/2022						<0.001		0.000517 (J)
								` '

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	<0.001	8E-05 (J)		0.0004 (J)			
11/17/2016	<0.001						
11/18/2016		<0.001					
11/21/2016				0.0005 (J)			
2/22/2017	<0.001						
2/23/2017		0.0001 (J)	<0.001	0.0007 (J)			
4/17/2017			<0.001				
5/15/2017			<0.001				
6/15/2017	<0.001	<0.001	<0.001	0.0006 (J)			
9/28/2017	<0.001	<0.001	<0.001	0.0007 (J)			
2/15/2018	<0.001	<0.001	<0.001	0.00069 (J)			
6/27/2018	<0.001						
6/28/2018		<0.001	<0.001	0.00056 (J)			
12/19/2018	<0.001	<0.001 (X)	<0.001				
12/20/2018				<0.001 (X)			
1/15/2019					0.00011 (J)		
8/28/2019	<0.001	<0.001	<0.001				
8/29/2019				0.00053 (J)			
10/16/2019	<0.001		<0.001	0.00057 (J)			
10/17/2019		<0.001					
10/22/2019					<0.001		
12/3/2019		<0.001					
3/5/2020	<0.001	<0.001	<0.001	0.00059 (J)			
8/19/2020	<0.001	<0.001	<0.001	0.00056 (J)			
9/16/2020	<0.001	<0.001	<0.001				
9/17/2020				0.0005 (J)			
3/3/2021		<0.001	<0.001				
3/4/2021	<0.001			0.00042 (J)			
9/22/2021		<0.001					
9/23/2021	<0.001		<0.001	0.00048 (J)			
2/1/2022	<0.001	<0.001		0.00058			
2/2/2022			<0.001				
8/23/2022			<0.001	0.000459 (J)	<0.001	<0.001	
8/24/2022	<0.001	<0.001					
9/1/2022							<0.001

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	12.6	4.09	13.5	19.6				
9/1/2016					3.3			
9/7/2016						26.3	53.4	
9/8/2016								97.3
11/15/2016				21.7	3.44			
11/16/2016	12.1	4.25	14.9					
11/17/2016						31.8	41.3	97.6
2/20/2017			13.9	21.1	3.52			
2/21/2017	11.4	4.02						
2/22/2017						33.5	53.1	106
6/12/2017	9.34		13.7	21.5	3.11			
6/13/2017		3.84						
6/14/2017							47.1	98
6/15/2017						29		
9/26/2017	14.3	3.31	14.4	24	3.15			
9/27/2017							49.5	95.8
9/28/2017						34.1		
2/13/2018	<25	3.94	<25	<25	3.65			
2/15/2018						33.8	50.9	100
6/26/2018	16 (J)	3.6	13.5 (J)	23.5 (J)	3.3			
6/27/2018						34.1	55.1	90.1
12/18/2018	14.5 (J)	3.8	16.4 (J)	19.8 (J)	3.5		52.7	85.1
12/19/2018						33.1		
3/19/2019	14.3 (JD)	3.9	12.3 (J)	21.4 (J)	3.6	31.6		
3/20/2019							51.4	82
10/15/2019	15.1	3.7	14.4	20	3.5			
10/16/2019							46.5	78.2
12/3/2019						37.7		
3/3/2020	20	4	14.9	23.2	5	29.7		
3/5/2020							48.1	89.6
9/15/2020	14.1	3.9	12.7	16.8	3.7			
9/16/2020						37.9	37.9	77.7
3/1/2021	15.4				4.2			
3/2/2021		4	13.2	16.8				
3/3/2021							37.5	88.6
3/4/2021						41.2		
9/21/2021			14.1	19.1				
9/22/2021	15.9	4.3			4.1	36.4	28.9	76.9
2/1/2022	14.4	4.4	14.5	19.1	4.2	41.5	34.3	81.7
8/23/2022	13.9	4.65	14.3	18.2	3.97		119	
8/24/2022						43.6		75

Constituent: Calcium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	54.1	50.6		45.9				
11/17/2016	62.6							
11/18/2016		53.9						
11/21/2016				46.4				
2/22/2017	64.6							
2/23/2017		51	3.26	43.5				
4/17/2017			3.23					
5/15/2017			2.97 (B-01)					
6/15/2017	61.3	53.8	3.15	45.3				
9/28/2017	60.8	51.8	3.26	45.1				
2/15/2018	56.6	50.1	3.39	45.3				
6/27/2018	66.2							
6/28/2018		51	3.1	45.9				
12/19/2018	64.4	57.1	3.6					
12/20/2018				41.8				
1/15/2019					23.5 (J)			
3/19/2019		49.5						
3/20/2019	61.8		3.3	38.2				
10/16/2019	61.2		3.4	38.4				
10/22/2019					14.8			
12/3/2019		47.8						
3/5/2020	69.9	51.7	3.7	39.8				
9/16/2020	61.8	45.9	3.2					
9/17/2020				33.1				
3/3/2021		53	3.6					
3/4/2021	71.8			41				
9/22/2021		53.7						
9/23/2021	70.5		3.7	36.8				
2/1/2022	73.8	49.7		37.8				
2/2/2022			3.7					
8/23/2022			3.7	37.1	9.69	76.4		
8/24/2022	68.5	48.1						
9/1/2022							42.6	69

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	2.3	2	4.4	3.6				
9/1/2016					2.5			
9/7/2016						3.7	5.3	
9/8/2016								7.2
11/15/2016				4	2.3			
11/16/2016	2	1.8	4.4					
11/17/2016						4.05 (D)	5.45 (D)	7.8 (D)
2/20/2017			4.8	3.9	2.4			
2/21/2017	2	1.8						
2/22/2017						3.6	0.12 (J)	7.1
6/12/2017	2.1		4.2	3.8	2.2			
6/13/2017		1.7						
6/14/2017							4.5	7.3
6/15/2017						3.7		
9/26/2017	2	1.8	4.4	4.1	2.3			
9/27/2017							5.4	7.6
9/28/2017						4.1		
2/13/2018	2.1	1.7	4.7	4.1	2.3			
2/15/2018						5.3	6.3	7.2
6/26/2018	2.4	2.2	4.5	4.1	2.6			
6/27/2018						4.2	4.5	7.1
12/18/2018	1.8	1.9	4.5	3.8	2.3		6.1	7.1
12/19/2018						4.9 (J-X)		
3/19/2019	2.45 (D)	2	4.5	4.2	2.6	5		
3/20/2019							6.2	6.9
10/15/2019	2.2	1.9	4.2	3.7	2.4			
10/16/2019							5.4	7.3
12/3/2019						4.8		
3/3/2020	1.9	1.9	3.9	3.6	2.9	3.8		
3/5/2020							4.8	6.4
9/15/2020	1.9	1.7	3.7	3.7	2.3			
9/16/2020						4.2	4.1	6.6
3/1/2021	1.8				2.1			
3/2/2021		1.7	3.8	3.7				
3/3/2021							3.9	6.4
3/4/2021						4.6		
9/21/2021			3.2	3.2				
9/22/2021	1.7	1.5			2.1	4.6	2.7	5.6
2/1/2022	1.8	1.6	3.5	3.4	2.1	4.9	13.1	5.9
8/23/2022	2.02	2.18	3.64	3.59	2.39		30.3	
8/24/2022						5		6.17

Constituent: Chloride (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	5.8	3.1		5.8				
11/17/2016	6.1 (D)							
11/18/2016		3.95 (D)						
11/21/2016				5.05 (D)				
2/22/2017	5.6							
2/23/2017		3.2	2.1	4.1				
4/17/2017			1.8					
5/15/2017			1.8					
6/15/2017	5.8	4	1.9	4.8				
9/28/2017	6.2	4.6	1.9	6.7				
2/15/2018	6.2	5.4	2.3	8				
6/27/2018	5.9							
6/28/2018		9 (J-X)	2.1 (J-X)	5.5 (J-X)				
12/19/2018	6.2 (J-X)	6.2 (J-X)	1.9 (J-X)					
12/20/2018				8 (J-X)				
1/15/2019					2.4			
3/19/2019		7.1						
3/20/2019	6.6		2.3	6.6				
10/16/2019	6.6		2.3	6.4				
10/22/2019					2.1			
12/3/2019		7.7						
3/5/2020	5.8	7.6	1.8	5.8				
9/16/2020	6	7.9	1.8					
9/17/2020				6.1				
3/3/2021		8.1	1.9					
3/4/2021	5.8			5.6				
9/22/2021		7.1						
9/23/2021	6.1		1.9	6				
2/1/2022	6	7.6		5.8				
2/2/2022			1.8					
8/23/2022			1.97	6.42	4.2	4.94		
8/24/2022	6.53	7.96						
9/1/2022							10.8	6.24

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.001 (J)	0.0034 (J)	0.0058 (J)	0.0028 (J)	0.0447			
9/1/2016					0.0147			
9/7/2016						0.01 (J)	<0.01	
9/8/2016								<0.01
11/15/2016				0.003 (J)	0.0154 (B)			
11/16/2016	<0.01	0.0029 (J)	0.0051 (J)					
11/17/2016						0.0185	<0.01	<0.01
2/20/2017			0.0049 (J)	0.0047 (J)	0.014			
2/21/2017	<0.01	0.0036 (J)						
2/22/2017						0.0122	<0.01	<0.01
6/12/2017	0.0005 (J)		0.0052 (J)	0.0041 (J)	0.016			
6/13/2017		0.0038 (J)						
6/14/2017							<0.01	<0.01
6/15/2017						0.0117		
9/26/2017	0.0005 (J)	0.0045 (J)	0.0039 (J)	0.0037 (J)	0.0144			
9/27/2017							<0.01	<0.01
9/28/2017						0.0114		
2/13/2018	<0.01	<0.01	<0.01	<0.01	0.0144			
2/15/2018						0.011	<0.01	<0.01
6/26/2018	<0.01	0.008 (J)	0.0053 (J)	0.0043 (J)	0.015			
6/27/2018						0.0098 (J)	<0.01	<0.01
12/18/2018	<0.01	0.012	0.0032 (J)	0.0054 (J)	0.015		<0.01	<0.01
12/19/2018						0.0095 (J)		
8/27/2019	0.0004 (J)	0.0083 (J)	0.0055 (J)	0.0043 (J)	0.015		<0.01	
8/28/2019						0.013	<0.01	<0.01
10/15/2019	<0.01	0.0083 (J)	0.0047 (J)	0.0055 (J)	0.014			
10/16/2019							0.00049 (J)	<0.01
12/3/2019						0.011		
3/3/2020	0.00047 (J)	0.0098 (J)	0.0069 (J)	0.0057 (J)	0.011	0.0081 (J)		
3/5/2020							<0.01	<0.01
8/18/2020	0.00096 (J)	0.0085 (J)	0.0069 (J)	0.005 (J)	0.015			
8/19/2020						0.012	<0.01	<0.01
9/15/2020	<0.01	0.0082 (J)	0.0069 (J)	0.0048 (J)	0.014			
9/16/2020						0.012	<0.01	<0.01
3/1/2021	<0.01				0.011			
3/2/2021		0.0074	0.0064	0.0044 (J)				
3/3/2021				.,			<0.01	<0.01
3/4/2021						0.01		
9/21/2021			0.0064	0.0044 (J)				
9/22/2021	<0.01	0.0091	-	V-7	0.014	0.0091	<0.01	<0.01
2/1/2022	0.0013 (J)	0.0092	0.0066	0.0052	0.015	0.013	<0.01	<0.01
8/23/2022	<0.01	0.00908 (J)	0.00647 (J)	0.00435 (J)	0.0143		<0.01	• •
8/24/2022	y. <del></del> .	(0)	(0)	(0)		0.0127	9- <del>-</del> -	<0.01
J. LTI LULL						5.51L7		0.01

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	0.0019 (J)	0.0073 (J)		0.0014 (J)			
11/17/2016	0.0024 (J)						
11/18/2016		0.008 (J)					
11/21/2016				0.003 (J)			
2/22/2017	0.004 (J)						
2/23/2017		0.0086 (J)	0.001 (J)	0.0028 (J)			
4/17/2017			0.0018 (J)				
5/15/2017			0.0014 (J)				
6/15/2017	0.0033 (J)	0.0082 (J)	0.0013 (J)	0.0038 (J)			
9/28/2017	0.0052 (J)	0.0083 (J)	0.0014 (J)	0.0037 (J)			
2/15/2018	<0.01	0.0086 (J)	<0.01	0.0044 (J)			
6/27/2018	0.0062 (J)						
6/28/2018		0.0076 (J)	<0.01	0.0041 (J)			
12/19/2018	0.0073 (J)	0.0085 (J)	<0.01				
12/20/2018				0.0041 (J)			
1/15/2019					0.025		
8/28/2019	0.0071 (J)	0.0078 (J)	0.0017 (J)				
8/29/2019				0.0044 (J)			
10/16/2019	0.0064 (J)		0.0014 (J)	0.0038 (J)			
10/22/2019					0.02		
12/3/2019		0.007 (J)					
3/5/2020	0.0076 (J)	0.0087 (J)	0.0016 (J)	0.0038 (J)			
8/19/2020	0.0073 (J)	0.0094 (J)	0.0017 (J)	0.0043 (J)			
9/16/2020	0.0058 (J)	0.0064 (J)	0.0018 (J)				
9/17/2020				0.0042 (J)			
3/3/2021		0.0067	0.0014 (J)				
3/4/2021	0.0053			0.004 (J)			
9/22/2021		0.0065					
9/23/2021	0.0065		0.0016 (J)	0.004 (J)			
2/1/2022	0.0056	0.0068		0.0035 (J)			
2/2/2022			0.0015 (J)				
8/23/2022			<0.01	0.00398 (J)	0.0128	<0.01	
8/24/2022	0.00752 (J)	0.00713 (J)					
9/1/2022							<0.01

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0016 (J)	0.0034 (J)	0.0013 (J)	<0.001				
9/1/2016					<0.001			
9/7/2016						<0.001	0.0612	
9/8/2016								0.0029 (J)
11/15/2016				<0.001	<0.001			
11/16/2016	0.0006 (J)	0.003 (J)	<0.01 (o)					
11/17/2016						<0.001	0.0551	0.0028 (J)
2/20/2017			0.0012 (J)	0.0009 (J)	<0.001			
2/21/2017	<0.001	0.0028 (J)						
2/22/2017						<0.001	0.0567	0.0041 (J)
6/12/2017	<0.001		0.0011 (J)	0.0006 (J)	0.0003 (J)			
6/13/2017		0.0025 (J)						
6/14/2017							0.0557	0.0036 (J)
6/15/2017						<0.001		
9/26/2017	<0.001	0.002 (J)	0.0016 (J)	0.0005 (J)	0.0003 (J)			
9/27/2017							0.049	0.0028 (J)
9/28/2017						<0.001		
2/13/2018	<0.001	<0.001	<0.01 (o)	<0.001	<0.001			
2/15/2018						<0.001	0.0536	<0.001
6/26/2018	<0.001	0.0019 (J)	0.0009 (J)	0.00052 (J)	<0.001			
6/27/2018		. ,	. ,	. ,		<0.001	0.054	0.0041 (J)
12/18/2018	<0.001	0.0032 (J)	0.00062 (J)	<0.001	<0.001		0.049	0.0032 (J)
12/19/2018		. ,	. ,			<0.001		. ,
8/27/2019	<0.001	0.0012 (J)	0.00068 (J)	0.00042 (J)	<0.001		0.045	
8/28/2019		. ,	. ,	( )		<0.001	0.045	0.0037 (J)
10/15/2019	<0.001	0.00097 (J)	0.00083 (J)	<0.001	<0.001			(,,
10/16/2019		(,)					0.042	0.0043 (J)
10/17/2019						<0.001		(,,
12/3/2019						<0.001		
3/3/2020	<0.001	0.0015 (J)	0.00043 (J)	<0.001	0.0011 (J)	<0.001		
3/5/2020	0.001	0.0010 (0)	0.000 10 (0)	0.001	0.0011 (0)	0.001	0.037	0.0031 (J)
8/18/2020	<0.001	0.0014 (J)	0.00048 (J)	<0.001	0.00061 (J)		0.007	0.000 (0)
8/19/2020	40.001	0.0014 (0)	0.00040 (0)	<b>10.001</b>	0.00001 (0)	<0.001	0.036	0.0041 (J)
9/15/2020	<0.001	0.001 (J)	0.0005 (J)	<0.001	<0.001	<b>10.001</b>	0.000	0.0041 (3)
9/16/2020	10.001	0.001 (3)	0.0003 (3)	10.001	10.001	<0.001	0.034	0.0042 (J)
3/1/2021	<0.001				<0.001	<b>~</b> 0.001	0.034	0.0042 (3)
3/2/2021	<b>~0.001</b>	0.001 (J)	0.00053 (J)	<0.001	<b>~</b> 0.001			
3/3/2021		0.001 (3)	0.00033 (3)	<b>~0.001</b>			0.028	0.0046 (J)
3/4/2021						<0.001	0.028	0.0040 (3)
			0.00071 (1)	<0.001		<0.001		
9/21/2021	0.0015 (1)	-0.001	0.00071 (J)	<0.001	0.00078 (1)	-0.001	0.024	0.0075
9/22/2021	0.0015 (J)	<0.001	0.0007 (1)	~0.001	0.00078 (J)	<0.001	0.024	
2/1/2022	0.00079 (J)	0.0011 (J)	0.0007 (J)	<0.001	<0.001	<0.001	0.027	0.0044 (J)
8/23/2022	0.000767 (J)	0.000844 (J)	0.000553 (J)	<0.001	<0.001	-0.001	0.0639	0.00400
8/24/2022						<0.001		0.00438

Constituent: Cobalt (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	0.0023 (J)	<0.001		0.236				
11/17/2016	0.0012 (J)							
11/18/2016		<0.001						
11/21/2016				0.298				
2/22/2017	0.0008 (J)							
2/23/2017		<0.001	<0.001	0.277				
4/17/2017			<0.001					
5/15/2017			<0.001					
6/15/2017	0.0004 (J)	<0.001	<0.001	0.262				
9/28/2017	0.0003 (J)	<0.001	<0.001	0.279				
2/15/2018	<0.001	<0.001	<0.001	0.279				
6/27/2018	<0.001							
6/28/2018		<0.001	<0.001	0.23				
12/19/2018	<0.001	<0.001	<0.001					
12/20/2018				0.25				
1/15/2019					<0.001			
8/28/2019	<0.001	<0.001	<0.001					
8/29/2019				0.21				
10/16/2019	<0.001		<0.001	0.21				
10/17/2019		<0.001						
10/22/2019					0.00037 (J)			
12/3/2019		<0.001						
3/5/2020	<0.001	<0.001	<0.001	0.22				
8/19/2020	<0.001	<0.001	<0.001	0.22				
9/16/2020	<0.001	<0.001	<0.001					
9/17/2020				0.2				
3/3/2021		<0.001	<0.001					
3/4/2021	<0.001			0.2				
9/22/2021		<0.001						
9/23/2021	<0.001		<0.001	0.17				
2/1/2022	<0.001	<0.001		0.18				
2/2/2022			<0.001					
8/23/2022			<0.001	0.173	<0.001	<0.001		
8/24/2022	<0.001	<0.001						
9/1/2022							0.0056	0.0015

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.351 (U)	1 (U)	0.62 (U)	0.603 (U)				
9/1/2016					1.33			
9/7/2016						1.18	0.541 (U)	
9/8/2016								0.998 (U)
11/15/2016				0.645 (U)	0.412 (U)			
11/16/2016	0.824 (U)	0.43 (U)	0.493 (U)					
11/17/2016						0.145 (U)	1.02 (U)	0.613
2/20/2017			0.534 (U)	1.36	0.633 (U)			
2/21/2017	1.01 (U)	0.96 (U)						
2/22/2017						0.0213 (U)	0.482 (U)	1.01 (U)
6/12/2017	0.532 (U)		0.254 (U)	0.566 (U)	0.112 (U)			
6/13/2017		0.645 (U)						
6/14/2017		, ,					0.723 (U)	0.801 (U)
6/15/2017						0.41 (U)		
9/26/2017	0.845 (U)	0.299 (U)	0.62 (U)	0.762 (U)	0.167 (U)	, ,		
9/27/2017	,	,	,	,	,		1.5	1.44
9/28/2017						0.496 (U)		
2/13/2018	0.176 (U)	1.01 (U)	0.0914 (U)	0.349 (U)	0.347 (U)	. ,		
2/15/2018	,	. ,	, ,	,	,	0.672 (U)	1.14 (U)	0.668 (U)
6/26/2018	1.02 (U)	1.26 (J+X)	1.11 (U)	0.614 (U)	0.903 (U)	. ,	. ,	. ,
6/27/2018	, ,	, ,	. ,	. ,	. ,	0.692 (U)	1.3 (U)	1.06 (U)
12/18/2018	0.487 (U)	0.44 (U)	0.42 (U)	0.445 (U)	0.353 (U)	, ,	1.64 (UX)	1.22
12/19/2018	. ,	. ,	. ,	. ,	. ,	0.325 (U)	, ,	
8/27/2019	1.11	1.47	1.19	1.44	0.65 (U)	, ,	1.38	
8/28/2019						0.24 (U)		0.811 (U)
10/15/2019	1.02 (U)	0.807 (U)	0.714 (U)	0.467 (U)	0.402 (U)			
10/16/2019							1.16 (U)	0.561 (U)
12/18/2019						1.16 (U)		
3/3/2020	1.18 (U)	0.818 (U)	0.996 (U)	1.5	0.397 (U)	0.756 (U)		
3/5/2020							0.683 (U)	0.792 (U)
8/18/2020	0.0861 (U)	1.22 (U)	0.53 (U)	0.581 (U)	0.453 (U)			
8/19/2020						0.985 (U)	1.14 (U)	1.21 (U)
9/15/2020	0.0583 (U)	0.579 (U)	0.215 (U)	0.55 (U)	0.474 (U)			
9/16/2020						0.478 (U)	0.195 (U)	0.72 (U)
3/1/2021	0.127 (U)				0.215 (U)			
3/2/2021		0.342 (U)	0.409 (U)	0.362 (U)				
3/3/2021							0.708 (U)	1.12
3/4/2021						0.38 (U)		
9/21/2021			0.182 (U)	0.86 (U)				
9/22/2021	0.349 (U)	1.33 (U)			0.943 (U)	0.734 (U)	0.382 (U)	0.91 (U)
2/1/2022	0.233 (U)	0.251 (U)	1.23	0.23 (U)	0.349 (U)	0.503 (U)	0.583 (U)	0.535 (U)
8/23/2022	1.7	0.531	2.3	0.735	0.203		1.94	
8/24/2022						0.152		1.86

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	0.189 (U)	0.638 (U)		0.816 (U)			
11/17/2016	0.729 (U)						
11/18/2016		1.22 (U)					
11/21/2016				2.94			
2/22/2017	0.293 (U)						
2/23/2017		0.554 (U)	0.567 (U)	1.92			
4/17/2017			0.335 (U)				
5/15/2017			0.261 (U)				
6/15/2017	1.09	0.77 (U)	0.188 (U)	3.6			
9/28/2017	1.02 (U)	1.07 (U)	0.627 (U)	3.3			
2/15/2018	0.742 (U)	0.751 (U)	0.869 (U)	2.31 (J+X)			
6/27/2018	0.739 (U)						
6/28/2018		0.392 (U)	0.336 (U)	1.75 (UX)			
12/19/2018	0.465 (U)	0.693 (U)	0.454 (U)				
12/20/2018				2.8 (J+X)			
1/15/2019					<0.983		
8/28/2019	0.995 (U)	0.866 (U)	0.809 (U)				
8/29/2019				3.68			
10/16/2019	1.69		0.815 (U)	2.66			
10/22/2019					0.631 (U)		
12/18/2019		1.91					
3/5/2020	0.858 (U)	1.3	0.791 (U)	2.21			
8/19/2020	0.162 (U)	1.4	0.582 (U)	3.17			
9/16/2020	1.25 (U)	1.17 (U)	0.844 (U)				
9/17/2020				2.92			
3/3/2021		0.307 (U)	1.12				
3/4/2021	0.461 (U)			1.99			
9/22/2021		0.808 (U)					
9/23/2021	0.394 (U)		0.078 (U)	1.4			
2/1/2022	0.672 (U)	1.61 (U)		7.64			
2/2/2022			0.654 (U)				
8/23/2022			2.37	3.12	1.83	3.04	
8/24/2022	3.1	1.38					
9/1/2022							1.57

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

9/21/2016	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.11 (J)	0.05 (J)	0.07 (J)	0.19 (J)				
9/1/2016					0.06 (J)			
9/7/2016						0.22 (J)	0.19 (J)	
9/8/2016								0.17 (J)
11/15/2016				0.13 (J)	0.06 (J)			
11/16/2016	0.08 (J)	0.07 (J)	0.07 (J)					
11/17/2016						0.12 (J)	0.12 (J)	0.06 (J)
2/20/2017			0.06 (J)	0.08 (J)	0.04 (J)			
2/21/2017	0.14 (J)	0.05 (J)						
2/22/2017						0.11 (J)	0.21 (J)	0.17 (J)
6/12/2017	0.16 (J)		0.008 (J)	0.07 (J)	0.06 (J)			
6/13/2017		0.04 (J)						
6/14/2017							0.18 (J)	0.1 (J)
6/15/2017						0.05 (J)		
9/26/2017	0.14 (J)	<0.1	<0.1	0.04 (J)	<0.1			
9/27/2017	. ,			. ,			0.42	0.4
9/28/2017						0.05 (J)		
2/13/2018	<0.1	<0.1	<0.1	<0.1	<0.1	(-)		
2/15/2018			0	0		<0.1	0.42	<0.1
6/26/2018	0.085 (J)	0.048 (J)	0.045 (J)	0.072 (J)	0.041 (J)	-0.1	0.42	-0.1
6/27/2018	0.000 (0)	0.040 (0)	0.040 (0)	0.072 (0)	0.041 (0)	0.093 (J)	0.32	0.21 (J)
12/18/2018	0.085 (J)	<0.1	<0.1	<0.1	<0.1	0.000 (0)	0.28 (J)	0.12 (J)
	0.065 (3)	<b>~0.1</b>	<b>~0.1</b>	<b>~0.1</b>	<b>~0.1</b>	0.16 ( 1)	0.28 (3)	0.12 (0)
12/19/2018 3/19/2019	0.0655 (1D)	0.027 (1)	-0.1	0.06 (1)	0.02 (1)	0.16 (J)		
	0.0655 (JD)	0.037 (J)	<0.1	0.06 (J)	0.03 (J)	0.1 (J)	0.1471)	0.074 ( 1)
3/20/2019	.0.4	.0.4			.0.4		0.14 (J)	0.074 (J)
8/27/2019	<0.1	<0.1	<0.1	<0.1	<0.1	0.005 (1)	0.11 (J)	0.057 (1)
8/28/2019	.0.4	.0.4		0.045 (1)	.0.4	0.085 (J)	0.11 (J)	0.057 (J)
10/15/2019	<0.1	<0.1	<0.1	0.045 (J)	<0.1		2.47.40	2.42.40
10/16/2019							0.17 (J)	0.13 (J)
12/3/2019						0.2 (J)		
3/3/2020	0.066 (J)	0.05 (J)	<0.1	0.057 (J)	0.09 (J)	0.093 (J)		
3/5/2020							0.088 (J)	0.072 (J)
8/18/2020	<0.1	<0.1	<0.1	<0.1	<0.1			
8/19/2020						0.1	0.11	0.074 (J)
9/15/2020	<0.1	<0.1	<0.1	0.051 (J)	<0.1			
9/16/2020						0.1	0.085 (J)	0.077 (J)
3/1/2021	<0.1				<0.1			
3/2/2021		<0.1	<0.1	<0.1				
3/3/2021							0.069 (J)	0.071 (J)
3/4/2021						0.096 (J)		
9/21/2021			<0.1	0.056 (J)				
9/22/2021	<0.1	<0.1			<0.1	0.1	0.068 (J)	0.1
2/1/2022	<0.1	<0.1	<0.1	<0.1	<0.1	0.079 (J)	0.053 (J)	0.06 (J)
8/23/2022	<0.1	<0.1	<0.1	<0.1	<0.1		0.187	
8/24/2022						0.274		0.14

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	0.34	0.18 (J)		0.66				
11/17/2016	0.14 (J)							
11/18/2016		0.03 (J)						
11/21/2016				0.9 (D)				
2/22/2017	0.09 (J)							
2/23/2017		0.07 (J)	0.1 (J)	0.75				
4/17/2017			0.08 (J)					
5/15/2017			0.02 (J)					
6/15/2017	0.03 (J)	0.01 (J)	0.03 (J)	0.77				
9/28/2017	<0.1	<0.1	<0.1	0.8				
2/15/2018	<0.1	<0.1	<0.1	0.82				
6/27/2018	0.22 (J)							
6/28/2018		0.51 (J+X)	<0.1	1.5 (J+X)				
12/19/2018	0.11 (J)	<0.1	0.094 (J)					
12/20/2018				0.68				
1/15/2019					0.06 (J)			
3/19/2019		<0.1						
3/20/2019	0.088 (J)		0.062 (J)	0.95				
8/28/2019	0.056 (J)	<0.1	<0.1					
8/29/2019				0.9				
10/16/2019	0.08 (J)		0.059 (J)	0.61				
10/22/2019					<0.1			
12/3/2019		0.15 (J)						
3/5/2020	0.067 (J)	<0.1	0.05 (J)	0.92				
8/19/2020	0.06 (J)	0.051 (J)	0.055 (J)	0.95				
9/16/2020	0.062 (J)	<0.1	<0.1					
9/17/2020				0.68				
3/3/2021		<0.1	<0.1					
3/4/2021	0.076 (J)			0.83				
9/22/2021		0.054 (J)						
9/23/2021	0.073 (J)		<0.1	0.85				
2/1/2022	0.055 (J)	<0.1		0.95				
2/2/2022			<0.1					
8/23/2022			0.105	0.609	0.128	0.164		
8/24/2022	<0.1	0.194						
9/1/2022							1.43	0.14

Constituent: Lead (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	<0.002	<0.002	<0.002	<0.002				
9/1/2016					0.0001 (J)			
9/7/2016						<0.002	0.0002 (J)	
9/8/2016								<0.002
11/15/2016				<0.002	<0.002			
11/16/2016	<0.002	<0.002	<0.002					
11/17/2016						0.0001 (J)	0.0002 (J)	0.0001 (J)
2/20/2017			<0.002	0.0002 (J)	<0.002			
2/21/2017	<0.002	<0.002						
2/22/2017						<0.002	0.0001 (J)	0.0003 (J)
6/12/2017	8E-05 (J)		<0.002	0.0001 (J)	8E-05 (J)			
6/13/2017		<0.002						
6/14/2017							9E-05 (J)	<0.002
6/15/2017						<0.002		
9/26/2017	7E-05 (J)	7E-05 (J)	<0.002	0.0001 (J)	<0.002			
9/27/2017							7E-05 (J)	9E-05 (J)
9/28/2017						<0.002		
2/13/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
2/15/2018						<0.002	<0.002	<0.002
6/26/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
6/27/2018						<0.002	<0.002	<0.002
12/18/2018	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002
12/19/2018						<0.002		
8/27/2019	<0.002	5.8E-05 (J)	<0.002	0.00036 (J)	<0.002		0.00013 (J)	
8/28/2019						<0.002	0.00013 (J)	<0.002
10/15/2019	<0.002	<0.002	<0.002	7.9E-05 (J)	<0.002			
10/16/2019							8.8E-05 (J)	<0.002
12/3/2019						<0.002		
3/3/2020	<0.002	<0.002	<0.002	7.9E-05 (J)	7.3E-05 (J)	<0.002		
3/5/2020							8.7E-05 (J)	<0.002
8/18/2020	<0.002	<0.002	<0.002	0.0001 (J)	<0.002			
8/19/2020						<0.002	6E-05 (J)	<0.002
9/15/2020	<0.002	<0.002	0.0013 (J)	4.3E-05 (J)	<0.002			
9/16/2020						5.4E-05 (J)	6.3E-05 (J)	<0.002
3/1/2021	<0.002				<0.002			
3/2/2021		<0.002	3.7E-05 (J)	<0.002				
3/3/2021							5.8E-05 (J)	<0.002
3/4/2021						<0.002		
9/21/2021			<0.002	<0.002				
9/22/2021	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
2/1/2022	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
8/23/2022	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	
8/24/2022						<0.002		<0.002

Constituent: Lead (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	0.0001 (J)	<0.002		0.0004 (J)			
11/17/2016	0.0002 (J)						
11/18/2016		<0.002					
11/21/2016				0.0005 (J)			
2/22/2017	0.0001 (J)						
2/23/2017		<0.002	<0.002	0.0005 (J)			
4/17/2017			0.0001 (J)				
5/15/2017			<0.002				
6/15/2017	<0.002	<0.002	<0.002	0.0004 (J)			
9/28/2017	<0.002	<0.002	0.0001 (J)	0.0004 (J)			
2/15/2018	<0.002	<0.002	<0.002	0.00047 (J)			
6/27/2018	<0.002						
6/28/2018		<0.002	<0.002	0.00036 (J)			
12/19/2018	<0.002	<0.002	<0.002				
12/20/2018				0.00039 (J)			
1/15/2019					<0.002		
8/28/2019	<0.002	<0.002	<0.002				
8/29/2019				0.00035 (J)			
10/16/2019	<0.002		<0.002	0.00035 (J)			
10/22/2019					0.00035 (J)		
12/3/2019		<0.002					
3/5/2020	<0.002	<0.002	<0.002	0.00041 (J)			
8/19/2020	<0.002	4.7E-05 (J)	<0.002	0.00031 (J)			
9/16/2020	0.00012 (J)	<0.002	<0.002				
9/17/2020				0.00032 (J)			
3/3/2021		<0.002	<0.002				
3/4/2021	<0.002			0.00034 (J)			
9/22/2021		<0.002					
9/23/2021	<0.002		<0.002	<0.002			
2/1/2022	<0.002	<0.002		<0.002			
2/2/2022			<0.002				
8/23/2022			<0.002	<0.002	<0.002	<0.002	
8/24/2022	<0.002	<0.002					
9/1/2022							<0.002

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 0.0268 (J)	BRGWA-2S (bg) <0.01	BRGWA-5I (bg) <0.01	BRGWA-5S (bg) <0.01	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.0208 (3)	<b>~0.01</b>	<b>~0.01</b>	<b>~0.01</b>	0.003 (J)			
9/7/2016					0.003 (3)	<0.01	0.0092 (J)	
9/8/2016						<b>~0.01</b>	0.0092 (3)	<0.01
11/15/2016				<0.01	0.0033 (J)			<b>~0.01</b>
11/16/2016	0.0201 (J)	<0.01	0.0033 (J)	<b>~0.01</b>	0.0033 (3)			
11/17/2016	0.0201 (0)	40.01	0.0033 (0)			<0.01	0.0097 (J)	<0.01
2/20/2017			<0.01	<0.01	0.0025 (J)	<b>10.01</b>	0.0037 (0)	10.01
2/21/2017	0.0128 (J)	<0.01	<b>10.01</b>	<b>10.01</b>	0.0025 (0)			
2/22/2017	0.0120 (0)	40.01				<0.01	0.0106 (J)	<0.01
6/12/2017	0.0245 (J)		0.0019 (J)	<0.01	0.0027 (J)	<b>10.01</b>	0.0100 (0)	10.01
6/13/2017	0.0243 (3)	<0.01	0.0019 (3)	<b>~0.01</b>	0.0027 (3)			
6/14/2017		<b>~0.01</b>					0.0097 (J)	<0.01
6/15/2017						<0.01	0.0037 (0)	10.01
9/26/2017	0.0549	<0.01	0.0022 (J)	<0.01	0.0023 (J)	<b>10.01</b>		
9/27/2017	0.0349	<b>~0.01</b>	0.0022 (3)	<b>~0.01</b>	0.0023 (3)		0.0099 (J)	<0.01
9/28/2017						<0.01	0.0099 (3)	<b>~0.01</b>
2/13/2018	0.0595	<0.01	0.0041 (J)	<0.01	0.0027 (J)	<b>~0.01</b>		
2/15/2018	0.0595	<0.01	0.0041 (3)	<0.01	0.0027 (3)	<0.01	0.0106 (J)	<0.01
6/26/2018	0.089	<0.01	0.0025 (J)	<0.01	0.0029 (J)	<0.01	0.0100 (3)	<b>\0.01</b>
6/27/2018	0.069	<b>~0.01</b>	0.0023 (3)	<b>~0.01</b>	0.0029 (3)	<0.01	0.01 (J)	<0.01
12/18/2018	0.024 (J)	<0.01	0.0032 (J)	<0.01	0.0026 (J)	<b>~0.01</b>	0.01 (J)	<0.01
12/19/2018	0.024 (3)	<b>~0.01</b>	0.0032 (3)	<b>~0.01</b>	0.0020 (3)	<0.01	0.011(3)	<b>~0.01</b>
8/27/2019	0.035	<0.01	0.0019 (J)	<0.01	0.0028 (J)	<b>~0.01</b>	0.01 (J)	
8/28/2019	0.033	40.01	0.0013 (0)	<b>10.01</b>	0.0020 (0)	0.00097 (J)	0.01 (J)	0.0009 (J)
10/15/2019	0.028 (J)	<0.01	0.002 (J)	<0.01	0.0024 (J)	0.00097 (3)	0.01 (3)	0.0009 (3)
10/15/2019	0.028 (3)	<b>~0.01</b>	0.002 (3)	<b>~0.01</b>	0.0024 (3)		0.0098 (J)	0.00078 (J)
12/3/2019						0.001 (J)	0.0030 (0)	0.00070 (3)
3/3/2020	0.055	<0.01	0.0013 (J)	<0.01	0.0026 (J)	<0.01		
3/5/2020	0.033	<b>~0.01</b>	0.0013 (3)	<b>~0.01</b>	0.0020 (3)	<b>~0.01</b>	0.011 (J)	0.00089 (J)
8/18/2020	0.054	<0.01	0.00095 (J)	<0.01	0.0026 (J)		0.011(3)	0.00089 (3)
8/19/2020	0.004	40.01	0.00033 (3)	40.01	0.0020 (0)	0.001 (J)	0.009 (J)	0.00082 (J)
9/15/2020	0.033	<0.01	0.001 (J)	<0.01	0.0027 (J)	0.001 (3)	0.009 (3)	0.00082 (3)
9/16/2020	0.033	<b>~0.01</b>	0.001 (3)	<b>~0.01</b>	0.0027 (3)	0.00096 (J)	0.0089 (J)	<0.01
3/1/2021	0.027 (J)				0.0036 (J)	0.00030 (3)	0.0003 (3)	<b>10.01</b>
3/2/2021	0.027 (3)	<0.01	0.00081 (J)	<0.01	0.0030 (0)			
3/3/2021		40.01	0.00001 (0)	<b>10.01</b>			0.0085 (J)	0.00096 (J)
3/4/2021						0.00086 (J)	0.0083 (3)	0.00090 (3)
9/21/2021			0.0012 (J)	<0.01		0.00000 (0)		
9/22/2021	0.021 (J)	<0.01	5.0012 (0)	3.01	0.0035 (J)	0.0011 (J)	0.008 (J)	<0.01
2/1/2022	0.021 (J) 0.023 (J)	<0.01	0.0011 (J)	<0.01	0.0035 (J) 0.0029 (J)	0.00011 (J)	0.008 (J)	0.00085 (J)
8/23/2022	0.023 (3)	<0.01	<0.01	<0.01	0.0029 (J) 0.00314 (J)	5.00000 (J)	0.0109	0.00000 (0)
8/24/2022	J.UZUZ	-0.01	-0.01	-0.01	3.000 i <del> +</del> (0)	<0.01	0.0100	<0.01
0/27/2022						-0.01		-0.01

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	0.0021 (J)	0.0024 (J)		0.0193 (J)			
11/17/2016	0.0022 (J)						
11/18/2016		0.0026 (J)					
11/21/2016				0.0223 (J)			
2/22/2017	0.0023 (J)						
2/23/2017		0.0026 (J)	<0.01	0.0229 (J)			
4/17/2017			<0.01				
5/15/2017			<0.01				
6/15/2017	0.0023 (J)	0.0026 (J)	<0.01	0.0227 (J)			
9/28/2017	0.0021 (J)	0.0025 (J)	<0.01	0.023 (J)			
2/15/2018	0.0021 (J)	<0.01	<0.01	0.0254 (J)			
6/27/2018	0.0021 (J)						
6/28/2018		0.0022 (J)	<0.01	0.021 (J)			
12/19/2018	0.0021 (J)	0.0026 (J)	<0.01				
12/20/2018				0.022 (J)			
1/15/2019					0.0017 (J)		
8/28/2019	0.0021 (J)	0.0025 (J)	<0.01				
8/29/2019				0.021 (J)			
10/16/2019	0.0022 (J)		<0.01	0.02 (J)			
10/22/2019					0.001 (J)		
12/3/2019		0.0024 (J)					
3/5/2020	0.0021 (J)	0.0025 (J)	<0.01	0.021 (J)			
8/19/2020	0.0021 (J)	0.0024 (J)	<0.01	0.021 (J)			
9/16/2020	0.002 (J)	0.0022 (J)	<0.01				
9/17/2020				0.02 (J)			
3/3/2021		0.0024 (J)	<0.01				
3/4/2021	0.0021 (J)			0.021 (J)			
9/22/2021		0.0026 (J)					
9/23/2021	0.0022 (J)		<0.01	0.019 (J)			
2/1/2022	0.0021 (J)	0.0023 (J)		0.02 (J)			
2/2/2022			<0.01				
8/23/2022			<0.01	0.0214	<0.01	0.0171	
8/24/2022	<0.01	<0.01					
9/1/2022							0.00615 (J)

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.0002	BRGWA-2S (bg) <0.0002	BRGWA-5I (bg) <0.0002	BRGWA-5S (bg) <0.0002	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	-0.0002	-0.0002	-0.0002	-0.0002	<0.0002			
9/7/2016					0.0002	<0.0002	<0.0002	
9/8/2016						0.0002	0.0002	<0.0002
11/15/2016				<0.0002	<0.0002			0.0002
11/16/2016	<0.0002	<0.0002	<0.0002	0.0002	0.0002			
11/17/2016						<0.0002	<0.0002	<0.0002
2/20/2017			<0.0002	8E-05 (J)	<0.0002			
2/21/2017	<0.0002	<0.0002		(-)				
2/22/2017						<0.0002	<0.0002	<0.0002
6/12/2017	4E-05 (J)		<0.0002	<0.0002	<0.0002			
6/13/2017	.,	<0.0002						
6/14/2017							7E-05 (J)	7E-05 (J)
6/15/2017						6E-05 (J)		
9/26/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
9/27/2017							4E-05 (J)	4E-05 (J)
9/28/2017						<0.0002		
2/13/2018	0.00021	0.00019 (J)	<0.0002	0.00013 (J)	<0.0002			
2/15/2018						<0.0002	<0.0002	<0.0002
6/26/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
6/27/2018						<0.0002	<0.0002	<0.0002
12/18/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
12/19/2018						<0.0002		
8/27/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	
8/28/2019						<0.0002	<0.0002	<0.0002
8/18/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
8/19/2020						8.4E-05 (J)	<0.0002	0.00012 (J)
9/15/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
9/16/2020						<0.0002	<0.0002	<0.0002
3/1/2021	<0.0002				<0.0002			
3/2/2021		<0.0002	<0.0002	<0.0002				
3/3/2021							<0.0002	<0.0002
3/4/2021						<0.0002		
9/21/2021			0.0001 (J)	0.0001 (J)				
9/22/2021	0.0001 (J)	0.0001 (J)			0.0001 (J)	0.0001 (J)	0.00012 (J)	0.00015 (J)
2/1/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/23/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	
8/24/2022						<0.0002		<0.0002

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

9/7/2016	BRGWC-35S <0.0002	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
0/7/2016	<0.0002						
9///2010		<0.0002		7E-05 (J)			
11/17/2016	<0.0002						
11/18/2016		<0.0002					
11/21/2016				0.00012 (J)			
2/22/2017	<0.0002						
2/23/2017		<0.0002	<0.0002	7E-05 (J)			
4/17/2017			<0.0002				
5/15/2017			<0.0002				
6/15/2017	7E-05 (J)	7E-05 (J)	6E-05 (J)	0.00016 (J)			
9/28/2017	<0.0002	<0.0002	<0.0002	0.00011 (J)			
2/15/2018	<0.0002	<0.0002	<0.0002	0.00015 (J)			
6/27/2018	<0.0002						
6/28/2018		<0.0002	<0.0002	<0.0002 (X)			
12/19/2018	<0.0002	<0.0002	<0.0002				
12/20/2018				0.00017 (J)			
1/15/2019					<0.0002		
8/28/2019	<0.0002	<0.0002	<0.0002				
8/29/2019				0.00018 (J)			
8/19/2020	0.00013 (J)	0.00013 (J)	0.00014 (J)	0.00018 (J)			
9/16/2020	<0.0002	<0.0002	<0.0002				
9/17/2020				0.00011 (J)			
3/3/2021		<0.0002	<0.0002				
3/4/2021	<0.0002			8.5E-05 (J)			
9/22/2021		0.0001 (J)					
9/23/2021	0.00011 (J)		0.00011 (J)	0.00022			
2/1/2022	<0.0002	<0.0002		<0.0002			
2/2/2022			<0.0002				
8/23/2022			<0.0002	0.000117 (J)	<0.0002	<0.0002	
8/24/2022	<0.0002	<0.0002					
9/1/2022							<0.0002

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Bright									
1912 18    1912 19				,		BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
98/2016		0.0021 (J)	<0.001	0.004 (J)	<0.001				
11152076						<0.001			
11/152016							<0.001	<0.001	
11/162016									<0.001
111172016					<0.001	<0.001			
2202017		<0.001	<0.001	0.0038 (J)					
							<0.001	<0.001	<0.001
				0.0055 (J)	<0.001	<0.001			
6/12/2017   0.0021 (J)		0.0021 (J)	<0.001						
6/13/2017							<0.001	<0.001	<0.001
6/14/2017		0.0021 (J)		0.005 (J)	<0.001	<0.001			
6/15/2017			<0.001						
9262017   0.0011 ()   0.001   0.0053 ()   0.001   0.00								<0.001	<0.001
9927/2017							<0.001		
9/28/2017		0.0011 (J)	<0.001	0.0053 (J)	<0.001	<0.001			
2/13/2018								<0.001	<0.001
2/15/2018							<0.001		
6/26/2018   < <		0.0019 (J)	<0.001	0.008 (J)	<0.001	<0.001			
6/27/2018							<0.001	<0.001	<0.001
12/18/2018   <0.001   <0.001   0.0048 (J)   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <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		<0.001	<0.001	0.0041 (J)	<0.001	<0.001			
12/19/2018							<0.001		
8/27/2019   <0.001		<0.001	<0.001	0.0048 (J)	<0.001	<0.001		<0.001	<0.001
8/28/2019							<0.001		
10/15/2019   <0.001   <0.001   0.0035 (J)   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <0.001   <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		<0.001	<0.001	0.0028 (J)	<0.001	<0.001			
10/16/2019							<0.001	<0.001	<0.001
12/3/2019		<0.001	<0.001	0.0035 (J)	<0.001	<0.001			
3/3/2020   \$\cdot 0.001   \$\cdot 0								<0.001	<0.001
3/5/2020									
8/18/2020 0.0011 (J) <0.001 0.0015 (J) <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.00		<0.001	<0.001	0.0023 (J)	<0.001	<0.001	<0.001		
8/19/2020								<0.001	<0.001
9/15/2020		0.0011 (J)	<0.001	0.0015 (J)	<0.001	<0.001			
9/16/2020							<0.001	<0.001	<0.001
3/1/2021   <0.001   <0.001   <0.001   <0.001     <0.001		0.0007 (J)	<0.001	0.0015 (J)	<0.001	<0.001			
3/2/2021 < 0.001  0.0015 (J) < 0.001  3/3/2021							<0.001	<0.001	<0.001
3/3/2021		<0.001				<0.001			
3/4/2021       <0.001	3/2/2021		<0.001	0.0015 (J)	<0.001				
9/21/2021     0.0012 (J)     <0.001								<0.001	<0.001
9/22/2021     0.0012 (J)     <0.001							<0.001		
2/1/2022 0.0013 (J) <0.001 0.002 (J) <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001				0.002 (J)	<0.001				
8/23/2022 0.0024 <0.001 0.00151 <0.001 <0.001 <0.001		0.0012 (J)	<0.001			<0.001	<0.001	<0.001	
							<0.001		<0.001
8/24/2022 <0.001 <0.001		0.0024	<0.001	0.00151	<0.001	<0.001		<0.001	
	8/24/2022						<0.001		<0.001

Constituent: Molybdenum (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	<0.001	<0.001		<0.001			
11/17/2016	<0.001						
11/18/2016		<0.001					
11/21/2016				<0.001			
2/22/2017	<0.001						
2/23/2017		<0.001	<0.001	<0.001			
4/17/2017			<0.001				
5/15/2017			<0.001				
6/15/2017	<0.001	<0.001	<0.001	<0.001			
9/28/2017	<0.001	<0.001	<0.001	<0.001			
2/15/2018	<0.001	<0.001	<0.001	<0.001			
6/27/2018	<0.001						
6/28/2018		<0.001	<0.001	<0.001			
12/19/2018	<0.001	<0.001	<0.001				
12/20/2018				<0.001			
1/15/2019					<0.001		
8/28/2019	<0.001	<0.001	<0.001				
8/29/2019				<0.001			
10/16/2019	<0.001		<0.001	<0.001			
10/22/2019					<0.001		
12/3/2019		<0.001					
3/5/2020	<0.001	<0.001	<0.001	<0.001			
8/19/2020	<0.001	<0.001	<0.001	<0.001			
9/16/2020	<0.001	<0.001	<0.001				
9/17/2020				<0.001			
3/3/2021		<0.001	<0.001				
3/4/2021	<0.001			<0.001			
9/22/2021		<0.001					
9/23/2021	<0.001		<0.001	<0.001			
2/1/2022	<0.001	<0.001		<0.001			
2/2/2022			<0.001				
8/23/2022			<0.001	<0.001	<0.001	0.00265	
8/24/2022	<0.001	<0.001					
9/1/2022							0.00142

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 7.16	BRGWA-2S (bg)	BRGWA-5I (bg) 6.53	BRGWA-5S (bg) 6.59	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	7.10	0.2	0.55	0.59	6.49			
9/7/2016					0.43	6.36	4.92	
9/8/2016						0.30	4.32	5.84
11/15/2016				6.67	6.59			3.64
11/16/2016	6.96	6.12	6.4	0.07	0.55			
11/17/2016	0.50	0.12	0.4			6.28	4.82	5.81
2/20/2017			6.44	6.65	6.61	0.20	4.02	5.61
2/21/2017	7.15	6.24	0.44	0.03	0.01			
2/22/2017	7.13	0.24				6.4	4.86	5.85
6/12/2017	7.31		6.4	6.64		0.4	4.00	0.00
6/13/2017	7.01	6.19	0	0.01				
6/14/2017		0.10					4.86	5.87
9/26/2017	7.02	6.15	6.31	6.58	6.47			
9/27/2017							4.78	5.74
9/28/2017						6.35		
2/13/2018	7.44	6.18	6.62	6.72	6.54			
2/15/2018						6.35	4.84	5.93
6/26/2018	6.93	6.05	6.29	6.43	6.23			
6/27/2018						6.35	4.73	5.68
12/18/2018	6.76	5.92	6.57	6.7	6.71		4.84	5.97
12/19/2018						6.56		
3/19/2019	6.87	6.18	6.45	6.63	6.18	6.43		
3/20/2019							4.77	5.84
8/27/2019	6.79	6.09	6.37	6.49	6.35		4.78	
8/28/2019						6.25	5.52	5.8
10/15/2019	6.57	6.06	6.77	7.01	6.36			
10/16/2019							4.78	5.85
10/17/2019						6.3		
3/3/2020	6.71	6.1	6.29	6.49	6.59	6.34		
3/5/2020							4.82	5.89
8/18/2020	6.59	6.06	6.29	6.41	6.33			
8/19/2020						6.24	4.78	5.78
9/15/2020	6.64	6.01	6.27	6.25	6.43			
9/16/2020						6.26	4.78	5.81
3/1/2021	6.66				6.7			
3/2/2021		6.2	6.47	6.42				
3/3/2021							4.83	5.88
3/4/2021						6.45		
9/21/2021			6.32	6.36				
9/22/2021	6.78	6.06			6.48	6.22	4.81	5.93
2/1/2022	6.83	5.95	6.38	6.39	6.54	6.39	4.82	5.87
8/23/2022	6.67	5.95	6.24	6.36	6.51		4.67	
8/24/2022						6.62		5.75

Constituent: pH, Field (S.U.) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D
9/7/2016	6.1	5.59		5.43		
9/23/2016				5.46		
9/26/2016					5.68	
11/17/2016	6.04					
11/18/2016		5.51				
11/21/2016				4.84		
2/22/2017	6.08					
2/23/2017		5.65	5.57	4.73		
9/28/2017	6.03	5.62	5.76	4.37		
2/15/2018	6.02	5.66	5.95	4.3		
6/27/2018	6.01					
6/28/2018		5.57	5.78	4.16		
12/19/2018	6.22	5.76	6.07			
12/20/2018				4.21		
1/15/2019					5.52	
3/19/2019		5.72				
3/20/2019	6.06		5.93	4.34		
8/28/2019	5.95	5.52	5.8			
8/29/2019				4.01		
10/16/2019	6.03		5.81	4.21		
10/17/2019		5.61				
10/22/2019					5.49	
3/5/2020	6.04	5.39	5.53	4.01		
8/19/2020	5.97	5.53	5.66	4.12		
9/16/2020	5.96	5.58	5.84			
9/17/2020				4.17		
3/3/2021		5.86	5.87			
3/4/2021	6.14			4.19		
9/22/2021		5.53				
9/23/2021	6.08		5.85	4.05		
2/1/2022	6.09	5.65		4.06		
2/2/2022			5.8			
8/23/2022			5.82	3.97	5.46	7.18
8/24/2022	6.05	5.59				

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	<0.005	<0.005	<0.005	<0.005				
9/1/2016					<0.005			
9/7/2016						0.0024 (J)	0.0032 (J)	
9/8/2016								<0.005
11/15/2016				<0.005	<0.005			
11/16/2016	<0.005	<0.005	<0.005					
11/17/2016						0.0028 (J)	0.0028 (J)	<0.005
2/20/2017			<0.005	<0.005	<0.005			
2/21/2017	<0.005	<0.005						
2/22/2017						0.0018 (J)	0.0018 (J)	<0.005
6/12/2017	<0.005		<0.005	<0.005	<0.005			
6/13/2017		<0.005						
6/14/2017							0.004 (J)	<0.005
6/15/2017						0.0024 (J)		
9/26/2017	<0.005	<0.005	<0.005	<0.005	<0.005			
9/27/2017							0.0036 (J)	<0.005
9/28/2017						<0.005		
2/13/2018	<0.005	<0.005	<0.005	<0.005	<0.005			
2/15/2018						<0.005	<0.005	<0.005
6/26/2018	<0.005	<0.005	<0.005	<0.005	<0.005			
6/27/2018						0.002 (J)	0.0017 (J)	<0.005
12/18/2018	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
12/19/2018						0.0014 (J)		
8/27/2019	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	
8/28/2019						0.003 (J)	<0.005	<0.005
10/15/2019	<0.005	<0.005	<0.005	<0.005	<0.005			
10/16/2019							0.0028 (J)	<0.005
12/3/2019						0.0041 (J)		
3/3/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.0019 (J)		
3/5/2020							<0.005	<0.005
8/18/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
8/19/2020						0.003 (J)	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
9/16/2020						<0.005	0.0028 (J)	<0.005
3/1/2021	<0.005				<0.005			
3/2/2021		<0.005	<0.005	<0.005				
3/3/2021							<0.005	<0.005
3/4/2021						<0.005		
9/21/2021			<0.005	<0.005				
9/22/2021	<0.005	<0.005			<0.005	0.0015 (J)	<0.005	<0.005
2/1/2022	<0.005	<0.005	<0.005	<0.005	<0.005	0.0021 (J)	<0.005	<0.005
8/23/2022	<0.005	<0.005	<0.005	<0.005	<0.005		0.0061	
8/24/2022						0.00208 (J)		<0.005

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	<0.005	0.0079 (J)		0.0311			
11/17/2016	<0.005						
11/18/2016		0.0082 (J)					
11/21/2016				0.0409			
2/22/2017	<0.005						
2/23/2017		0.0061 (J)	<0.005	0.0354			
4/17/2017			<0.005				
5/15/2017			<0.005				
6/15/2017	<0.005	0.0046 (J)	<0.005	0.0511			
9/28/2017	<0.005	0.0042 (J)	<0.005	0.0484			
2/15/2018	<0.005	0.0045 (J)	<0.005	0.0435			
6/27/2018	<0.005						
6/28/2018		0.0033 (J)	<0.005	0.037			
12/19/2018	<0.005	0.0042 (J)	<0.005				
12/20/2018				0.037			
1/15/2019					0.0033 (J)		
8/28/2019	<0.005	0.0041 (J)	<0.005				
8/29/2019				0.036			
10/16/2019	<0.005		<0.005	0.033			
10/22/2019					0.0033 (J)		
12/3/2019		0.0035 (J)					
3/5/2020	<0.005	0.0034 (J)	<0.005	0.032			
8/19/2020	<0.005	0.002 (J)	<0.005	0.041			
9/16/2020	<0.005	0.0031 (J)	<0.005				
9/17/2020				0.029			
3/3/2021		0.0024 (J)	<0.005				
3/4/2021	<0.005			0.039			
9/22/2021		0.0032 (J)					
9/23/2021	<0.005		<0.005	0.031			
2/1/2022	<0.005	0.0025 (J)		0.029			
2/2/2022			<0.005				
8/23/2022			<0.005	0.0296	0.00157 (J)	<0.005	
8/24/2022	<0.005	0.00246 (J)					
9/1/2022							0.00625

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	7.5	0.38 (J)	2.7	0.81 (J)				
9/1/2016					0.6 (J)			
9/7/2016						97	260	
9/8/2016								420
11/15/2016				<1 (J)	0.68 (J)			
11/16/2016	6.6	<1 (J)	3.4					
11/17/2016						120 (D)	235 (D)	445 (D)
2/20/2017			3.9 (B-01)	1 (B-01)	0.98 (J)			
2/21/2017	6.1	1.5						
2/22/2017						120	210	410
6/12/2017	5		3.7	0.94 (J)	0.54 (J)			
6/13/2017		0.67 (J)						
6/14/2017							200	410
6/15/2017						130		
9/26/2017	5.4	0.62 (J)	4.1	0.92 (J)	0.53 (J)			
9/27/2017							200	360
9/28/2017						120		
2/13/2018	4.7 (J)	<1	6.6	<1	<1			
2/15/2018						109	197	335
6/26/2018	6.2	0.69 (J)	3.5	0.91 (J)	0.54 (J)			
6/27/2018						118	200	296
12/18/2018	5.9	0.72 (J)	4.3	0.68 (J)	0.39 (J)		222	345
12/19/2018						125		
3/19/2019	6 (D)	0.78 (J)	3	0.74 (J)	0.68 (J)	126		
3/20/2019							204	329
10/15/2019	5.2	0.47 (J)	3.8	0.68 (J)	0.48 (J)			
10/16/2019							226	325
12/3/2019						180		
3/3/2020	7.1	0.93 (J)	2.8	0.71 (J)	2.5	95.4		
3/5/2020							173	287
9/15/2020	5.9	<1	1.7	<1	<1			
9/16/2020						151	154	283
3/1/2021	4.7				0.74 (J)			
3/2/2021		<1	2.2	<1				
3/3/2021							133	277
3/4/2021						122		
9/21/2021			2.3	<1				
9/22/2021	5.2	<1			<1	123	94.6	232
2/1/2022	5.4	<1	2	<1	<1	139	99.7	243
8/23/2022	5.66	0.452	2.21	0.521	0.479		385	
8/24/2022						157		268

Constituent: Sulfate (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	260	300		440				
11/17/2016	285 (D)							
11/18/2016		245 (D)						
11/21/2016				490 (D)				
2/22/2017	270							
2/23/2017		330	0.55 (J)	470				
4/17/2017			0.44 (J)					
5/15/2017			0.45 (J)					
6/15/2017	280	310	0.46 (J)	490				
9/28/2017	240	290	0.49 (J)	470				
2/15/2018	266	292	1.9 (o)	432				
6/27/2018	278							
6/28/2018		284	0.24 (J)	453				
12/19/2018	287	319	0.4 (J)					
12/20/2018				463				
1/15/2019					152			
3/19/2019		307						
3/20/2019	268		<1 (X)	405				
10/16/2019	277		0.29 (J)	432				
10/22/2019					93.2			
12/3/2019		256						
3/5/2020	269	262	<1	370				
9/16/2020	270	256	<1					
9/17/2020				356				
3/3/2021		252	<1					
3/4/2021	251			325				
9/22/2021		234						
9/23/2021	258		<1	318				
2/1/2022	256	195		287				
2/2/2022			<1					
8/23/2022			0.307 (J)	389	51	348		
8/24/2022	279	224						
9/1/2022							172	340

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.002	BRGWA-2S (bg) <0.002	BRGWA-5I (bg) <0.002	BRGWA-5S (bg) <0.002	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	<0.002	<0.002	<0.002	<0.002	<0.002			
9/7/2016					<0.002	<0.002	0.0002 (J)	
						<0.002	0.0002 (3)	<0.000
9/8/2016								<0.002
11/15/2016	-0.000	-0.000	-0.000	<0.002	<0.002			
11/16/2016	<0.002	<0.002	<0.002			-0.000	0.0000 (1)	-0.000
11/17/2016			-0.000	-0.000	-0.000	<0.002	0.0002 (J)	<0.002
2/20/2017	.0.000		<0.002	<0.002	<0.002			
2/21/2017	<0.002	<0.002				-0.000	0.0000 (1)	-0.000
2/22/2017	.0.000					<0.002	0.0002 (J)	<0.002
6/12/2017	<0.002		<0.002	<0.002	<0.002			
6/13/2017		<0.002						
6/14/2017							0.0002 (J)	<0.002
6/15/2017						<0.002		
9/26/2017	<0.002	<0.002	<0.002	<0.002	<0.002			
9/27/2017							0.0002 (J)	<0.002
9/28/2017						<0.002		
2/13/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
2/15/2018						<0.002	0.00024 (J)	<0.002
6/26/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
6/27/2018						<0.002	0.00022 (J)	<0.002
12/18/2018	<0.002	<0.002	<0.002	<0.002	<0.002		0.00022 (J)	<0.002
12/19/2018						<0.002		
8/27/2019	<0.002	<0.002	<0.002	<0.002	<0.002		0.00016 (J)	
8/28/2019						<0.002	0.00016 (J)	<0.002
10/15/2019	<0.002	<0.002	<0.002	<0.002	<0.002			
10/16/2019							0.00019 (J)	<0.002
12/3/2019						6.6E-05 (J)		
3/3/2020	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
3/5/2020							0.0002 (J)	<0.002
8/18/2020	<0.002	<0.002	<0.002	<0.002	<0.002			
8/19/2020						<0.002	0.00018 (J)	<0.002
9/15/2020	<0.002	<0.002	<0.002	<0.002	<0.002			
9/16/2020						<0.002	0.00018 (J)	<0.002
3/1/2021	<0.002				<0.002			
3/2/2021		<0.002	<0.002	<0.002				
3/3/2021							0.00018 (J)	<0.002
3/4/2021						<0.002		
9/21/2021			<0.002	<0.002				
9/22/2021	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
2/1/2022	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
8/23/2022	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	
8/24/2022						<0.002		<0.002

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70
9/7/2016	<0.002	<0.002		<0.002			
11/17/2016	<0.002						
11/18/2016		<0.002					
11/21/2016				0.0004 (J)			
2/22/2017	<0.002						
2/23/2017		<0.002	<0.002	0.0003 (J)			
4/17/2017			<0.002				
5/15/2017			<0.002				
6/15/2017	<0.002	<0.002	<0.002	0.0003 (J)			
9/28/2017	<0.002	<0.002	<0.002	0.0003 (J)			
2/15/2018	<0.002	<0.002	<0.002	0.00026 (J)			
6/27/2018	<0.002						
6/28/2018		<0.002	<0.002	0.00018 (J)			
12/19/2018	<0.002	<0.002	<0.002				
12/20/2018				<0.002 (X)			
1/15/2019					<0.002		
8/28/2019	<0.002	<0.002	<0.002				
8/29/2019				0.00021 (J)			
10/16/2019	<0.002		<0.002	0.0002 (J)			
10/22/2019					<0.002		
12/3/2019		<0.002					
3/5/2020	<0.002	<0.002	<0.002	0.0002 (J)			
8/19/2020	<0.002	<0.002	<0.002	0.00019 (J)			
9/16/2020	<0.002	<0.002	<0.002				
9/17/2020				0.00017 (J)			
3/3/2021		<0.002	<0.002				
3/4/2021	<0.002			<0.002			
9/22/2021		<0.002					
9/23/2021	<0.002		<0.002	0.00022 (J)			
2/1/2022	<0.002	<0.002		<0.002			
2/2/2022			<0.002				
8/23/2022			<0.002	<0.002	<0.002	<0.002	
8/24/2022	<0.002	<0.002					
9/1/2022							<0.002

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

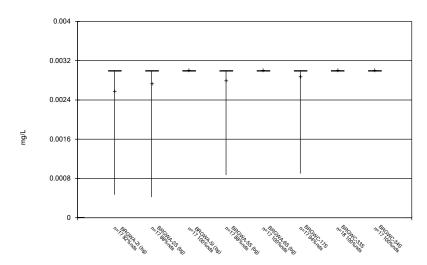
	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	151	88	138	154				
9/1/2016					299			
9/7/2016						331	382	
9/8/2016								663
11/15/2016				123	41			
11/16/2016	69	41	77					
11/17/2016						308	382	651
2/20/2017			170	158	133			
2/21/2017	68	<10						
2/22/2017						341	387	706
6/12/2017	161		132	142	61			
6/13/2017		53						
6/14/2017							316	643
6/15/2017						333		
9/26/2017	167	45	108	138	29			
9/27/2017							303	579
9/28/2017						310		
2/13/2018	165	63	141	150	61			
2/15/2018						292	332	612
6/26/2018	188	71	133	154	71			
6/27/2018						353 (X)	538 (X)	359 (X)
12/18/2018	145 (X)	78 (X)	138 (X)	147	70 (X)		358	535
12/19/2018						317		
3/19/2019	146.5 (D)	68	130	146	72	303		
3/20/2019							338	517
10/15/2019	140	66	175	144	63			
10/16/2019							281	473
12/3/2019						378		
3/3/2020	155	41	<10	130	54	263		
3/5/2020							292	489
9/15/2020	116	69	100	116	79			
9/16/2020						316	88	392
3/1/2021	98				39			
3/2/2021		43	80	96				
3/3/2021							212	422
3/4/2021						316		
9/21/2021			108	104				
9/22/2021	129	66			62	323	190	406
2/1/2022	126	72	129	124	61	354	209	449
8/23/2022	117	45	107	101	52		614	
8/24/2022						370		452

Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-70	PZ-52D
9/7/2016	486	528		750				
11/17/2016	453							
11/18/2016		524						
11/21/2016				795				
2/22/2017	541							
2/23/2017		517	45	733				
4/17/2017			53					
5/15/2017			48					
6/15/2017	548	566	63	812				
9/28/2017	487	475	39	690				
2/15/2018	500	513	54	722				
6/27/2018	347 (X)							
6/28/2018		499	59 (X)	704				
12/19/2018	489	521	68					
12/20/2018				642				
1/15/2019					284			
3/19/2019		498						
3/20/2019	501		68 (X)	615				
10/16/2019	481		49	630				
10/22/2019					203			
12/3/2019		498						
3/5/2020	535	457	39	608				
9/16/2020	474	463	31					
9/17/2020				587				
3/3/2021		442	33					
3/4/2021	480			540				
9/22/2021		457						
9/23/2021	511		49	528				
2/1/2022	521	441		560				
2/2/2022			46					
8/23/2022			40	568	130	543		
8/24/2022	507	418						
9/1/2022							321	754

# FIGURE B.

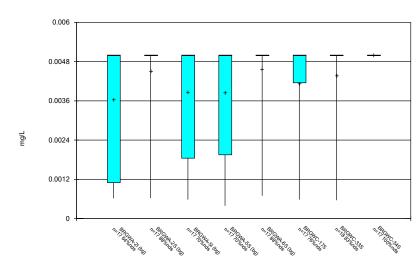
#### Box & Whiskers Plot



Constituent: Antimony Analysis Run 11/4/2022 11:35 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

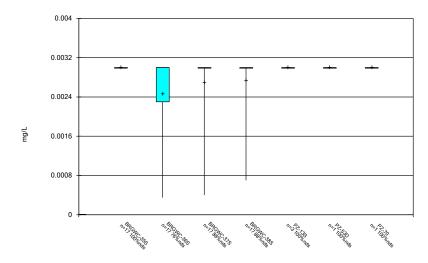
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/4/2022 11:35 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

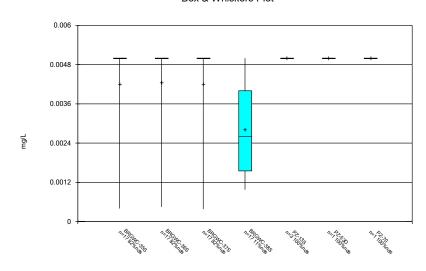
Box & Whiskers Plot



Constituent: Antimony Analysis Run 11/4/2022 11:35 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

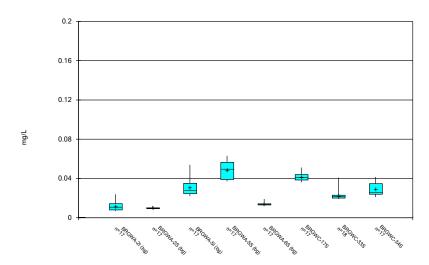
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/4/2022 11:35 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

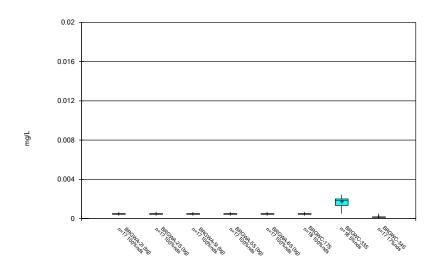
Box & Whiskers Plot



Constituent: Barium Analysis Run 11/4/2022 11:35 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

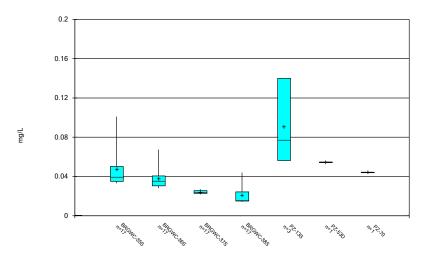
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Beryllium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

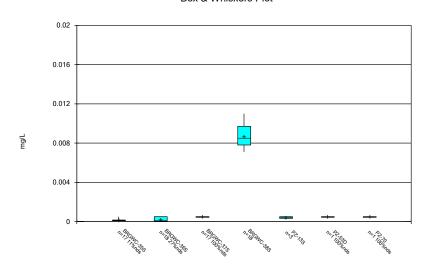
Box & Whiskers Plot



Constituent: Barium Analysis Run 11/4/2022 11:35 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

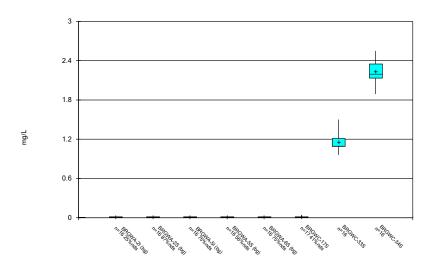
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Beryllium Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

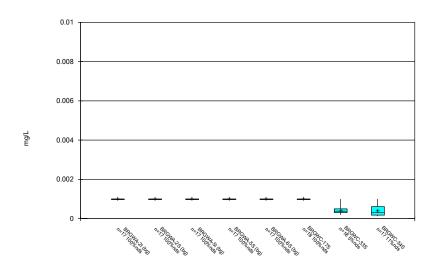
#### Box & Whiskers Plot



Constituent: Boron Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

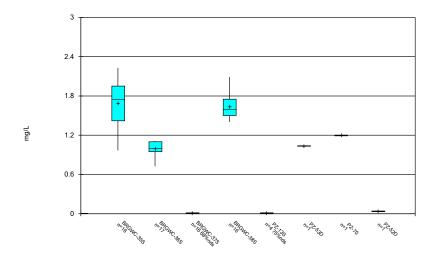
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

#### Box & Whiskers Plot



Constituent: Cadmium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

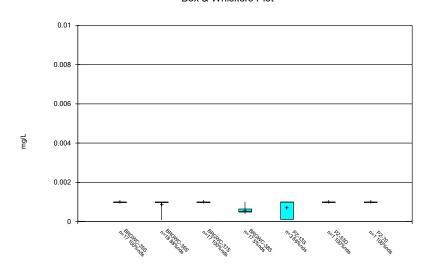
Box & Whiskers Plot



Constituent: Boron Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

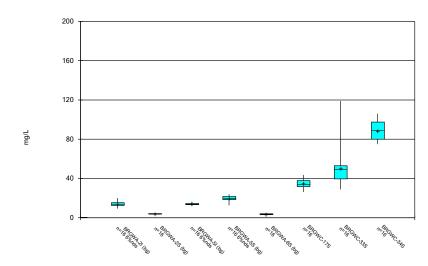
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cadmium Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

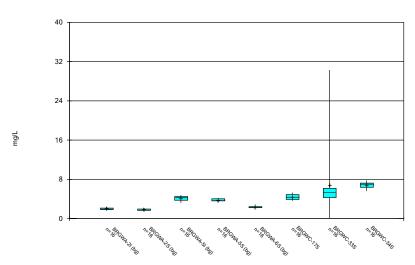
Box & Whiskers Plot



Constituent: Calcium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

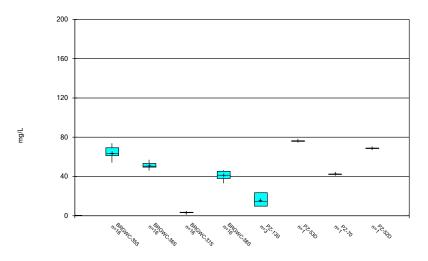
Sanitas<sup>™</sup> v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

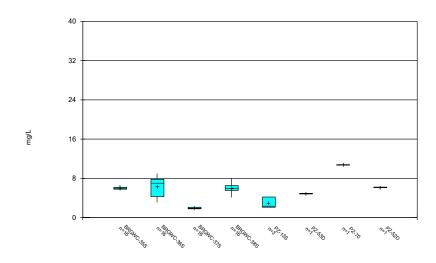
Box & Whiskers Plot



Constituent: Calcium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

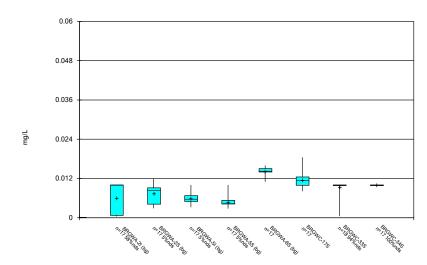
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

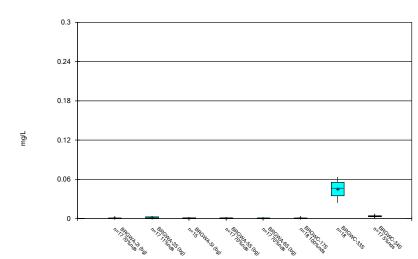
Box & Whiskers Plot



Constituent: Chromium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

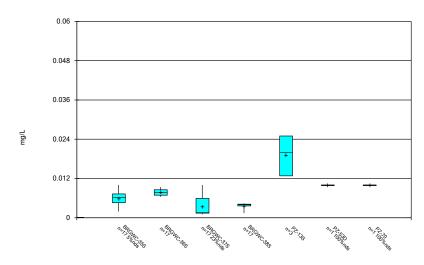
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cobalt Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

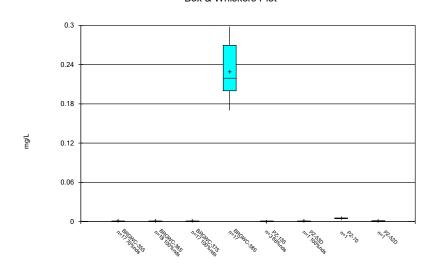
Box & Whiskers Plot



Constituent: Chromium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

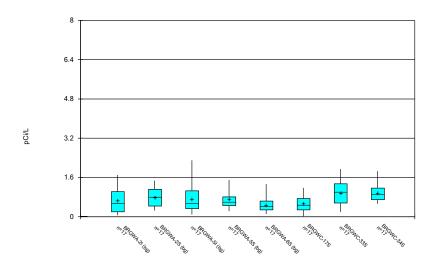
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cobalt Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

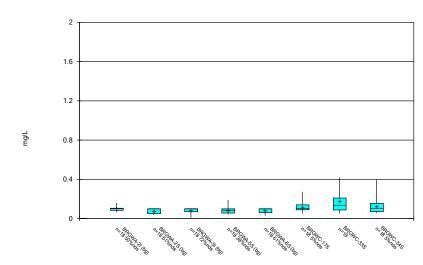
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

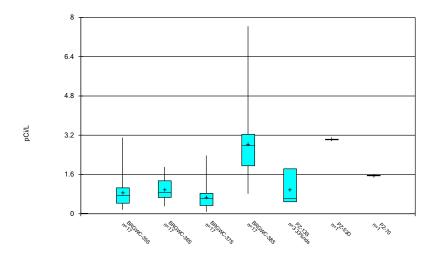
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

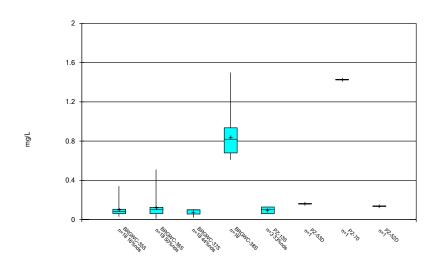
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

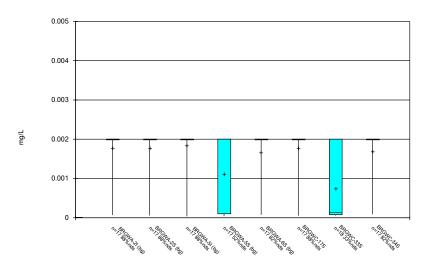
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

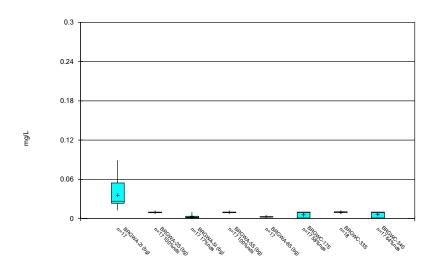
Box & Whiskers Plot



Constituent: Lead Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

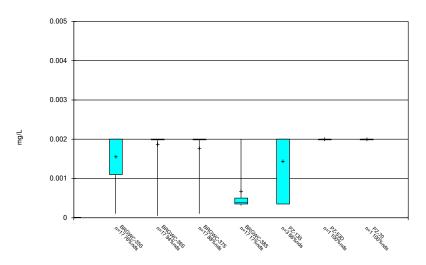
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

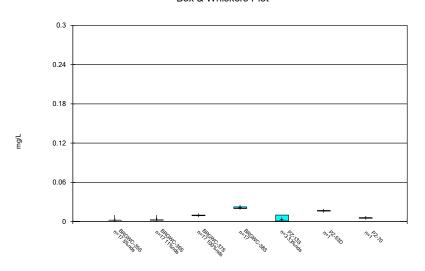
Box & Whiskers Plot



Constituent: Lead Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

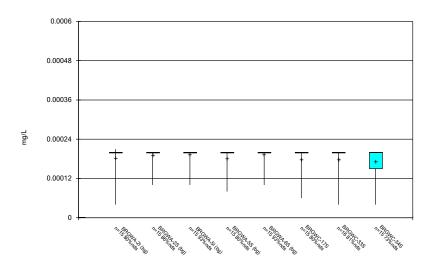
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

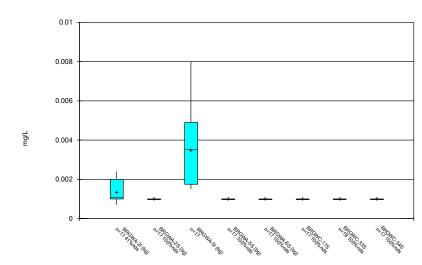
Box & Whiskers Plot



Constituent: Mercury Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

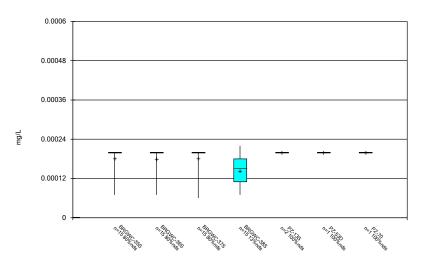
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

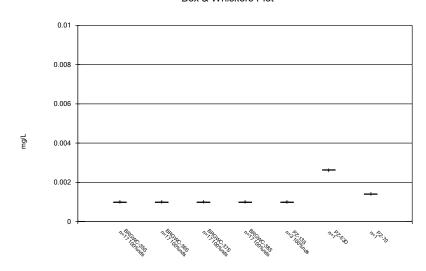
Box & Whiskers Plot



Constituent: Mercury Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

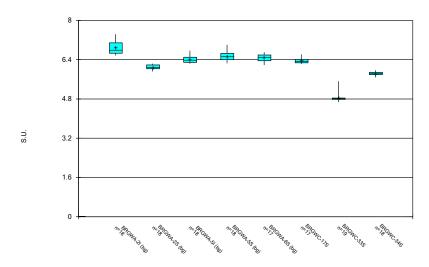
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

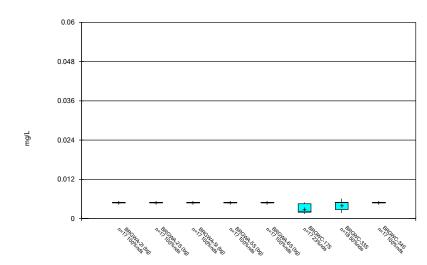
Box & Whiskers Plot



Constituent: pH, Field Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

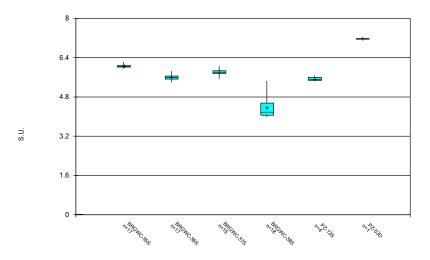
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

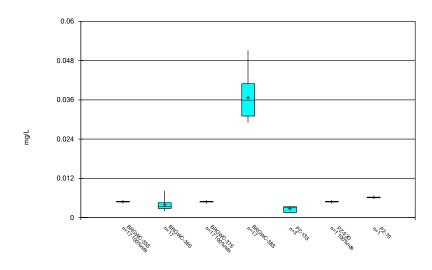
Box & Whiskers Plot



Constituent: pH, Field Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

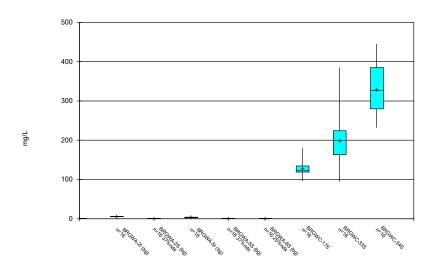
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

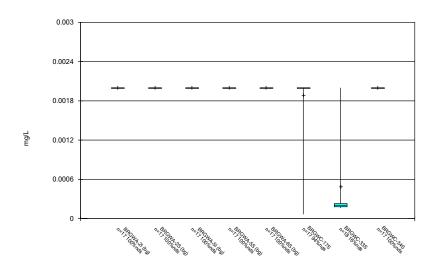
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

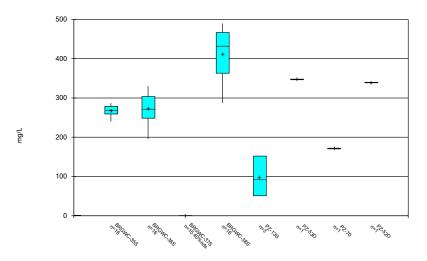
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

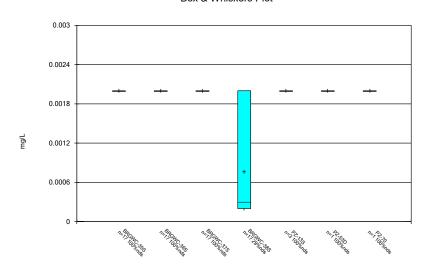
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 11/4/2022 11:36 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

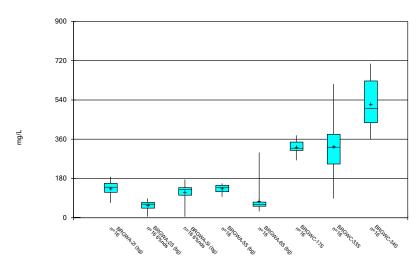
Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

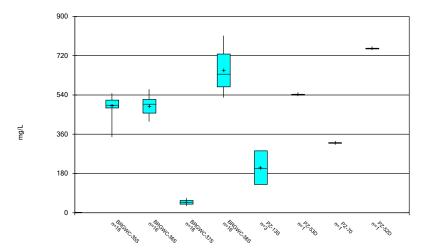
#### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 11/4/2022 11:36 AM View: Pond E 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, 11:38 AM

BRGWA-5I Cobalt (mg/L)
BRGWC-37S Sulfate (mg/L)

11/16/2016 <0.01 (o) 2/13/2018 <0.01 (o)

2/15/2018 1.9 (o)

# FIGURE D.

### Appendix III Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:18 PM

					•								
Constituent	Well	Upper Lir	m. Lower Lir	m. <u>Date</u>	Observ.	Sig. Bg	N Bg Mean	Std. Dev.	%ND:	s ND Adj.	Transform	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-17S	0.0187	n/a	8/24/2022	0.0273	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-33S	0.0187	n/a	8/23/2022	0.975	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-34S	0.0187	n/a	8/24/2022	2.45	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-35S	0.0187	n/a	8/24/2022	2.23	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-36S	0.0187	n/a	8/24/2022	1.1	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-38S	0.0187	n/a	8/23/2022	1.67	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-17S	24	n/a	8/24/2022	43.6	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-33S	24	n/a	8/23/2022	119	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-34S	24	n/a	8/24/2022	75	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-35S	24	n/a	8/24/2022	68.5	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-36S	24	n/a	8/24/2022	48.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-38S	24	n/a	8/23/2022	37.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-17S	4.8	n/a	8/24/2022	5	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-33S	4.8	n/a	8/23/2022	30.3	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-34S	4.8	n/a	8/24/2022	6.17	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-35S	4.8	n/a	8/24/2022	6.53	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-36S	4.8	n/a	8/24/2022	7.96	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-38S	4.8	n/a	8/23/2022	6.42	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-17S	0.19	n/a	8/24/2022	0.274	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-36S	0.19	n/a	8/24/2022	0.194	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-38S	0.19	n/a	8/23/2022	0.609	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-33S	7.057	5.907	8/23/2022	4.67	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-34S	7.057	5.907	8/24/2022	5.75	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-36S	7.057	5.907	8/24/2022	5.59	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-37S	7.057	5.907	8/23/2022	5.82	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-38S	7.057	5.907	8/23/2022	3.97	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-17S	7.5	n/a	8/24/2022	157	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-33S	7.5	n/a	8/23/2022	385	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-34S	7.5	n/a	8/24/2022	268	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-35S	7.5	n/a	8/24/2022	279	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-36S	7.5	n/a	8/24/2022	224	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-38S	7.5	n/a	8/23/2022	389	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-17S	299	n/a	8/24/2022	370	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-33S	299	n/a	8/23/2022	614	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-34S	299	n/a	8/24/2022	452	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-35S	299	n/a	8/24/2022	507	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-36S	299	n/a	8/24/2022	418	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-38S	299	n/a	8/23/2022	568	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	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, 4:18 PM

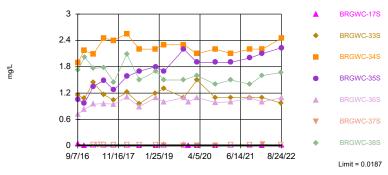
											_		
Constituent	Well		n. Lower Lim		Observ.		N Bg Mean	Std. Dev.		<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-17S	0.0187	n/a	8/24/2022	0.0273	Yes 80	n/a	n/a	63.75		n/a	0.0002983	` ,
Boron (mg/L)	BRGWC-33S	0.0187	n/a	8/23/2022	0.975	Yes 80	n/a	n/a	63.75		n/a		, ,
Boron (mg/L)	BRGWC-34S	0.0187	n/a	8/24/2022		Yes 80	n/a	n/a	63.75		n/a	0.0002983	` ,
Boron (mg/L)	BRGWC-35S	0.0187	n/a	8/24/2022	2.23	Yes 80	n/a	n/a	63.75		n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-36S	0.0187	n/a		1.1	Yes 80	n/a	n/a	63.75		n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-37S	0.0187	n/a	8/23/2022	0.015ND	No 80	n/a	n/a	63.75		n/a	0.0002983	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-38S	0.0187	n/a		1.67	Yes 80	n/a	n/a	63.75	n/a	n/a	0.0002983	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-17S	24	n/a	8/24/2022	43.6	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-33S	24	n/a	8/23/2022	119	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-34S	24	n/a	8/24/2022	75	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-35S	24	n/a	8/24/2022	68.5	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-36S	24	n/a	8/24/2022	48.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-37S	24	n/a	8/23/2022	3.7	No 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-38S	24	n/a	8/23/2022	37.1	Yes 80	n/a	n/a	3.75	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-17S	4.8	n/a	8/24/2022	5	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-33S	4.8	n/a	8/23/2022	30.3	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-34S	4.8	n/a	8/24/2022	6.17	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-35S	4.8	n/a	8/24/2022	6.53	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-36S	4.8	n/a	8/24/2022	7.96	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-37S	4.8	n/a	8/23/2022	1.97	No 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-38S	4.8	n/a	8/23/2022	6.42	Yes 80	n/a	n/a	0	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-17S	0.19	n/a	8/24/2022	0.274	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-33S	0.19	n/a	8/23/2022	0.187	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-34S	0.19	n/a	8/24/2022	0.14	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-35S	0.19	n/a	8/24/2022	0.1ND	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-36S	0.19	n/a	8/24/2022	0.194	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-37S	0.19	n/a	8/23/2022	0.105	No 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-38S	0.19	n/a	8/23/2022	0.609	Yes 90	n/a	n/a	56.67	n/a	n/a	0.0002371	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-17S	7.057	5.907	8/24/2022	6.62	No 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-33S	7.057	5.907	8/23/2022	4.67	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-34S	7.057	5.907	8/24/2022	5.75	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-35S	7.057	5.907	8/24/2022	6.05	No 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-36S	7.057	5.907	8/24/2022	5.59	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-37S	7.057	5.907	8/23/2022	5.82	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
pH, Field (S.U.)	BRGWC-38S	7.057	5.907	8/23/2022	3.97	Yes 89	6.482	0.3048	0	None	No	0.0005373	Param Inter 1 of 2
Sulfate (mg/L)	BRGWC-17S	7.5	n/a	8/24/2022	157	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-33S	7.5	n/a	8/23/2022	385	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-34S	7.5	n/a	8/24/2022	268	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-35S	7.5	n/a	8/24/2022	279	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-36S	7.5	n/a	8/24/2022	224	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-37S	7.5	n/a	8/23/2022	0.307J	No 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-38S	7.5	n/a	8/23/2022	389	Yes 80	n/a	n/a	20	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-17S	299	n/a	8/24/2022	370	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-33S	299	n/a	8/23/2022	614	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-34S	299	n/a	8/24/2022	452	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-35S	299	n/a	8/24/2022	507	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-36S	299	n/a	8/24/2022	418	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-37S	299	n/a	8/23/2022	40	No 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-38S	299	n/a	8/23/2022	568	Yes 80	n/a	n/a	2.5	n/a	n/a	0.0002983	NP Inter (normality) 1 of 2

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

#### Prediction Limit

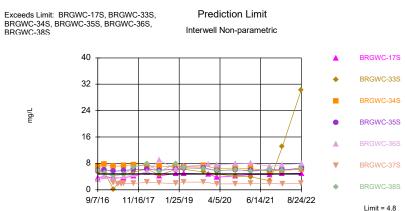
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 80 background values. 63.75% NDs. Annual per-constituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

Constituent: Boron Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

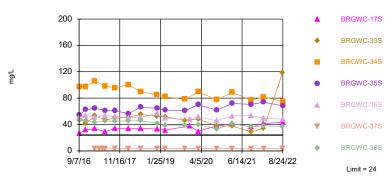


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. Annual per-constituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

Prediction Limit
Interwell Non-parametric



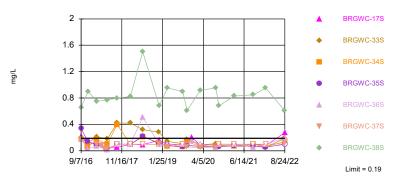
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 3.75% NDs. Annual perconstituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

Constituent: Calcium Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: BRGWC-17S, BRGWC-36S, BRGWC-38S

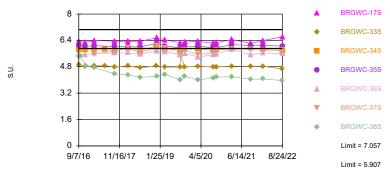
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 90 background values. 56.67% NDs. Annual per-constituent alpha = 0.003314. Individual comparison alpha = 0.0002371 (1 of 2). Comparing 7 points to limit.

Exceeds Limits: BRGWC-33S, BRGWC-34S, BRGWC-36S, BRGWC-37S, BRGWC-39S

Prediction Limit
Interwell Parametric



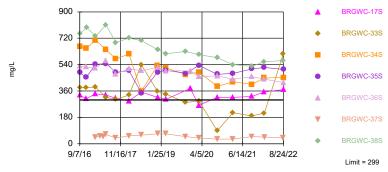
Background Data Summary: Mean=6.482, Std. Dev.=0.3048, n=89. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9721, critical = 0.961. Kappa = 1.886 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005373. Comparing 7 points to limit.

Constituent: pH, Field Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

Prediction Limit
Interwell Non-parametric



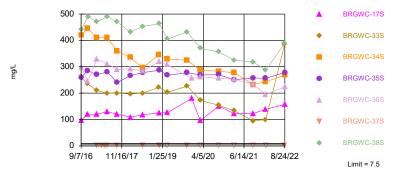
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 2.5% NDs. Annual perconstituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

### Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 80 background values. 20% NDs. Annual perconstituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

	BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-17S	BRGWC-35S	BRGWC-36S
8/31/2016	0.0072 (J)	<0.015	<0.015	<0.015	0.045				
9/1/2016					<0.015	. ==			
9/7/2016						1.73	0.0449 (J)	1.06	0.725
9/8/2016									
11/15/2016				0.0085 (J)	0.0123 (J)				
11/16/2016	0.0117 (J)	0.0187 (J)	0.0109 (J)						
11/17/2016							0.0067 (J)	0.967	
11/18/2016									0.831
11/21/2016						2.02			
2/20/2017		0.0066 (J)		0.0093 (J)	0.0157 (J)				
2/21/2017	0.0088 (J)		<0.015						
2/22/2017							<0.015	1.35	
2/23/2017						1.77			0.949
4/17/2017									
5/15/2017									
6/12/2017	0.0133 (J)	<0.015		<0.015	<0.015				
6/13/2017			<0.015						
6/14/2017									
6/15/2017						1.78	<0.015	1.49	0.961
9/26/2017	0.0093 (J)	<0.015	<0.015	<0.015	<0.015				
9/27/2017									
9/28/2017						1.45	<0.015	1.27	0.948
2/13/2018	0.0141 (J)	<0.015	<0.015	<0.015	<0.015				
2/15/2018	(-,					2.09	<0.015	1.58	1.11
6/26/2018	0.012 (J)	0.0042 (J)	<0.015	0.0056 (J)	0.0041 (J)				
6/27/2018	0.0.2 (0)	0.00 12 (0)	0.0.0	0.0000 (0)	0.0011 (0)		0.0088 (J+X)	1.7 (J+X)	
6/28/2018						1.5	0.0000 (0.71)	1.7 (0.74)	0.89
12/18/2018	0.0086 (J)	<0.015	<0.015	0.0062 (J)	<0.015				0.00
12/19/2018	0.0000 (0)	-0.010	-0.010	0.0002 (0)	-0.010		0.0045 (J)	1.8	1.1
12/20/2018						1.7	0.0043 (0)	1.0	1.1
3/19/2019	0.00565 (JD)	<0.015	<0.015	<0.015	<0.015	1.7	<0.015		1
3/20/2019	0.00303 (3D)	<b>~0.013</b>	<b>~0.013</b>	<b>~0.013</b>	<b>~</b> 0.013	1.5	<b>~0.013</b>	1.7	1
	0.0067 (1)	<0.01E	<0.01E	0.006 (1)	0.01 (1)	1.5		1.7	
10/15/2019	0.0067 (J)	<0.015	<0.015	0.006 (J)	0.01 (J)	4.5		2.2	
10/16/2019						1.5	-0.015	2.2	4.4
10/17/2019							<0.015		1.1
12/3/2019							0.0063 (J)		1
3/3/2020	0.0082 (J)	<0.015	<0.015	<0.015	<0.015	1.0	0.0075 (J)	1.0	
3/5/2020						1.6		1.9	1.1
9/15/2020	<0.015	<0.015	<0.015	<0.015	<0.015				
9/16/2020							0.0066 (J)	1.9	0.99
9/17/2020						1.4			
3/1/2021	<0.015				<0.015				
3/2/2021		0.0053 (J)	<0.015	0.0071 (J)					
3/3/2021									1
3/4/2021						1.5	<0.015	1.9	
9/21/2021		<0.015		<0.015					
9/22/2021	<0.015		<0.015		<0.015		0.02 (J)		1.1
9/23/2021						1.4		2	
2/1/2022	<0.015	<0.015	<0.015	<0.015	<0.015	1.6	0.013 (J)	2.1	1
2/2/2022									
8/23/2022	0.00592 (J)	<0.015	0.00532 (J)	0.00538 (J)	<0.015	1.67			
8/24/2022							0.0273	2.23	1.1

			Plant Branch	Client: Southern Company	Data: Plant Branch AP	
	BRGWC-33S	BRGWC-34S	BRGWC-37S			
8/31/2016						
9/1/2016						
9/7/2016	1.15					
9/8/2016		1.89				
11/15/2016						
11/16/2016						
11/17/2016	1.08	2.17				
11/18/2016		2				
11/21/2016						
2/20/2017						
2/21/2017						
2/22/2017	1.44	2.09				
2/23/2017	1.44	2.09	<0.015			
4/17/2017			<0.015			
5/15/2017			<0.015			
6/12/2017						
6/13/2017						
6/14/2017	1.16	2.45				
6/15/2017			<0.015			
9/26/2017						
9/27/2017	1.04	2.4				
9/28/2017			<0.015			
2/13/2018						
2/15/2018	1.22	2.55	<0.015			
6/26/2018						
6/27/2018	0.96 (J+X)	2.2 (J+X)				
6/28/2018			<0.015 (X)			
12/18/2018	1.2	2.2				
12/19/2018			<0.015			
12/20/2018						
3/19/2019						
3/20/2019	1.3	2.3	0.004 (J)			
10/15/2019						
10/16/2019	1.1	2.3	0.0055 (J)			
10/17/2019						
12/3/2019						
3/3/2020						
3/5/2020	1.5	2.1	0.0076 (J)			
9/15/2020						
9/16/2020	1.1	2.2	0.0062 (J)			
9/17/2020						
3/1/2021						
3/2/2021						
3/3/2021	1.1	2.1	<0.015			
3/4/2021						
9/21/2021						
9/22/2021	1.1	2.2				
9/23/2021			<0.015			
2/1/2022	1.1	2.2				
2/2/2022			0.032 (J)			
8/23/2022	0.975		<0.015			
8/24/2022	2.07.0	2.45	2.0.0			
		· · <del>·</del>				

	BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-17S	BRGWC-35S	BRGWC-36S
8/31/2016	12.6	13.5	4.09	19.6					
9/1/2016					3.3				
9/7/2016						45.9	26.3	54.1	50.6
9/8/2016									
11/15/2016				21.7	3.44				
11/16/2016	12.1	14.9	4.25						
11/17/2016							31.8	62.6	
11/18/2016									53.9
11/21/2016						46.4			
2/20/2017		13.9		21.1	3.52				
2/21/2017	11.4		4.02						
2/22/2017							33.5	64.6	
2/23/2017						43.5			51
4/17/2017									
5/15/2017									
6/12/2017	9.34	13.7		21.5	3.11				
6/13/2017	3.04	10.7	3.84	21.0	0.11				
6/14/2017			0.04						
6/15/2017						45.3	29	61.3	53.8
9/26/2017	14.3	14.4	3.31	24	3.15	40.0	20	01.0	00.0
9/27/2017	14.0	14.4	0.01	24	0.10				
9/28/2017						45.1	34.1	60.8	51.8
2/13/2018	<25	<25	3.94	<25	3.65	43.1	34.1	00.0	31.0
2/15/2018	~23	~23	3.34	~23	3.03	45.3	33.8	56.6	50.1
6/26/2018	16 (J)	13.5 (J)	3.6	23.5 (J)	3.3	40.0	33.0	30.0	30.1
6/27/2018	10 (0)	13.3 (3)	3.0	20.0 (0)	3.3		34.1	66.2	
6/28/2018						45.9	54.1	00.2	51
12/18/2018	14.5 (J)	16.4 (J)	3.8	19.8 (J)	3.5	10.0			
12/19/2018	(0)	(0)	0.0	10.0 (0)	0.0		33.1	64.4	57.1
12/20/2018						41.8			
3/19/2019	14.3 (JD)	12.3 (J)	3.9	21.4 (J)	3.6		31.6		49.5
3/20/2019	()	(5)		(-)		38.2		61.8	
10/15/2019	15.1	14.4	3.7	20	3.5				
10/16/2019						38.4		61.2	
12/3/2019							37.7		47.8
3/3/2020	20	14.9	4	23.2	5		29.7		
3/5/2020						39.8		69.9	51.7
9/15/2020	14.1	12.7	3.9	16.8	3.7	00.0		00.0	01.7
9/16/2020		,	0.0		···		37.9	61.8	45.9
9/17/2020						33.1	07.0	00	10.0
3/1/2021	15.4				4.2	00.1			
3/2/2021	10.4	13.2	4	16.8	7.2				
3/3/2021			•						53
3/4/2021						41	41.2	71.8	
9/21/2021		14.1		19.1				70	
9/22/2021	15.9		4.3		4.1		36.4		53.7
9/23/2021	,. <del>.</del>		-		•	36.8		70.5	
2/1/2022	14.4	14.5	4.4	19.1	4.2	37.8	41.5	73.8	49.7
2/2/2022			•	,	_	- <del></del>		,. <del>.</del>	
8/23/2022	13.9	14.3	4.65	18.2	3.97	37.1			
8/24/2022							43.6	68.5	48.1

		BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/20	)16			
9/1/201	16			
9/7/201	16	53.4		
9/8/201	16		97.3	
11/15/2	2016			
11/16/2				
11/17/2	2016	41.3	97.6	
11/18/2	2016			
11/21/2	2016			
2/20/20				
2/21/20	)17			
2/22/20		53.1	106	
2/23/20				3.26
4/17/20				3.23
5/15/20				2.97 (B-01)
6/12/20				
6/13/20				
6/14/20		47.1	98	
6/15/20				3.15
9/26/20				
9/27/20		49.5	95.8	
9/28/20			00.0	3.26
2/13/20				0.20
2/15/20		50.9	100	3.39
6/26/20		00.0	100	
6/27/20		55.1	90.1	
6/28/20		00.1	30.1	3.1
12/18/2		52.7	85.1	0.1
12/19/2		52.7	00.1	3.6
12/13/2				5.0
3/19/20				
3/20/20		51.4	82	3.3
10/15/2		01.4	02	
10/16/2		46.5	78.2	3.4
12/3/20		40.0	70.2	U.T
3/3/202				
3/5/202		48.1	89.6	3.7
9/15/20			30.0	<b></b>
9/16/20		37.9	77.7	3.2
9/17/20		-7.0		
3/1//202				
3/2/202				
3/3/202		37.5	88.6	3.6
3/4/202		57.0	30.0	
9/21/20				
9/22/20		28.9	76.9	
9/23/20		20.0	70.5	3.7
2/1/202		34.3	81.7	o. <i>i</i>
2/1/202		J4.J	01.7	3.7
		110		
8/23/20		119	75	3.7
8/24/20	122		75	

	BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-17S	BRGWC-35S	BRGWC-36S
8/31/2016	2.3	4.4	2	3.6					
9/1/2016					2.5				
9/7/2016						5.8	3.7	5.8	3.1
9/8/2016									
11/15/2016				4	2.3				
11/16/2016	2	4.4	1.8						
11/17/2016							4.05 (D)	6.1 (D)	
11/18/2016							` ,	` ,	3.95 (D)
11/21/2016						5.05 (D)			. ,
2/20/2017		4.8		3.9	2.4	,			
2/21/2017	2		1.8						
2/22/2017							3.6	5.6	
2/23/2017						4.1			3.2
4/17/2017									
5/15/2017									
6/12/2017	2.1	4.2		3.8	2.2				
6/13/2017	2.1	7.2	1.7	0.0	2.2				
6/14/2017			1.,						
6/15/2017						4.8	3.7	5.8	4
9/26/2017	2	4.4	1.8	4.1	2.3	4.0	5.7	3.0	7
9/27/2017	-	7.7	1.0	7.1	2.0				
9/28/2017						6.7	4.1	6.2	4.6
2/13/2018	2.1	4.7	1.7	4.1	2.3	0.7	4.1	0.2	4.0
2/15/2018	2.1	4.7	1.7	4.1	2.5	8	5.3	6.2	5.4
6/26/2018	2.4	4.5	2.2	4.1	2.6	Ū	0.0	5.2	
6/27/2018					2.0		4.2	5.9	
6/28/2018						5.5 (J-X)			9 (J-X)
12/18/2018	1.8	4.5	1.9	3.8	2.3	,			,
12/19/2018							4.9 (J-X)	6.2 (J-X)	6.2 (J-X)
12/20/2018						8 (J-X)			
3/19/2019	2.45 (D)	4.5	2	4.2	2.6	` '	5		7.1
3/20/2019	, ,					6.6		6.6	
10/15/2019	2.2	4.2	1.9	3.7	2.4				
10/16/2019						6.4		6.6	
12/3/2019							4.8		7.7
3/3/2020	1.9	3.9	1.9	3.6	2.9		3.8		
3/5/2020						5.8		5.8	7.6
9/15/2020	1.9	3.7	1.7	3.7	2.3				
9/16/2020							4.2	6	7.9
9/17/2020						6.1			
3/1/2021	1.8				2.1				
3/2/2021		3.8	1.7	3.7					
3/3/2021									8.1
3/4/2021						5.6	4.6	5.8	
9/21/2021		3.2		3.2		** <del>=</del>	· <del>-</del>	- <del></del>	
9/22/2021	1.7		1.5	<del>-</del>	2.1		4.6		7.1
9/23/2021	-		-		•	6	-	6.1	
2/1/2022	1.8	3.5	1.6	3.4	2.1	5.8	4.9	6	7.6
2/2/2022	-	-	-			· ·	-		•
8/23/2022	2.02	3.64	2.18	3.59	2.39	6.42			
8/24/2022							5	6.53	7.96

	BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/2016			
9/1/2016			
9/7/2016	5.3		
9/8/2016		7.2	
11/15/2016			
11/16/2016			
11/17/2016	5.45 (D)	7.8 (D)	
11/18/2016	0.10 (2)	7.0 (2)	
11/21/2016			
2/20/2017			
2/21/2017			
	0.12 (1)	7.1	
2/22/2017	0.12 (J)	7.1	0.4
2/23/2017			2.1
4/17/2017			1.8
5/15/2017			1.8
6/12/2017			
6/13/2017			
6/14/2017	4.5	7.3	
6/15/2017			1.9
9/26/2017			
9/27/2017	5.4	7.6	
9/28/2017			1.9
2/13/2018			
2/15/2018	6.3	7.2	2.3
6/26/2018			
6/27/2018	4.5	7.1	
6/28/2018			2.1 (J-X)
12/18/2018	6.1	7.1	
12/19/2018			1.9 (J-X)
12/20/2018			
3/19/2019			
3/20/2019	6.2	6.9	2.3
10/15/2019			
10/16/2019	5.4	7.3	2.3
12/3/2019			
3/3/2020			
3/5/2020	4.8	6.4	1.8
9/15/2020			
9/16/2020	4.1	6.6	1.8
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021	3.9	6.4	1.9
3/4/2021			
9/21/2021			
9/22/2021	2.7	5.6	
9/23/2021			1.9
2/1/2022	13.1	5.9	
2/2/2022			1.8
8/23/2022	30.3		1.97
8/24/2022		6.17	

9/21/2016	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-36S	BRGWC-35S	BRGWC-17S
8/31/2016 9/1/2016	0.11 (J)	0.19 (J)	0.07 (J)	0.05 (J)	0.06 (J)				
					0.00 (3)	0.66	0.1971)	0.24	0.22 (1)
9/7/2016						0.66	0.18 (J)	0.34	0.22 (J)
9/8/2016									
11/15/2016		0.13 (J)			0.06 (J)				
11/16/2016	0.08 (J)		0.07 (J)	0.07 (J)					
11/17/2016								0.14 (J)	0.12 (J)
11/18/2016							0.03 (J)		
11/21/2016						0.9 (D)			
2/20/2017		0.08 (J)	0.06 (J)		0.04 (J)				
2/21/2017	0.14 (J)			0.05 (J)					
2/22/2017								0.09 (J)	0.11 (J)
2/23/2017						0.75	0.07 (J)		
4/17/2017									
5/15/2017									
6/12/2017	0.16 (J)	0.07 (J)	0.008 (J)		0.06 (J)				
6/13/2017				0.04 (J)					
6/14/2017									
6/15/2017						0.77	0.01 (J)	0.03 (J)	0.05 (J)
9/26/2017	0.14 (J)	0.04 (J)	<0.1	<0.1	<0.1		. ,	. ,	( )
9/27/2017	(-)	(-)							
9/28/2017						0.8	<0.1	<0.1	0.05 (J)
2/13/2018	<0.1	<0.1	<0.1	<0.1	<0.1	0.0	-0.1	-0.1	0.00 (0)
2/15/2018	-0.1	-0.1	<b>40.1</b>	-0.1	-0.1	0.82	<0.1	<0.1	<0.1
6/26/2018	0.005 (1)	0.072 (1)	0.045 (1)	0.048 (J)	0.041 (J)	0.02	30.1	-0.1	10.1
	0.085 (J)	0.072 (J)	0.045 (J)	0.048 (3)	0.041 (3)			0.22 ( 1)	0.002 / 1)
6/27/2018						1 = / 1. \( \)	0 E1 / L. V)	0.22 (J)	0.093 (J)
6/28/2018	0.005 (1)	-0.1	-0.1	-0.4	-0.1	1.5 (J+X)	0.51 (J+X)		
12/18/2018	0.085 (J)	<0.1	<0.1	<0.1	<0.1		.0.4	0.44 ( 1)	0.40 (1)
12/19/2018							<0.1	0.11 (J)	0.16 (J)
12/20/2018						0.68			
3/19/2019	0.0655 (JD)	0.06 (J)	<0.1	0.037 (J)	0.03 (J)		<0.1		0.1 (J)
3/20/2019						0.95		0.088 (J)	
8/27/2019	<0.1	<0.1	<0.1	<0.1	<0.1				
8/28/2019							<0.1	0.056 (J)	0.085 (J)
8/29/2019						0.9			
10/15/2019	<0.1	0.045 (J)	<0.1	<0.1	<0.1				
10/16/2019						0.61		0.08 (J)	
12/3/2019							0.15 (J)		0.2 (J)
3/3/2020	0.066 (J)	0.057 (J)	<0.1	0.05 (J)	0.09 (J)				0.093 (J)
3/5/2020						0.92	<0.1	0.067 (J)	
8/18/2020	<0.1	<0.1	<0.1	<0.1	<0.1				
8/19/2020						0.95	0.051 (J)	0.06 (J)	0.1
9/15/2020	<0.1	0.051 (J)	<0.1	<0.1	<0.1				
9/16/2020							<0.1	0.062 (J)	0.1
9/17/2020						0.68			
3/1/2021	<0.1				<0.1				
3/2/2021		<0.1	<0.1	<0.1					
3/3/2021							<0.1		
3/4/2021						0.83		0.076 (J)	0.096 (J)
9/21/2021		0.056 (J)	<0.1					\-/	\-/
9/22/2021	<0.1	000 (0)	J.,	<0.1	<0.1		0.054 (J)		0.1
9/23/2021	5.1			5.1	5.1	0.85	3.007 (0)	0.073 (J)	···
5. Z0, Z0Z I						0.00		3.070 (0)	

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### **Prediction Limit**

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-36S	BRGWC-35S	BRGWC-17S
2/1/2022	<0.1	<0.1	<0.1	<0.1	<0.1	0.95	<0.1	0.055 (J)	0.079 (J)
2/2/2022									
8/23/2022	<0.1	<0.1	<0.1	<0.1	<0.1	0.609			
8/24/2022							0.194	<0.1	0.274

			Flait Dianett Collett. Southern Company Data. Flait Dianett Ar	
	BRGWC-33S	BRGWC-34S	BRGWC-37S	
8/31/2016				
9/1/2016				
9/7/2016	0.19 (J)			
9/8/2016		0.17 (J)		
11/15/2016				
11/16/2016				
11/17/2016	0.12 (J)	0.06 (J)		
11/18/2016	( )	. ,		
11/21/2016				
2/20/2017				
2/21/2017				
2/22/2017	0.21 (J)	0.17 (J)		
2/23/2017	0.21 (0)	0.17 (0)	0.1 (J)	
4/17/2017			0.08 (J)	
5/15/2017			0.02 (J)	
6/12/2017			0.02 (0)	
6/13/2017				
6/14/2017	0.19 (1)	0.171)		
6/15/2017	0.18 (J)	0.1 (J)	0.03 (J)	
9/26/2017			0.03 (3)	
9/27/2017	0.42	0.4		
	0.42	0.4	40.1	
9/28/2017			<0.1	
2/13/2018	0.42	-0.1	40.1	
2/15/2018	0.42	<0.1	<0.1	
6/26/2018	0.00	0.04 (1)		
6/27/2018	0.32	0.21 (J)		
6/28/2018	0.00 (1)	0.40 (1)	<0.1	
12/18/2018	0.28 (J)	0.12 (J)		
12/19/2018			0.094 (J)	
12/20/2018				
3/19/2019				
3/20/2019		0.074 (J)	0.062 (J)	
8/27/2019	0.11 (J)			
8/28/2019	0.11 (J)	0.057 (J)	<0.1	
8/29/2019				
10/15/2019				
10/16/2019	0.17 (J)	0.13 (J)	0.059 (J)	
12/3/2019				
3/3/2020				
3/5/2020	0.088 (J)	0.072 (J)	0.05 (J)	
8/18/2020				
8/19/2020	0.11	0.074 (J)	0.055 (J)	
9/15/2020				
9/16/2020	0.085 (J)	0.077 (J)	<0.1	
9/17/2020				
3/1/2021				
3/2/2021				
3/3/2021	0.069 (J)	0.071 (J)	<0.1	
3/4/2021				
9/21/2021				
9/22/2021	0.068 (J)	0.1		
9/23/2021			<0.1	

		BRGWC-33S	BRGWC-34S	BRGWC-37S
2/1/2	022	0.053 (J)	0.06 (J)	
2/2/2	022			<0.1
8/23/	2022	0.187		0.105
8/24/	2022		0.14	

	BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-36S	BRGWC-38S
8/31/2016	7.16	6.53	6.2	6.59					
9/1/2016					6.49				
9/7/2016						6.36	4.92	5.59	5.43
9/8/2016									
9/23/2016									5.46
11/15/2016				6.67	6.59				
11/16/2016	6.96	6.4	6.12						
11/17/2016						6.28	4.82		
11/18/2016								5.51	
11/21/2016									4.84
2/20/2017		6.44		6.65	6.61				
2/21/2017	7.15		6.24						
2/22/2017						6.4	4.86		
2/23/2017								5.65	4.73
6/12/2017	7.31	6.4		6.64					
6/13/2017			6.19						
6/14/2017							4.86		
9/26/2017	7.02	6.31	6.15	6.58	6.47				
9/27/2017							4.78		
9/28/2017						6.35		5.62	4.37
2/13/2018	7.44	6.62	6.18	6.72	6.54				
2/15/2018						6.35	4.84	5.66	4.3
6/26/2018	6.93	6.29	6.05	6.43	6.23				
6/27/2018						6.35	4.73		
6/28/2018								5.57	4.16
12/18/2018	6.76	6.57	5.92	6.7	6.71		4.84		
12/19/2018						6.56		5.76	
12/20/2018									4.21
3/19/2019	6.87	6.45	6.18	6.63	6.18	6.43		5.72	
3/20/2019							4.77		4.34
8/27/2019	6.79	6.37	6.09	6.49	6.35		4.78		
8/28/2019						6.25	5.52	5.52	
8/29/2019									4.01
10/15/2019	6.57	6.77	6.06	7.01	6.36				
10/16/2019							4.78		4.21
10/17/2019						6.3		5.61	
3/3/2020	6.71	6.29	6.1	6.49	6.59	6.34			
3/5/2020							4.82	5.39	4.01
8/18/2020	6.59	6.29	6.06	6.41	6.33				
8/19/2020						6.24	4.78	5.53	4.12
9/15/2020	6.64	6.27	6.01	6.25	6.43				
9/16/2020						6.26	4.78	5.58	
9/17/2020									4.17
3/1/2021	6.66				6.7				
3/2/2021		6.47	6.2	6.42					
3/3/2021							4.83	5.86	
3/4/2021						6.45			4.19
9/21/2021		6.32		6.36					
9/22/2021	6.78		6.06		6.48	6.22	4.81	5.53	
9/23/2021									4.05
2/1/2022	6.83	6.38	5.95	6.39	6.54	6.39	4.82	5.65	4.06
2/2/2022									

Page 2

### **Prediction Limit**

		BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-36S	BRGWC-38S
8/23	/2022	6.67	6.24	5.95	6.36	6.51		4.67		3.97
8/24	/2022						6.62		5.59	

			Flant Branch Client. Southern Company Data. Flant Branch AF	
	BRGWC-35S	BRGWC-34S	RGWC-37S	
8/31/2016				
9/1/2016				
9/7/2016	6.1			
9/8/2016		5.84		
9/23/2016				
11/15/2016				
11/16/2016				
11/17/2016	6.04	5.81		
11/18/2016				
11/21/2016				
2/20/2017				
2/21/2017				
2/22/2017	6.08	5.85		
2/23/2017			57	
6/12/2017				
6/13/2017				
6/14/2017		5.87		
9/26/2017		0.07		
9/27/2017		5.74		
9/28/2017	6.03		.76	
2/13/2018	0.03		.,,,	
2/15/2018	6.02	5.93	95	
6/26/2018	0.02	3.93	33	
6/27/2018	6.01	5.68		
6/28/2018	0.01		.78	
12/18/2018		5.97	.70	
12/19/2018	6.22		07	
12/20/2018	0.22		.07	
3/19/2019	0.00	F 0.4	02	
3/20/2019 8/27/2019	6.06	5.84	93	
	E 0E	E 0	0	
8/28/2019	5.95	5.8	8	
8/29/2019				
10/15/2019	6.02	E 0E	01	
10/16/2019	6.03	5.85	81	
10/17/2019				
3/3/2020	6.04	E 90	E2	
3/5/2020 8/18/2020	6.04	5.89	53	
	E 07	5.78	ec.	
8/19/2020	5.97	5.76	66	
9/15/2020 9/16/2020	F 06	E 01	04	
	5.96	5.81	84	
9/17/2020				
3/1/2021				
3/2/2021		5.88	97	
3/3/2021	6.14	5.88	87	
3/4/2021	6.14			
9/21/2021		F 02		
9/22/2021	0.00	5.93	05	
9/23/2021	6.08		85	
2/1/2022	6.09	5.87	0	
2/2/2022			8	

	BRGWC-35S	BRGWC-34S	BRGWC-37S
8/23/2022			5.82
8/24/2022	6.05	5.75	

	BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-17S	BRGWC-35S	BRGWC-36S
8/31/2016	7.5	2.7	0.38 (J)	0.81 (J)					
9/1/2016					0.6 (J)				
9/7/2016						440	97	260	300
9/8/2016									
11/15/2016				<1 (J)	0.68 (J)				
11/16/2016	6.6	3.4	<1 (J)						
11/17/2016							120 (D)	285 (D)	
11/18/2016									245 (D)
11/21/2016						490 (D)			
2/20/2017		3.9 (B-01)		1 (B-01)	0.98 (J)				
2/21/2017	6.1		1.5						
2/22/2017							120	270	
2/23/2017						470			330
4/17/2017									
5/15/2017									
6/12/2017	5	3.7		0.94 (J)	0.54 (J)				
6/13/2017			0.67 (J)						
6/14/2017									
6/15/2017						490	130	280	310
9/26/2017	5.4	4.1	0.62 (J)	0.92 (J)	0.53 (J)				
9/27/2017									
9/28/2017						470	120	240	290
2/13/2018	4.7 (J)	6.6	<1	<1	<1				
2/15/2018	. ,					432	109	266	292
6/26/2018	6.2	3.5	0.69 (J)	0.91 (J)	0.54 (J)				
6/27/2018			. ,	· /	.,		118	278	
6/28/2018						453			284
12/18/2018	5.9	4.3	0.72 (J)	0.68 (J)	0.39 (J)				
12/19/2018			. ,	· /	. ,		125	287	319
12/20/2018						463			
3/19/2019	6 (D)	3	0.78 (J)	0.74 (J)	0.68 (J)		126		307
3/20/2019	. ,		,	· /	. ,	405		268	
10/15/2019	5.2	3.8	0.47 (J)	0.68 (J)	0.48 (J)				
10/16/2019			(0)	(-)	(0)	432		277	
12/3/2019						.02	180		256
3/3/2020	7.1	2.8	0.93 (J)	0.71 (J)	2.5		95.4		
3/5/2020			(0)	(0)		370		269	262
9/15/2020	5.9	1.7	<1	<1	<1	0.0		200	202
9/16/2020	0.0			•			151	270	256
9/17/2020						356	101	270	200
3/1/2021	4.7				0.74 (J)	000			
3/2/2021	7.7	2.2	<1	<1	0.74 (3)				
3/3/2021		2.2	~1	-1					252
3/4/2021						325	122	251	232
9/21/2021		2.3		<1		J2J	122	251	
9/22/2021	5.2	2.0	<1	71	<i>c</i> 1		123		234
	5.2		~1		<1	210	123	259	234
9/23/2021	E 4	2	-1	-1	-1	318	120	258	105
2/1/2022	5.4	2	<1	<1	<1	287	139	256	195
2/2/2022	F 66	2.21	0.453	0.531	0.470	200			
8/23/2022	5.66	2.21	0.452	0.521	0.479	389	457	070	204
8/24/2022							157	279	224

			Plant Branch	Client: Southern Company	Data: Plant Branch AP		
	BRGWC-33S	BRGWC-34S	BRGWC-37S				
8/31/2016							
9/1/2016							
9/7/2016	260						
9/8/2016		420					
11/15/2016		420					
11/16/2016							
11/17/2016	225 (D)	44E (D)					
	235 (D)	445 (D)					
11/18/2016							
11/21/2016							
2/20/2017							
2/21/2017							
2/22/2017	210	410					
2/23/2017			0.55 (J)				
4/17/2017			0.44 (J)				
5/15/2017			0.45 (J)				
6/12/2017							
6/13/2017							
6/14/2017	200	410					
6/15/2017			0.46 (J)				
9/26/2017							
9/27/2017	200	360					
9/28/2017			0.49 (J)				
2/13/2018							
2/15/2018	197	335	1.9 (o)				
6/26/2018							
6/27/2018	200	296					
6/28/2018			0.24 (J)				
12/18/2018	222	345					
12/19/2018			0.4 (J)				
12/20/2018							
3/19/2019							
3/20/2019	204	329	<1 (X)				
10/15/2019			. (. 4)				
10/16/2019	226	325	0.29 (J)				
12/3/2019		020	0.20 (0)				
3/3/2020							
3/5/2020	173	287	<1				
9/15/2020	173	207	~1				
9/16/2020	154	283	<1				
9/17/2020	154	203	<b>\</b> 1				
3/1/2021							
3/2/2021	100	077					
3/3/2021	133	277	<1				
3/4/2021							
9/21/2021							
9/22/2021	94.6	232					
9/23/2021			<1				
2/1/2022	99.7	243					
2/2/2022			<1				
8/23/2022	385		0.307 (J)				
8/24/2022		268					

	BRGWA-2I (bg	) BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-17S	BRGWC-35S	BRGWC-36S
8/31/2016	151	138	88	154					
9/1/2016					299				
9/7/2016						750	331	486	528
9/8/2016									
11/15/201	6			123	41				
11/16/201	6 69	77	41						
11/17/201	6						308	453	
11/18/201	6								524
11/21/201	6					795			
2/20/2017		170		158	133				
2/21/2017	68		<10						
2/22/2017							341	541	
2/23/2017						733			517
4/17/2017									
5/15/2017									
6/12/2017	161	132		142	61				
6/13/2017			53						
6/14/2017									
6/15/2017						812	333	548	566
9/26/2017	167	108	45	138	29				
9/27/2017									
9/28/2017						690	310	487	475
2/13/2018	165	141	63	150	61				
2/15/2018						722	292	500	513
6/26/2018	188	133	71	154	71				
6/27/2018							353 (X)	347 (X)	
6/28/2018						704			499
12/18/201	8 145 (X)	138 (X)	78 (X)	147	70 (X)				
12/19/201	8						317	489	521
12/20/201	8					642			
3/19/2019	146.5 (D)	130	68	146	72		303		498
3/20/2019						615		501	
10/15/201	9 140	175	66	144	63				
10/16/201						630		481	
12/3/2019							378		498
3/3/2020	155	<10	41	130	54		263		
3/5/2020						608		535	457
9/15/2020		100	69	116	79				
9/16/2020							316	474	463
9/17/2020						587			
3/1/2021	98				39				
3/2/2021		80	43	96					
3/3/2021									442
3/4/2021		405				540	316	480	
9/21/2021		108	00	104	00		000		457
9/22/2021			66		62	500	323	-11	457
9/23/2021		100	70	104	04	528	254	511	444
2/1/2022	126	129	72	124	61	560	354	521	441
2/2/2022	117	107	4E	101	F2	ECO			
8/23/2022 8/24/2022		107	45	101	52	568	270	E07	410
0/24/2022							370	507	418

			Talk Braheli Chene. Goulden Company Bata. Fight Braheli Al
	BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/2016			
9/1/2016			
9/7/2016	382		
9/8/2016		663	
11/15/2016			
11/16/2016			
11/17/2016	382	651	
11/18/2016			
11/21/2016			
2/20/2017			
2/21/2017			
2/22/2017	387	706	
2/23/2017	00.	, 00	45
4/17/2017			53
5/15/2017			48
6/12/2017			
6/13/2017			
6/14/2017	316	643	
6/15/2017	310	043	63
9/26/2017			
9/27/2017	303	579	
9/28/2017	303	379	39
2/13/2018			
2/15/2018	332	612	54
6/26/2018	332	012	O4
	E29 (V)	3E0 (V)	
6/27/2018 6/28/2018	538 (X)	359 (X)	50 (V)
	250	F2F	59 (X)
12/18/2018	358	535	
12/19/2018			68
12/20/2018			
3/19/2019	220	F47	CO (V)
3/20/2019	338	517	68 (X)
10/15/2019	004	170	10
10/16/2019	281	473	49
12/3/2019			
3/3/2020	000	100	
3/5/2020	292	489	39
9/15/2020 9/16/2020	99	202	31
	88	392	31
9/17/2020			
3/1/2021			
3/2/2021	212	400	
3/3/2021	212	422	33
3/4/2021			
9/21/2021	100	406	
9/22/2021	190	406	40
9/23/2021	200	440	49
2/1/2022	209	449	10
2/2/2022	044		46
8/23/2022	614		40
8/24/2022		452	

# FIGURE E.

### Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

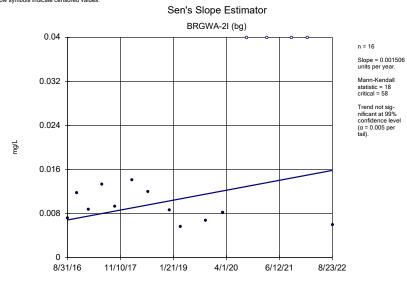
	Plant Branch Client: Southern Compar	ny Data: Plan	t Branch A	AP Printe	d 9/30	/2022, 4	:23 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-35S	0.1822	98	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1657	69	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-17S	1.937	71	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-34S	-4.253	-82	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-38S	-1.655	-76	-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-34S	-0.2582	-80	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-36S	0.8757	80	58	Yes	16	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
pH, Field (S.U.)	BRGWC-38S	-0.1382	-105	-68	Yes	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-32.85	-103	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-14.52	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-38S	-33.08	-85	-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-34S	-49.48	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.15	-92	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.84	-96	-58	Yes	16	0	n/a	n/a	0.01	NP

#### Appendix III Trend Tests - Prediction Limit Exceedances - All Results

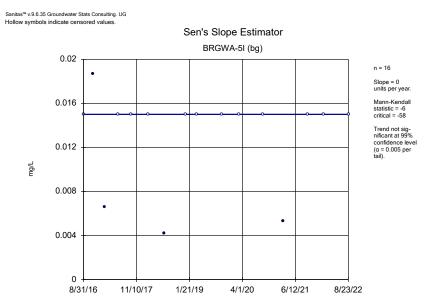
Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM Plant Branch Constituent Calc. Critical Sig. N <u>%NDs</u> <u>Normality</u> <u>Xform</u> <u>Alpha</u> Method Boron (mg/L) BRGWA-2I (bg) 0.001506 18 58 No 16 25 n/a n/a 0.01 NP BRGWA-2S (bg) 0 -3 16 0.01 NP Boron (mg/L) -58 No 87.5 n/a n/a 0 BRGWA-5I (bg) NP Boron (mg/L) -6 No 16 75 0.01 -58 n/a n/a Boron (mg/L) BRGWA-5S (bg) 0 -8 -58 No 16 56.25 n/a n/a 0.01 NΡ BRGWA-6S (bg) 58 16 75 0.01 NP Boron (mg/L) No n/a n/a BRGWC-17S -0.001021 -29 41 0.01 ΝP Boron (mg/L) -63 No 17 Boron (mg/L) BRGWC-33S -0.01268 -18 -58 No 16 0 0.01 NP Boron (mg/L) BRGWC-34S 0.001241 13 58 No 16 0 n/a n/a 0.01 NP Boron (mg/L) BRGWC-35S 0.1822 98 58 Yes 16 0 n/a n/a 0.01 NP BRGWC-36S 0.03171 0 NP Boron (mg/L) 58 63 No 17 n/a n/a 0.01 NP Boron (mg/L) BRGWC-38S -0.04809 -58 16 0 0.01 -40 No n/a n/a BRGWA-2I (bg) 0.5425 43 16 6.25 0.01 NP Calcium (mg/L) 58 No n/a n/a Calcium (mg/L) BRGWA-2S (bg) 0.073 30 No 16 0 n/a n/a 0.01 NP Calcium (mg/L) BRGWA-5I (bg) 0.03321 5 58 16 6.25 0.01 ΝP No Calcium (mg/L) BRGWA-5S (bg) -0.5076 -36 -58 No 16 6.25 n/a 0.01 NΡ Calcium (mg/L) BRGWA-6S (bg) 0.1657 69 58 Yes 16 0 n/a 0.01 NP BRGWC-17S Calcium (mg/L) 1.937 71 58 Yes 16 0 n/a n/a 0.01 NP Calcium (mg/L) BRGWC-33S -2.525 0 NP -38 -58 No 16 n/a n/a 0.01 BRGWC-34S -4.253 -82 0 NP Calcium (mg/L) -58 16 n/a 0.01 Yes n/a Calcium (mg/L) BRGWC-35S 2.067 57 58 16 0 0.01 NP No n/a n/a Calcium (mg/L) BRGWC-36S -0.4386 -29 -58 16 0 0.01 NΡ No n/a n/a Calcium (mg/L) BRGWC-38S -1.655 -76 -58 16 0 0.01 ΝP n/a Chloride (mg/L) BRGWA-2I (bg) -0.04825 -38 -58 No 16 0 n/a 0.01 NΡ 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 BRGWA-5S (ba) -0.07499 NP Chloride (mg/L) 16 0 0.01 -48 -58 No n/a n/a BRGWA-6S (bg) -0.01997 -21 0 0.01 NP Chloride (mg/L) -58 No 16 n/a n/a BRGWC-17S 0.1812 53 16 0 NP Chloride (mg/L) 58 No n/a 0.01 n/a BRGWC-33S 0.1438 NP Chloride (mg/L) 8 No 16 0 n/a n/a 0.01 Chloride (mg/L) BRGWC-34S -0.2582 NP -80 16 0 0.01 Chloride (mg/L) BRGWC-35S 0.05257 26 58 No 16 0 n/a n/a 0.01 NP Chloride (mg/L) BRGWC-36S 0.8757 80 58 Yes 16 0 n/a n/a 0.01 NP Chloride (mg/L) BRGWC-38S 0.1162 16 58 No 16 0 n/a n/a 0.01 NP BRGWA-2I (bg) 0 NP Fluoride (mg/L) -17 -68 No 18 50 n/a n/a 0.01 NP BRGWA-2S (bg) 0 49 Fluoride (mg/L) 68 No 18 61.11 0.01 n/a n/a Fluoride (mg/L) BRGWA-5I (bg) 0 54 68 No 18 72.22 0.01 NP n/a n/a Fluoride (mg/L) BRGWA-5S (bg) 0 -20 -68 No 18 38.89 n/a 0.01 NP BRGWA-6S (bg) 0 55 68 18 61.11 0.01 ΝP Fluoride (mg/L) No Fluoride (mg/L) BRGWC-17S -0.002182 -11 -68 No 18 5.556 n/a n/a 0.01 NP Fluoride (mg/L) BRGWC-36S 0 17 68 No 18 50 n/a n/a 0.01 NP 0.008753 Fluoride (mg/L) BRGWC-38S 16 68 No 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 NP pH. Field (S.U.) BRGWA-2S (ba) -0.0368 -71 0 -68 Yes 18 n/a n/a 0.01 pH, Field (S.U.) BRGWA-5I (bg) -0.02765 -47 -68 0 0.01 NP 18 No n/a n/a BRGWA-5S (bg) -0.05383 -81 0 NP pH, Field (S.U.) -68 Yes n/a 0.01 pH, Field (S.U.) BRGWA-6S (bg) 0 0 63 No 17 0 n/a 0.01 ΝP pH, Field (S.U.) BRGWC-33S -0.01085 -46 -74 No 19 0 n/a 0.01 NP n/a pH, Field (S.U.) BRGWC-34S 0.003222 10 68 No 18 0 n/a n/a 0.01 NP pH, Field (S.U.) BRGWC-36S 0 NP 1 63 No 17 0 n/a n/a 0.01 BRGWC-37S 0.009624 NP pH, Field (S.U.) 10 53 No 15 0 n/a n/a 0.01 pH, Field (S.U.) BRGWC-38S -0.1382 0 NP -105 -68 Yes 18 n/a n/a 0.01

# Appendix III Trend Tests - Prediction Limit Exceedances - All Results Plant Branch Olient: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

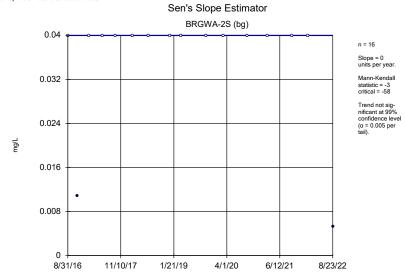
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Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Sulfate (mg/L)	BRGWA-2I (bg)	-0.1382	-32	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2S (bg)	-0.00315	-15	-58	No	16	37.5	n/a	n/a	0.01	NP
Sulfate (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-17S	4.317	47	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-33S	-20.1	-51	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-32.85	-103	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-35S	-1.61	-17	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-14.52	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-38S	-33.08	-85	-58	Yes	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-17S	2.861	19	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-33S	-31.32	-47	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-34S	-49.48	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-35S	2.399	12	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.15	-92	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.84	-96	-58	Yes	16	0	n/a	n/a	0.01	NP



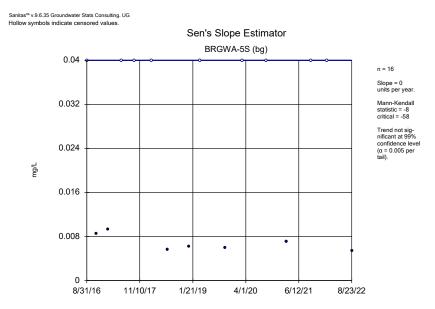
Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

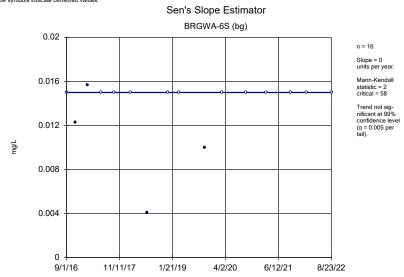


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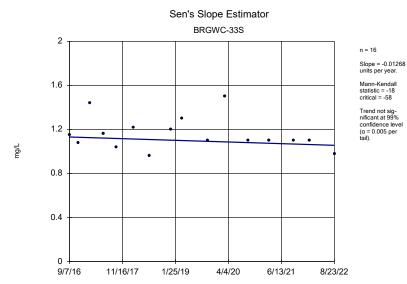
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



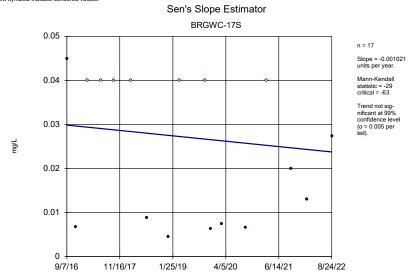
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

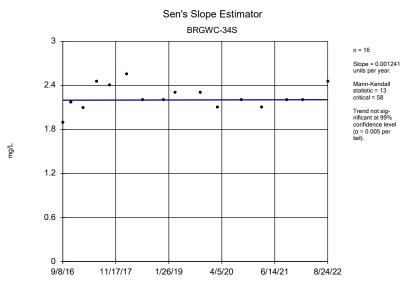


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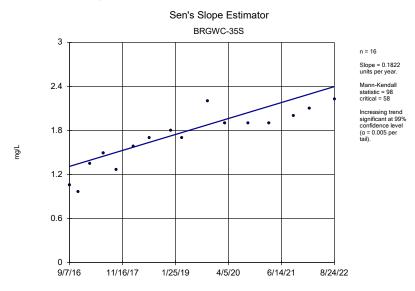
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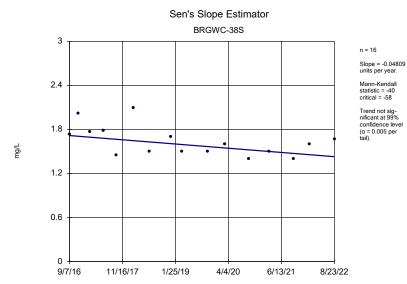
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Plant Branch Client: Southern Company Data: Plant Branch AP



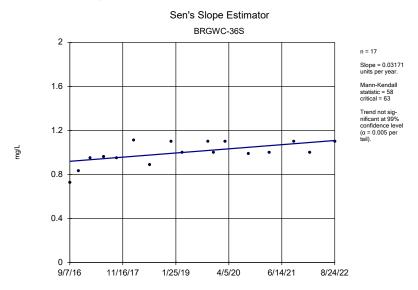
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Plant Branch Client: Southern Company Data: Plant Branch AP



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Plant Branch Client: Southern Company Data: Plant Branch AP

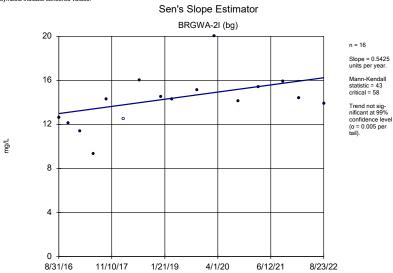


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Plant Branch Client: Southern Company Data: Plant Branch AP

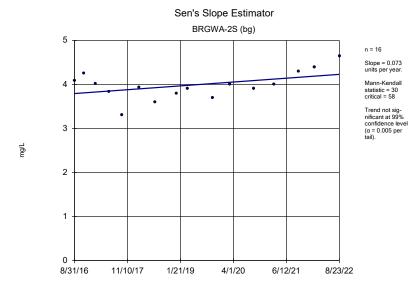


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Plant Branch Client: Southern Company Data: Plant Branch AP

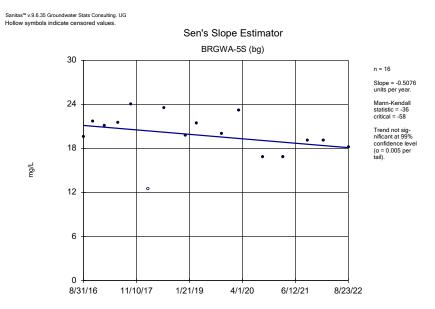
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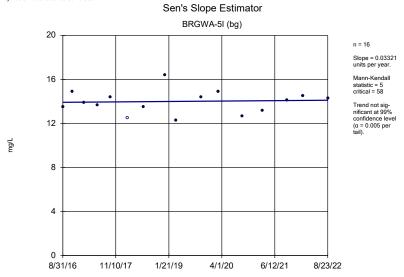
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Plant Branch Client: Southern Company Data: Plant Branch AP



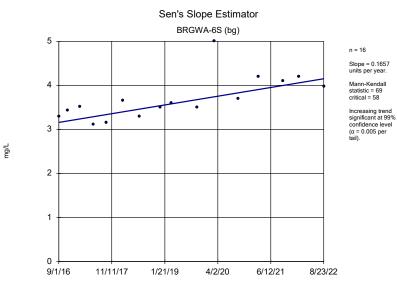
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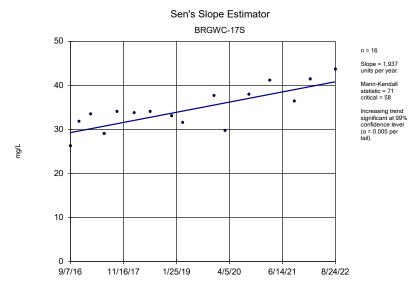
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

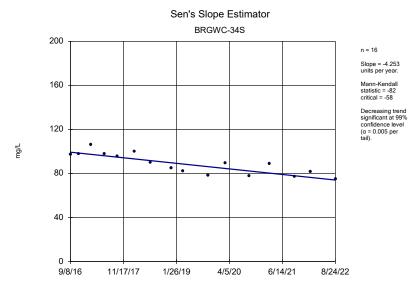


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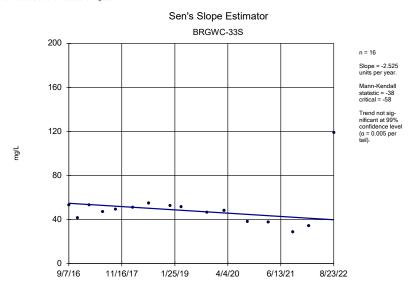


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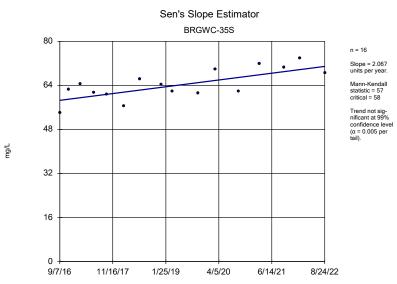




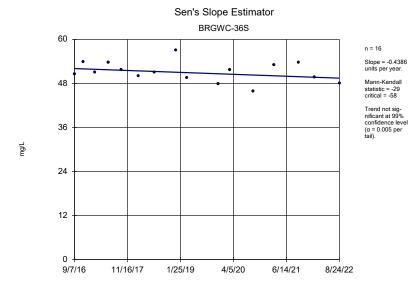
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Plant Branch Client: Southern Company Data: Plant Branch AP



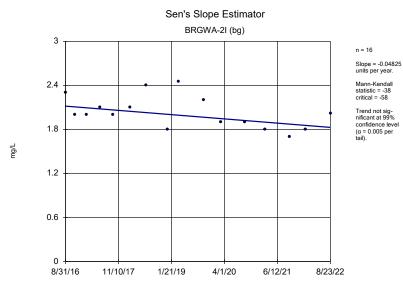
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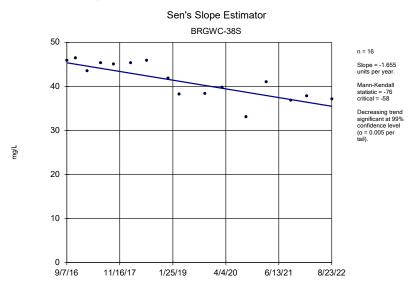
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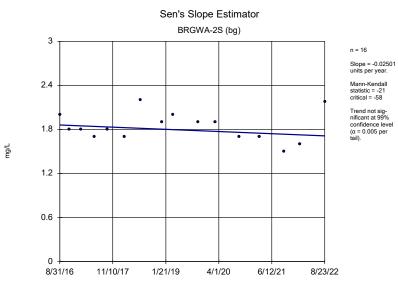
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Plant Branch Client: Southern Company Data: Plant Branch AP



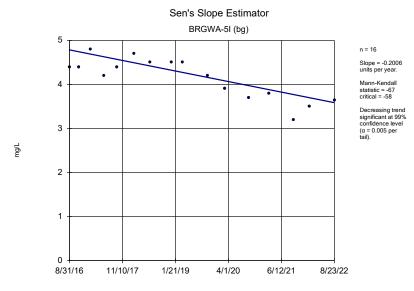
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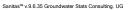
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Plant Branch Client: Southern Company Data: Plant Branch AP

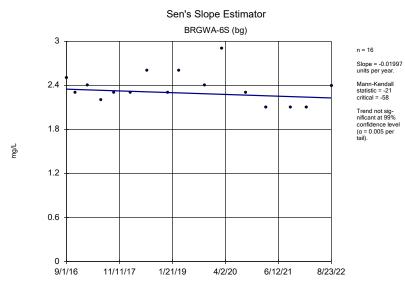


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Plant Branch Client: Southern Company Data: Plant Branch AP

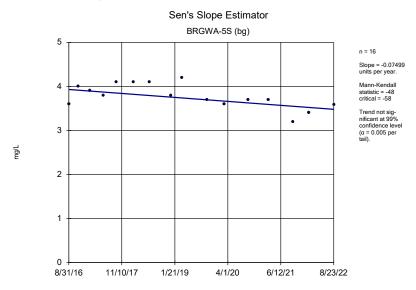


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Plant Branch Client: Southern Company Data: Plant Branch AP

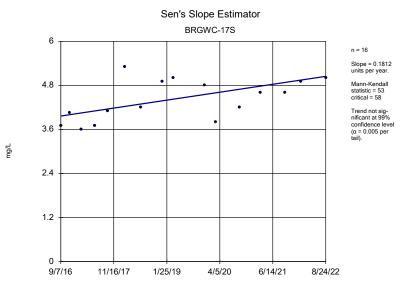




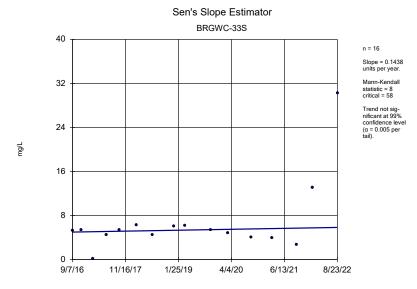
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Plant Branch Client: Southern Company Data: Plant Branch AP



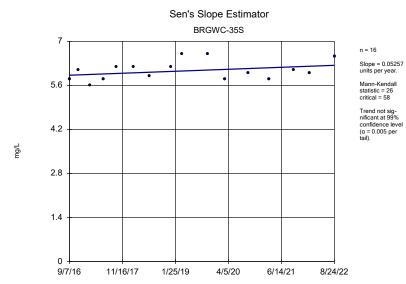
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Plant Branch Client: Southern Company Data: Plant Branch AP



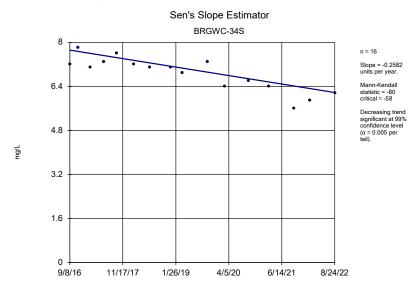
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Plant Branch Client: Southern Company Data: Plant Branch AP



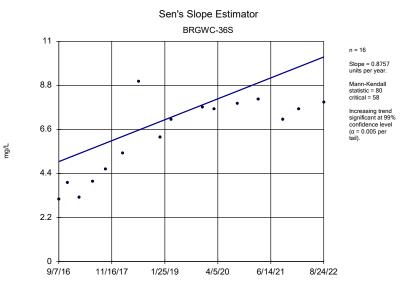
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Plant Branch Client: Southern Company Data: Plant Branch AP



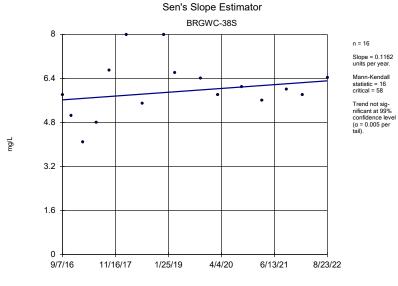
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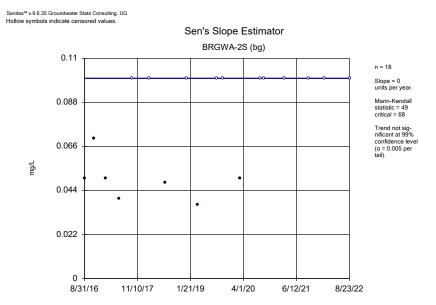
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Plant Branch Client: Southern Company Data: Plant Branch AP



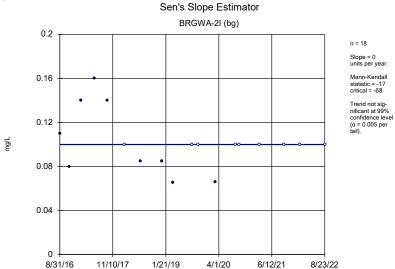
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

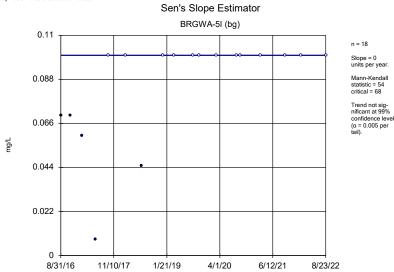


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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

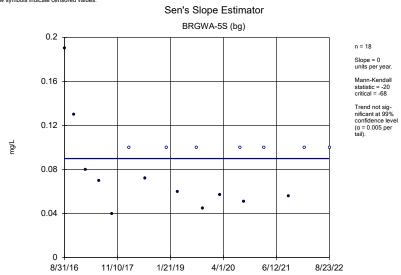




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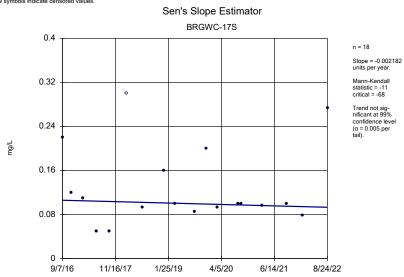
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Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



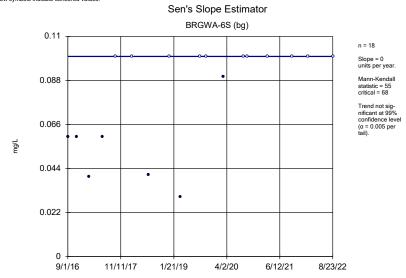
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



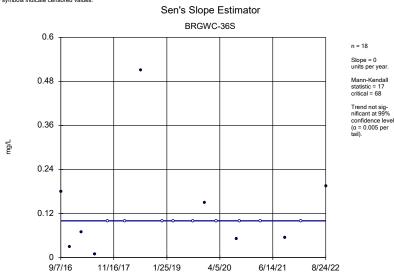
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



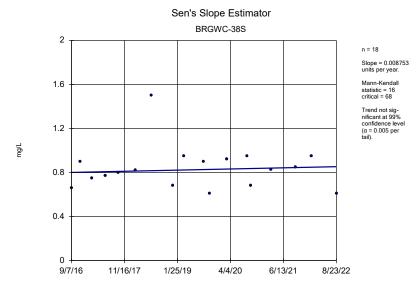
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

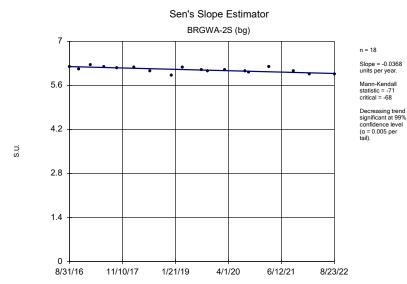


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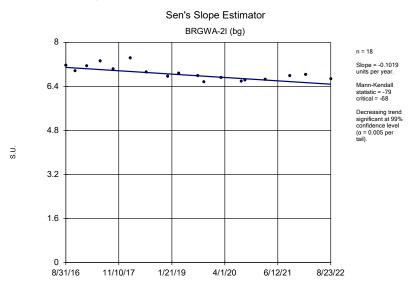
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Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

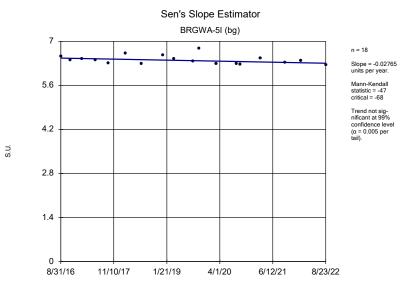


Constituent: pH, Field Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

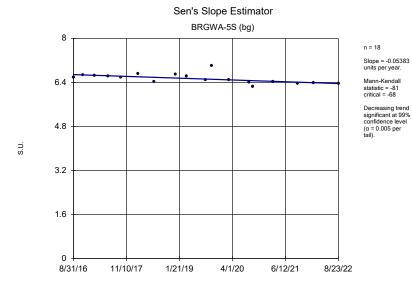


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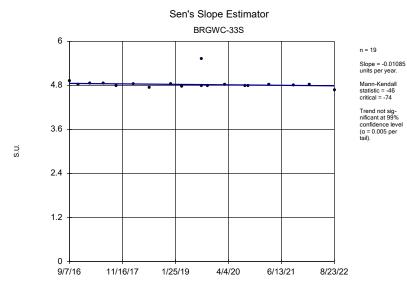
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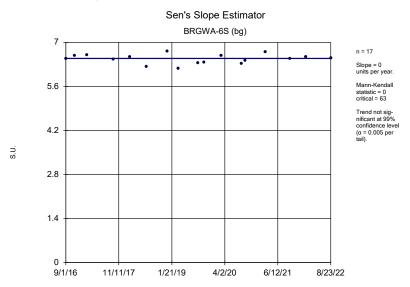
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Plant Branch Client: Southern Company Data: Plant Branch AP



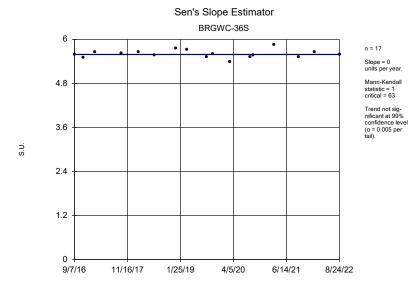
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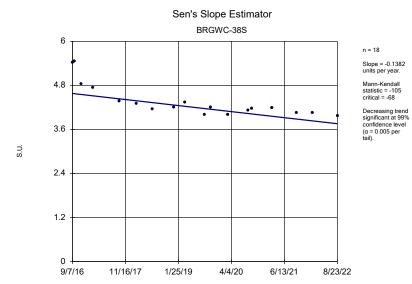
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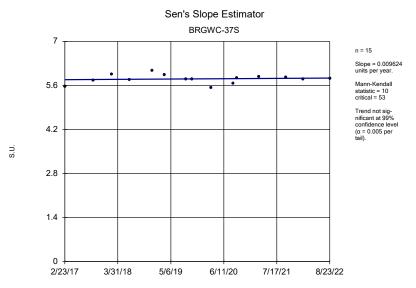
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Plant Branch Client: Southern Company Data: Plant Branch AP



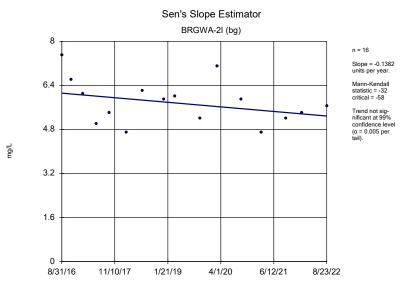
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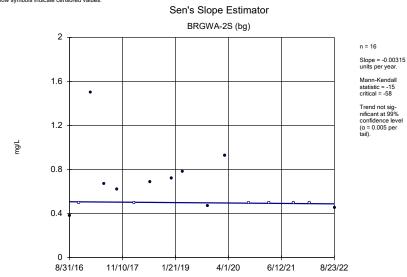
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Plant Branch Client: Southern Company Data: Plant Branch AP



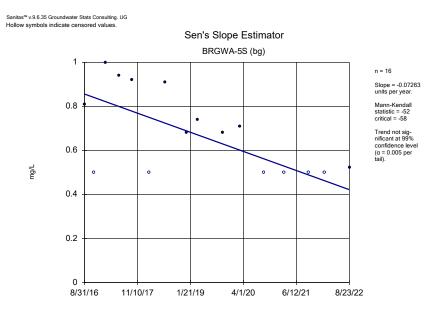
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Plant Branch Client: Southern Company Data: Plant Branch AP



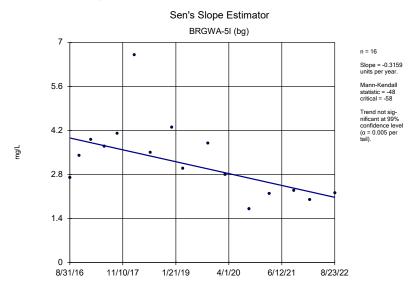
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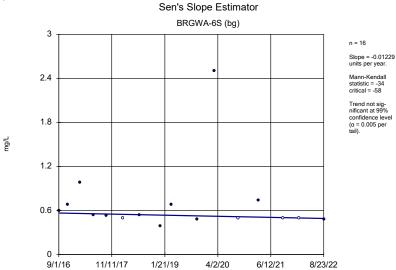


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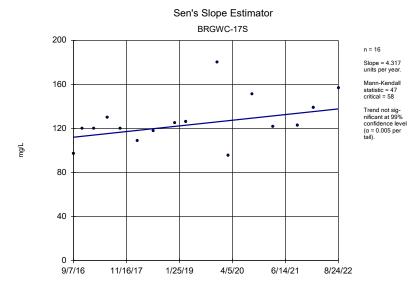


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Plant Branch Client: Southern Company Data: Plant Branch AP

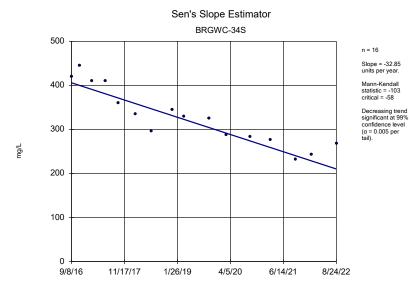




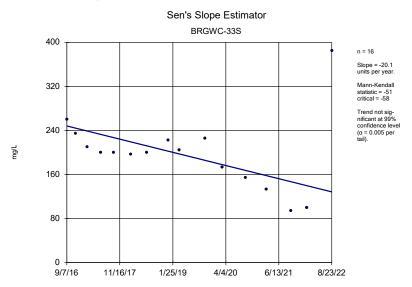
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Plant Branch Client: Southern Company Data: Plant Branch AP



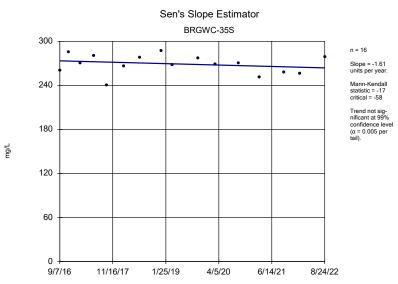
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Plant Branch Client: Southern Company Data: Plant Branch AP



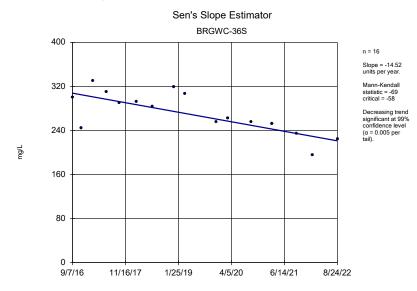
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

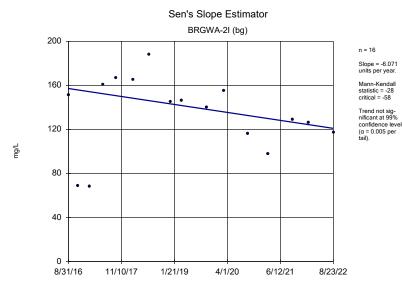


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Plant Branch Client: Southern Company Data: Plant Branch AP

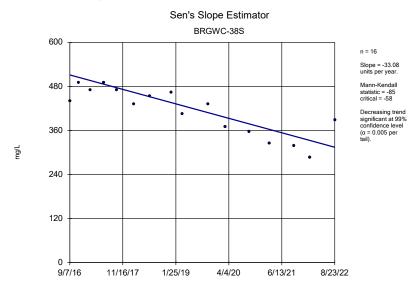


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Plant Branch Client: Southern Company Data: Plant Branch AP



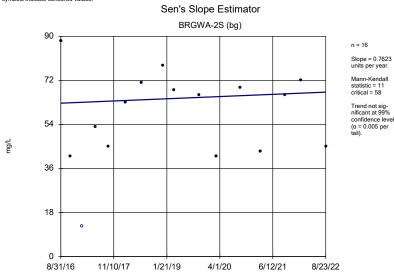


Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

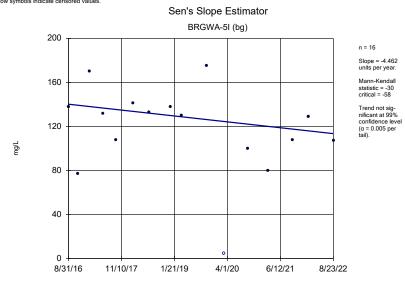


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Plant Branch Client: Southern Company Data: Plant Branch AP

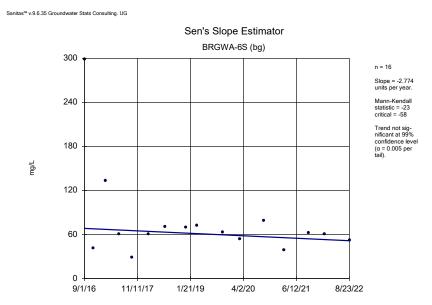
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



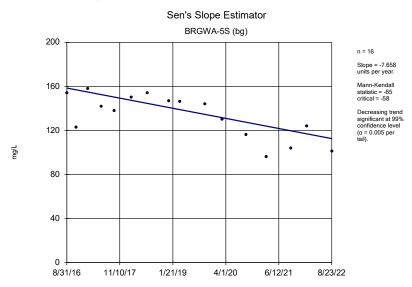
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Plant Branch Client: Southern Company Data: Plant Branch AP



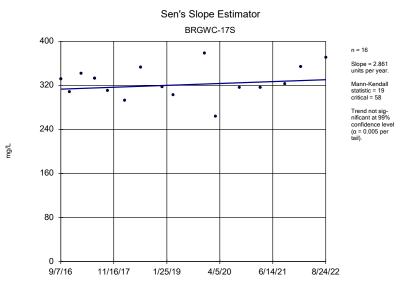
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Plant Branch Client: Southern Company Data: Plant Branch AP



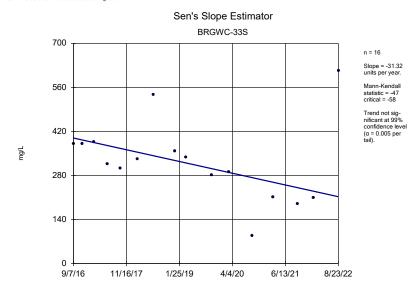
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



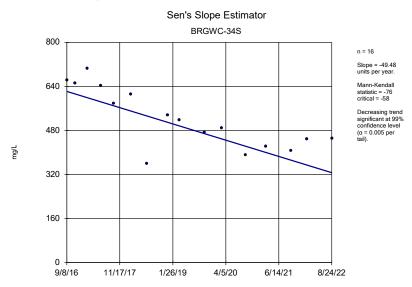
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Plant Branch Client: Southern Company Data: Plant Branch AP



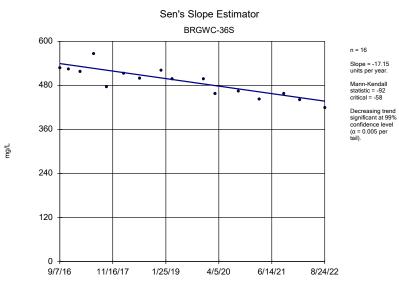
Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sen's Slope Estimator BRGWC-35S 600 n = 16 Slope = 2.399 units per year. 480 Mann-Kendall statistic = 12 critical = 58 Trend not sig-nificant at 99% confidence level 360 (α = 0.005 per tail). 240 120 0 9/7/16 11/16/17 1/25/19 4/5/20 6/14/21 8/24/22

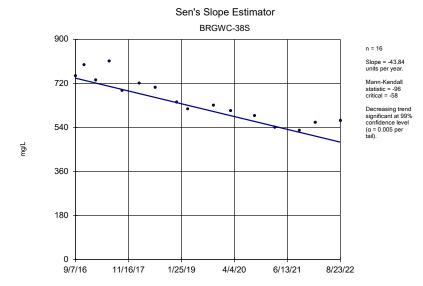
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
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, 11:44 AM

Constituent	Well	Upper Lin	n. Lower Lin	n. Date	Observ.	Sig.Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transforn	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	n/a 85	n/a	n/a	91.76	n/a	n/a	0.01278	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 85	n/a	n/a	76.47	n/a	n/a	0.01278	NP Inter(NDs)
Barium (mg/L)	n/a	0.063	n/a	n/a	n/a	n/a 85	n/a	n/a	0	n/a	n/a	0.01278	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.001	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)
Chromium (mg/L)	n/a	0.016	n/a	n/a	n/a	n/a 85	n/a	n/a	15.29	n/a	n/a	0.01278	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0034	n/a	n/a	n/a	n/a 83	n/a	n/a	45.78	n/a	n/a	0.01416	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	1.649	n/a	n/a	n/a	n/a 85	0.7756	0.2603	0	None	sqrt(x)	0.05	Inter
Fluoride (mg/L)	n/a	0.19	n/a	n/a	n/a	n/a 90	n/a	n/a	56.67	n/a	n/a	0.009888	NP Inter(NDs)
Lead (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 85	n/a	n/a	80	n/a	n/a	0.01278	NP Inter(NDs)
Lithium (mg/L)	n/a	0.089	n/a	n/a	n/a	n/a 85	n/a	n/a	43.53	n/a	n/a	0.01278	NP Inter(normality)
Mercury (mg/L)	n/a	0.00021	n/a	n/a	n/a	n/a 75	n/a	n/a	86.67	n/a	n/a	0.02134	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.008	n/a	n/a	n/a	n/a 85	n/a	n/a	68.24	n/a	n/a	0.01278	NP Inter(NDs)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)
Thallium (mg/L)	n/a	0.002	n/a	n/a	n/a	n/a 85	n/a	n/a	100	n/a	n/a	0.01278	NP Inter(NDs)

# Confidence Intervals - Significant Results Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

	Plant Branch	Cherit. Souther	ii Company	Data.	Pian	t branch AP	Printed 11/4/20	122, 1.2	PIVI			
<u>Constituent</u> <u>Well</u>	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Beryllium (mg/L) BRGWC-38S	0.009374	0.007986	0.004	Yes	18	0.00868	0.001148	0	None	No	0.01	Param.
Cobalt (mg/L) BRGWC-33S	0.05266	0.03803	0.006	Yes	18	0.04534	0.01209	0	None	No	0.01	Param.
Cobalt (mg/L) BRGWC-38S	0.2539	0.2042	0.006	Yes	17	0.2291	0.03971	0	None	No	0.01	Param.

# Confidence Intervals - All Results

		Plant Branch	Client: Souther	rn Company	Data:	Plai	nt Branch AP	Printed 11/4/20	022, 1:2	5 PM			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	<u>Mean</u>	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	BRGWC-17S	0.003	0.0009	0.006	No	17	0.002876	0.0005093	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-36S	0.003	0.0016	0.006	No	17	0.002473	0.00101	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-37S	0.003	0.0006	0.006	No	17	0.002706	0.000831	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-38S	0.003	0.0009	0.006	No	17	0.002741	0.0007315	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-17S	0.005	0.0033	0.01	No	17	0.00413	0.001717	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-33S	0.005	0.00262	0.01	No	18	0.004377	0.00149	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-35S	0.005	0.0006	0.01	No	17	0.004202	0.001777	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-36S	0.005	0.001	0.01	No	17	0.004244	0.001686	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-37S	0.005	0.00078	0.01	No	17	0.004212	0.001757	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-38S	0.003693	0.001937	0.01	No	17	0.002815	0.001401	11.76	None	No	0.01	Param.
Barium (mg/L)	BRGWC-17S	0.04399	0.039	2	No	17	0.04149	0.00398	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-33S	0.023	0.02	2	No	18	0.02246	0.004934	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-34S	0.03293	0.02469	2	No	17	0.02925	0.007023	0	None	ln(x)	0.01	Param.
Barium (mg/L)	BRGWC-35S	0.0518	0.034	2	No	17	0.04765	0.01902	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-36S	0.0415	0.03	2	No	17	0.03781	0.01045	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-37S	0.02521	0.02321	2	No	17	0.02421	0.001601	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-38S	0.0247	0.0141	2	No	17	0.02122	0.009821	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-33S	0.001987	0.001506	0.004	No	18	0.001698	0.0004897	5.556	None	x^2	0.01	Param.
Beryllium (mg/L)	BRGWC-34S	0.0002	0.00012	0.004	No	17	0.0001571	0.00005047	17.65	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-35S	0.0001748	0.0001173	0.004	No	17	0.0001488	0.00004897	11.76	None	x^(1/3)	0.01	Param.
Beryllium (mg/L)	BRGWC-36S	0.00025	0.000084	0.004	No	18	0.0001367	0.00007288	27.78	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-38S	0.009374	0.007986	0.004	Yes	18	0.00868	0.001148	0	None	No	0.01	Param.
Cadmium (mg/L)	BRGWC-33S	0.0005007	0.0003031	0.005	No	18	0.0004116	0.0001832	5.556	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	BRGWC-34S	0.0005515	0.0002222	0.005	No	17	0.0004234	0.0003035	11.76	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	BRGWC-36S	0.001	0.0001	0.005	No	18	0.0008989	0.0002943	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-38S	0.0006571	0.0004921	0.005	No	17	0.0005788	0.0001407	5.882	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	BRGWC-17S	0.01278	0.01004	0.1	No	17	0.01147	0.002307	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	BRGWC-33S	0.01	0.00049	0.1	No	18	0.009472	0.002242	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-35S	0.007139	0.004557	0.1	No	17	0.005848	0.00206	5.882	None	No	0.01	Param.
Chromium (mg/L)	BRGWC-36S	0.008297	0.007177	0.1	No	17	0.007737	0.0008931	0	None	No	0.01	Param.
Chromium (mg/L)	BRGWC-37S	0.01	0.0014	0.1	No	17	0.003506	0.003718	23.53	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-38S	0.004136	0.00349	0.1	No	17	0.003722	0.0007425	0	None	x^3	0.01	Param.
Cobalt (mg/L)	BRGWC-33S	0.05266	0.03803	0.006	Yes	18	0.04534	0.01209	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-34S	0.00438	0.0029	0.006	No	17	0.003811	0.001305	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-35S	0.0012	0.0008	0.006	No	17	0.001	0.0004047	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-38S	0.2539	0.2042	0.006	Yes	17	0.2291	0.03971	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-17S	0.7634	0.3342	5	No	17	0.5488	0.3425	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-33S	1.276	0.6673	5	No	17	0.9716	0.4857	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-34S	1.176	0.7451	5	No	17	0.9605	0.3438	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-35S	1.178	0.4487	5	No	17	0.8735	0.6993	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-36S	1.267	0.7139	5	No	17	0.9905	0.4415	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-37S	0.9215	0.3675	5	No	17	0.6882	0.5156	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-38S	3.563	1.94	5	No	17	2.837	1.466	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-17S	0.1403	0.08203	4	No	18	0.1183	0.05866	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-33S	0.2244	0.1072	4	No	19	0.1753	0.1115	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-34S	0.1433	0.07674	4	No	18	0.1214	0.08229	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-35S	0.1134	0.05857	4	No	18	0.1026	0.07216	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-36S	0.15	0.054	4	No	18	0.1194	0.1078	50	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-37S	0.1	0.055	4	No		0.08083	0.02744	44.44	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-38S	0.9342	0.7224	4	No	18	0.8405	0.2015	0	None	ln(x)	0.01	Param.
Lead (mg/L)	BRGWC-17S	0.002	0.0001	0.015	No	17	0.001774	0.0006387	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-33S	0.002	0.00007	0.015	No	18	0.0007376	0.0009194	33.33	None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-34S	0.002	0.0003	0.015	No	17	0.001676	0.0007229	82.35	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-35S	0.002	0.0002	0.015	No	17	0.00156	0.0008179	76.47	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-36S	0.002	0.000047	0.015	No	17	0.001885	0.0004737	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-37S	0.002	0.0001	0.015	No	17	0.001776	0.000631	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-38S	0.0005	0.00034	0.015	No	17	0.0006765	0.000634	17.65	None	No	0.01	NP (normality)

# Confidence Intervals - All Results

		Plant Branch	Client: Souther	n Company	Data:	Pla	nt Branch AP	Printed 11/4/20	022, 1:2	5 PM			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Lithium (mg/L)	BRGWC-17S	0.01	0.00097	0.089	No	17	0.006285	0.004577	58.82	None	No	0.01	NP (NDs)
Lithium (mg/L)	BRGWC-33S	0.01028	0.009171	0.089	No	18	0.009728	0.0009209	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-34S	0.01	0.00089	0.089	No	17	0.006776	0.004499	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BRGWC-35S	0.0023	0.002	0.089	No	17	0.0026	0.001909	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-36S	0.0026	0.0023	0.089	No	17	0.003341	0.00251	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-38S	0.02235	0.02036	0.089	No	17	0.02135	0.001591	0	None	No	0.01	Param.
Mercury (mg/L)	BRGWC-17S	0.0002	0.0001	0.002	No	15	0.0001763	0.00004972	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-33S	0.0002	0.00012	0.002	No	16	0.0001769	0.00005186	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-34S	0.0002	0.00012	0.002	No	15	0.000172	0.00005321	73.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-35S	0.0002	0.00013	0.002	No	15	0.0001807	0.00004166	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-36S	0.0002	0.00013	0.002	No	15	0.00018	0.00004293	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-37S	0.0002	0.00014	0.002	No	15	0.0001807	0.00004284	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-38S	0.000176	0.0001096	0.002	No	15	0.0001428	0.00004902	13.33	None	No	0.01	Param.
Selenium (mg/L)	BRGWC-17S	0.002547	0.001775	0.05	No	17	0.002969	0.001325	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Selenium (mg/L)	BRGWC-33S	0.005	0.0028	0.05	No	18	0.0041	0.001294	50	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-36S	0.005033	0.002974	0.05	No	17	0.004098	0.001795	0	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	BRGWC-38S	0.04086	0.03255	0.05	No	17	0.03671	0.006628	0	None	No	0.01	Param.
Thallium (mg/L)	BRGWC-17S	0.002	0.000066	0.002	No	17	0.001886	0.0004691	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BRGWC-33S	0.00024	0.00018	0.002	No	18	0.0004961	0.0006923	16.67	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-38S	0.002	0.00019	0.002	No	17	0.0007606	0.0008266	29.41	None	No	0.01	NP (normality)

# FIGURE G.

# FIGURE H.

# Confidence Intervals - Significant Results Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

	Plant Branch	Cherit. Souther	ii Company	Data.	Pian	t branch AP	Printed 11/4/20	122, 1.2	PIVI			
<u>Constituent</u> <u>Well</u>	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Beryllium (mg/L) BRGWC-38S	0.009374	0.007986	0.004	Yes	18	0.00868	0.001148	0	None	No	0.01	Param.
Cobalt (mg/L) BRGWC-33S	0.05266	0.03803	0.006	Yes	18	0.04534	0.01209	0	None	No	0.01	Param.
Cobalt (mg/L) BRGWC-38S	0.2539	0.2042	0.006	Yes	17	0.2291	0.03971	0	None	No	0.01	Param.

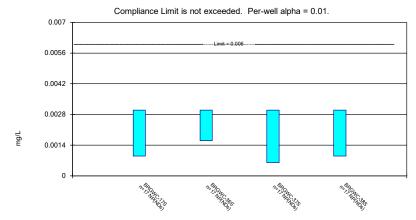
# Confidence Intervals - All Results

		Plant Branch	Client: Souther	rn Company	Data:	Plai	nt Branch AP	Printed 11/4/20	022, 1:2	5 PM			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	<u>Mean</u>	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	BRGWC-17S	0.003	0.0009	0.006	No	17	0.002876	0.0005093	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-36S	0.003	0.0016	0.006	No	17	0.002473	0.00101	76.47	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-37S	0.003	0.0006	0.006	No	17	0.002706	0.000831	88.24	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-38S	0.003	0.0009	0.006	No	17	0.002741	0.0007315	88.24	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-17S	0.005	0.0033	0.01	No	17	0.00413	0.001717	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-33S	0.005	0.00262	0.01	No	18	0.004377	0.00149	83.33	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-35S	0.005	0.0006	0.01	No	17	0.004202	0.001777	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-36S	0.005	0.001	0.01	No	17	0.004244	0.001686	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-37S	0.005	0.00078	0.01	No	17	0.004212	0.001757	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-38S	0.003693	0.001937	0.01	No	17	0.002815	0.001401	11.76	None	No	0.01	Param.
Barium (mg/L)	BRGWC-17S	0.04399	0.039	2	No	17	0.04149	0.00398	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-33S	0.023	0.02	2	No	18	0.02246	0.004934	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-34S	0.03293	0.02469	2	No	17	0.02925	0.007023	0	None	ln(x)	0.01	Param.
Barium (mg/L)	BRGWC-35S	0.0518	0.034	2	No	17	0.04765	0.01902	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-36S	0.0415	0.03	2	No	17	0.03781	0.01045	0	None	No	0.01	NP (normality)
Barium (mg/L)	BRGWC-37S	0.02521	0.02321	2	No	17	0.02421	0.001601	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-38S	0.0247	0.0141	2	No	17	0.02122	0.009821	0	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-33S	0.001987	0.001506	0.004	No	18	0.001698	0.0004897	5.556	None	x^2	0.01	Param.
Beryllium (mg/L)	BRGWC-34S	0.0002	0.00012	0.004	No	17	0.0001571	0.00005047	17.65	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-35S	0.0001748	0.0001173	0.004	No	17	0.0001488	0.00004897	11.76	None	x^(1/3)	0.01	Param.
Beryllium (mg/L)	BRGWC-36S	0.00025	0.000084	0.004	No	18	0.0001367	0.00007288	27.78	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-38S	0.009374	0.007986	0.004	Yes	18	0.00868	0.001148	0	None	No	0.01	Param.
Cadmium (mg/L)	BRGWC-33S	0.0005007	0.0003031	0.005	No	18	0.0004116	0.0001832	5.556	None	sqrt(x)	0.01	Param.
Cadmium (mg/L)	BRGWC-34S	0.0005515	0.0002222	0.005	No	17	0.0004234	0.0003035	11.76	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	BRGWC-36S	0.001	0.0001	0.005	No	18	0.0008989	0.0002943	88.89	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-38S	0.0006571	0.0004921	0.005	No	17	0.0005788	0.0001407	5.882	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	BRGWC-17S	0.01278	0.01004	0.1	No	17	0.01147	0.002307	0	None	sqrt(x)	0.01	Param.
Chromium (mg/L)	BRGWC-33S	0.01	0.00049	0.1	No	18	0.009472	0.002242	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-35S	0.007139	0.004557	0.1	No	17	0.005848	0.00206	5.882	None	No	0.01	Param.
Chromium (mg/L)	BRGWC-36S	0.008297	0.007177	0.1	No	17	0.007737	0.0008931	0	None	No	0.01	Param.
Chromium (mg/L)	BRGWC-37S	0.01	0.0014	0.1	No	17	0.003506	0.003718	23.53	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-38S	0.004136	0.00349	0.1	No	17	0.003722	0.0007425	0	None	x^3	0.01	Param.
Cobalt (mg/L)	BRGWC-33S	0.05266	0.03803	0.006	Yes	18	0.04534	0.01209	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-34S	0.00438	0.0029	0.006	No	17	0.003811	0.001305	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-35S	0.0012	0.0008	0.006	No	17	0.001	0.0004047	70.59	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-38S	0.2539	0.2042	0.006	Yes	17	0.2291	0.03971	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-17S	0.7634	0.3342	5	No	17	0.5488	0.3425	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-33S	1.276	0.6673	5	No	17	0.9716	0.4857	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-34S	1.176	0.7451	5	No	17	0.9605	0.3438	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-35S	1.178	0.4487	5	No	17	0.8735	0.6993	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-36S	1.267	0.7139	5	No	17	0.9905	0.4415	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-37S	0.9215	0.3675	5	No	17	0.6882	0.5156	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-38S	3.563	1.94	5	No	17	2.837	1.466	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-17S	0.1403	0.08203	4	No	18	0.1183	0.05866	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-33S	0.2244	0.1072	4	No	19	0.1753	0.1115	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-34S	0.1433	0.07674	4	No	18	0.1214	0.08229	5.556	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-35S	0.1134	0.05857	4	No	18	0.1026	0.07216	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-36S	0.15	0.054	4	No	18	0.1194	0.1078	50	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-37S	0.1	0.055	4	No		0.08083	0.02744	44.44	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-38S	0.9342	0.7224	4	No	18	0.8405	0.2015	0	None	ln(x)	0.01	Param.
Lead (mg/L)	BRGWC-17S	0.002	0.0001	0.015	No	17	0.001774	0.0006387	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-33S	0.002	0.00007	0.015	No	18	0.0007376	0.0009194	33.33	None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-34S	0.002	0.0003	0.015	No	17	0.001676	0.0007229	82.35	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-35S	0.002	0.0002	0.015	No	17	0.00156	0.0008179	76.47	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-36S	0.002	0.000047	0.015	No	17	0.001885	0.0004737	94.12	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-37S	0.002	0.0001	0.015	No	17	0.001776	0.000631	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-38S	0.0005	0.00034	0.015	No	17	0.0006765	0.000634	17.65	None	No	0.01	NP (normality)

# Confidence Intervals - All Results

		Plant Branch	Client: Souther	n Company	Data:	Pla	nt Branch AP	Printed 11/4/20	022, 1:2	5 PM			
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Lithium (mg/L)	BRGWC-17S	0.01	0.00097	0.089	No	17	0.006285	0.004577	58.82	None	No	0.01	NP (NDs)
Lithium (mg/L)	BRGWC-33S	0.01028	0.009171	0.089	No	18	0.009728	0.0009209	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-34S	0.01	0.00089	0.089	No	17	0.006776	0.004499	64.71	None	No	0.01	NP (NDs)
Lithium (mg/L)	BRGWC-35S	0.0023	0.002	0.089	No	17	0.0026	0.001909	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-36S	0.0026	0.0023	0.089	No	17	0.003341	0.00251	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-38S	0.02235	0.02036	0.089	No	17	0.02135	0.001591	0	None	No	0.01	Param.
Mercury (mg/L)	BRGWC-17S	0.0002	0.0001	0.002	No	15	0.0001763	0.00004972	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-33S	0.0002	0.00012	0.002	No	16	0.0001769	0.00005186	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-34S	0.0002	0.00012	0.002	No	15	0.000172	0.00005321	73.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-35S	0.0002	0.00013	0.002	No	15	0.0001807	0.00004166	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-36S	0.0002	0.00013	0.002	No	15	0.00018	0.00004293	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-37S	0.0002	0.00014	0.002	No	15	0.0001807	0.00004284	80	None	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-38S	0.000176	0.0001096	0.002	No	15	0.0001428	0.00004902	13.33	None	No	0.01	Param.
Selenium (mg/L)	BRGWC-17S	0.002547	0.001775	0.05	No	17	0.002969	0.001325	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Selenium (mg/L)	BRGWC-33S	0.005	0.0028	0.05	No	18	0.0041	0.001294	50	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-36S	0.005033	0.002974	0.05	No	17	0.004098	0.001795	0	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	BRGWC-38S	0.04086	0.03255	0.05	No	17	0.03671	0.006628	0	None	No	0.01	Param.
Thallium (mg/L)	BRGWC-17S	0.002	0.000066	0.002	No	17	0.001886	0.0004691	94.12	None	No	0.01	NP (NDs)
Thallium (mg/L)	BRGWC-33S	0.00024	0.00018	0.002	No	18	0.0004961	0.0006923	16.67	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-38S	0.002	0.00019	0.002	No	17	0.0007606	0.0008266	29.41	None	No	0.01	NP (normality)

#### Non-Parametric Confidence Interval

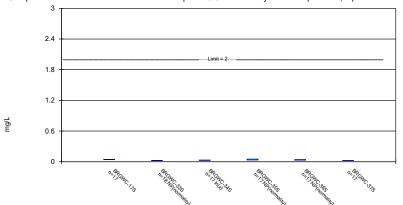


Constituent: Antimony Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

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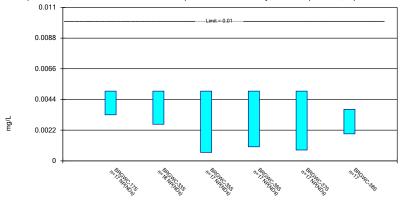
# Parametric and Non-Parametric (NP) Confidence Interval Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Parametric and Non-Parametric (NP) Confidence Interval

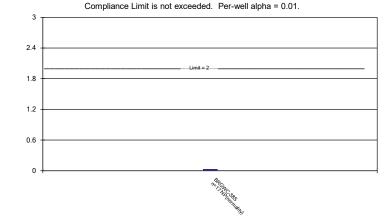
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



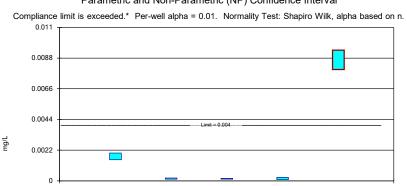
Constituent: Arsenic Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

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# Non-Parametric Confidence Interval



#### Parametric and Non-Parametric (NP) Confidence Interval

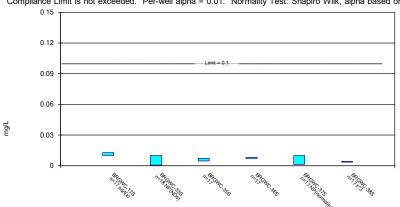


Constituent: Beryllium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

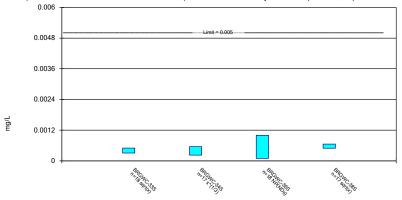
# Parametric and Non-Parametric (NP) Confidence Interval Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 11/4/2022 1:24 PM View: Pond E - 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. Normality Test: Shapiro Wilk, alpha based on n.



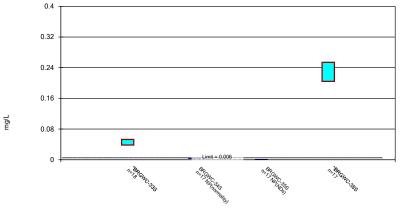
Constituent: Cadmium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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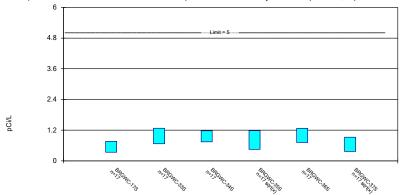
#### Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



#### Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

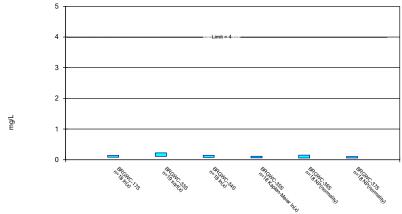


Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence In Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

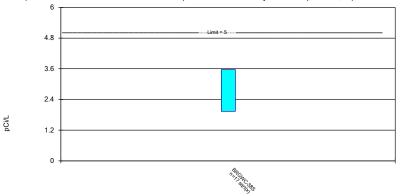


Constituent: Fluoride Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals

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.

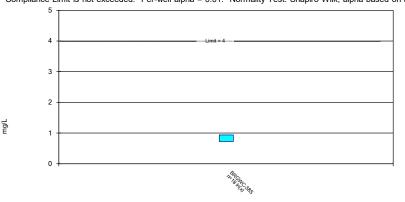


Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence In Plant Branch Client: Southern Company Data: Plant Branch AP

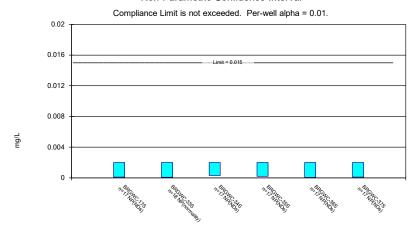
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

#### Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



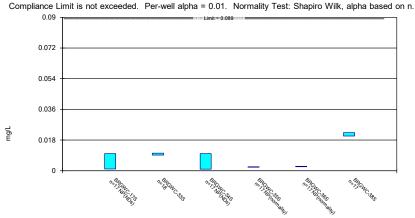
#### Non-Parametric Confidence Interval



Constituent: Lead Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

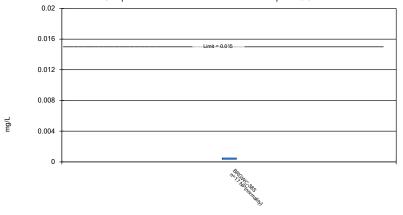
#### Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

### Parametric and Non-Parametric (NP) Confidence Interval



#### Non-Parametric Confidence Interval



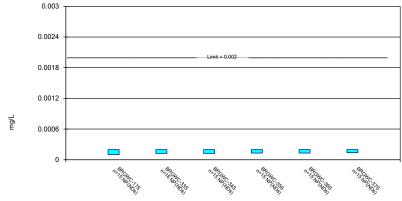


Constituent: Lead Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

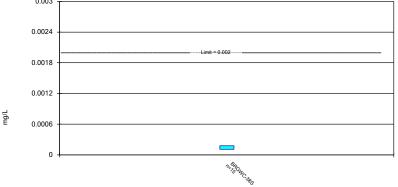
#### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



#### Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

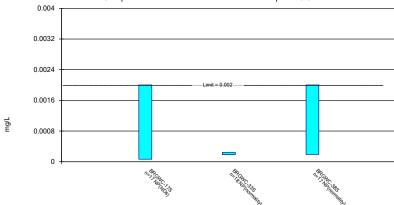


Constituent: Mercury Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

#### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

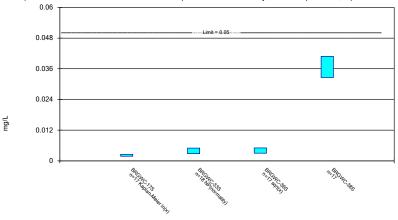


Constituent: Thallium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

#### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Constituent: Antimony (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	<0.003	<0.003		<0.003
11/17/2016	<0.003			
11/18/2016		0.0016 (J)		
11/21/2016				0.0009 (J)
2/22/2017	<0.003			
2/23/2017		<0.003	<0.003	<0.003
4/17/2017			0.0004 (J)	
5/15/2017			<0.003	
6/15/2017	0.0009 (J)	0.0006 (J)	0.0006 (J)	0.0007 (J)
9/28/2017	<0.003	<0.003	<0.003	<0.003
2/15/2018	<0.003	<0.003	<0.003	<0.003
6/27/2018	<0.003			
6/28/2018		<0.003	<0.003	<0.003
12/19/2018	<0.003	<0.003	<0.003	
12/20/2018				<0.003
8/28/2019	<0.003	0.00035 (J)	<0.003	
8/29/2019				<0.003
10/16/2019			<0.003	<0.003
12/3/2019	<0.003	0.00049 (J)		
3/3/2020	<0.003			
3/5/2020		<0.003	<0.003	<0.003
8/19/2020	<0.003	<0.003	<0.003	<0.003
9/16/2020	<0.003	<0.003	<0.003	
9/17/2020				<0.003
3/3/2021		<0.003	<0.003	
3/4/2021	<0.003			<0.003
9/22/2021	<0.003	<0.003		
9/23/2021			<0.003	<0.003
2/1/2022	<0.003	<0.003		<0.003
2/2/2022			<0.003	
8/23/2022			<0.003	<0.003
8/24/2022	<0.003	<0.003		
Mean	0.002876	0.002473	0.002706	0.002741
Std. Dev.	0.0005093	0.00101	0.000831	0.0007315
Upper Lim.	0.003	0.003	0.003	0.003
Lower Lim.	0.0009	0.0016	0.0006	0.0009

Constituent: Arsenic (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	<0.005	<0.005	<0.005	<0.005		0.0026 (J)
11/17/2016	<0.005	<0.005	<0.005			
11/18/2016				<0.005		
11/21/2016						0.0034 (J)
2/22/2017	<0.005	<0.005	<0.005			
2/23/2017				<0.005	<0.005	0.003 (J)
4/17/2017					<0.005	
5/15/2017					<0.005	
6/14/2017		0.0006 (J)				
6/15/2017	0.0006 (J)		0.0006 (J)	0.0007 (J)	<0.005	0.005 (J)
9/27/2017		<0.005				
9/28/2017	<0.005		<0.005	<0.005	<0.005	0.0046 (J)
2/15/2018	<0.005	<0.005	<0.005	<0.005	<0.005	0.0016 (J)
6/27/2018	<0.005	<0.005	<0.005			
6/28/2018				<0.005 (X)	<0.005 (X)	<0.005 (X)
12/18/2018		<0.005 (X)				
12/19/2018	<0.005		<0.005	<0.005	<0.005	
12/20/2018						0.00098 (J)
8/27/2019		<0.005				
8/28/2019	0.00073 (J)	<0.005	0.00044 (J)	0.00045 (J)	0.00038 (J)	
8/29/2019						0.0013 (J)
10/16/2019		0.00056 (J)	0.0004 (J)		0.00078 (J)	0.0024 (J)
12/3/2019	0.00058 (J)			0.001 (J)		
3/3/2020	0.0033 (J)					
3/5/2020		<0.005	<0.005	<0.005	0.00044 (J)	0.0011 (J)
8/19/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.0021 (J)
9/16/2020	<0.005	<0.005	<0.005	<0.005	<0.005	
9/17/2020						0.0015 (J)
3/3/2021		<0.005		<0.005	<0.005	
3/4/2021	<0.005		<0.005			0.0029 (J)
9/22/2021	<0.005	<0.005		<0.005		
9/23/2021			<0.005		<0.005	0.002 (J)
2/1/2022	<0.005	<0.005	<0.005	<0.005		<0.005
2/2/2022					<0.005	
8/23/2022		0.00262 (J)			<0.005	0.00337 (J)
8/24/2022	<0.005		<0.005	<0.005		
Mean	0.00413	0.004377	0.004202	0.004244	0.004212	0.002815
Std. Dev.	0.001717	0.00149	0.001777	0.001686	0.001757	0.001401
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.003693
Lower Lim.	0.0033	0.00262	0.0006	0.001	0.00078	0.001937

Constituent: Barium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S
9/7/2016	0.0377	0.0214		0.101	0.0674	
9/8/2016			0.0415			
11/17/2016	0.0405	0.0211	0.04	0.0808		
11/18/2016					0.0546	
2/22/2017	0.0392	0.0243	0.0415	0.0701		
2/23/2017					0.0489	0.0229
4/17/2017						0.0227
5/15/2017						0.0227
6/14/2017		0.0218	0.0341			
6/15/2017	0.0364			0.0518	0.0415	0.0218
9/27/2017		0.0219	0.0347			
9/28/2017	0.0408			0.047	0.0397	0.0222
2/15/2018	0.0396	0.0248	0.0346	0.0485	0.038	0.0243
6/27/2018	0.041	0.023	0.028	0.046		
6/28/2018					0.035	0.023
12/18/2018		0.023	0.029			
12/19/2018	0.038			0.04	0.035	0.024
8/27/2019		0.02				
8/28/2019	0.044	0.02	0.026	0.039	0.034	0.027
10/16/2019		0.019	0.022	0.037		0.024
12/3/2019	0.043				0.031	
3/3/2020	0.036					
3/5/2020		0.022	0.025	0.039	0.033	0.025
8/19/2020	0.047	0.02	0.024	0.04	0.037	0.026
9/16/2020	0.044	0.019	0.023	0.033	0.03	0.024
3/3/2021		0.02	0.024		0.031	0.024
3/4/2021	0.039			0.034		
9/22/2021	0.043	0.019	0.021		0.028	
9/23/2021				0.036		0.027
2/1/2022	0.045	0.023	0.024	0.033	0.029	
2/2/2022						0.025
8/23/2022		0.0409				0.026
8/24/2022	0.0512		0.0249	0.0339	0.0296	
Mean	0.04149	0.02246	0.02925	0.04765	0.03781	0.02421
Std. Dev.	0.00398	0.004934	0.007023	0.01902	0.01045	0.001601
Upper Lim.	0.04399	0.023	0.03293	0.0518	0.0415	0.02521
Lower Lim.	0.039	0.02	0.02469	0.034	0.03	0.02321

Constituent: Barium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-38S
9/7/2016	0.044
11/21/2016	0.0428 (J)
2/23/2017	0.0338
6/15/2017	0.0239
9/28/2017	0.0247
2/15/2018	0.0215
6/28/2018	0.018
12/20/2018	0.017
8/29/2019	0.016
10/16/2019	0.015
3/5/2020	0.016
8/19/2020	0.016
9/17/2020	0.014
3/4/2021	0.015
9/23/2021	0.014
2/1/2022	0.015
8/23/2022	0.0141
Mean	0.02122
Std. Dev.	0.009821
Upper Lim.	0.0247
Lower Lim.	0.0141

Constituent: Beryllium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

					,
	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-38S
9/7/2016	0.0019 (J)		9E-05 (J)	<0.0005	0.0079
9/8/2016		0.0001 (J)			
9/23/2016					0.0096 (R)
11/17/2016	0.002 (J)	0.0001 (J)	0.0001 (J)		
11/18/2016				0.0001 (J)	
11/21/2016					0.0092
2/22/2017	0.0022 (J)	0.0002 (J)	0.0001 (J)		
2/23/2017				0.0001 (J)	0.01
6/14/2017	0.0019 (J)	<0.0005			
6/15/2017			0.0001 (J)	9E-05 (J)	0.0104
9/27/2017	0.0017 (J)	0.0001 (J)			
9/28/2017			0.0001 (J)	0.0001 (J)	0.0098
2/15/2018	<0.0005	<0.0005	<0.0005	<0.0005	0.011 (J)
6/27/2018	0.002 (J)	0.00013 (J)	0.00015 (J)		
6/28/2018				8.1E-05 (J)	0.0085
12/18/2018	0.0021 (J)	0.00012 (J)			
12/19/2018			<0.0005 (X)	<0.0005 (X)	
12/20/2018					0.0092
8/27/2019	0.0019 (J)				
8/28/2019	0.0019 (J)	0.00014 (J)	0.00016 (J)	0.00011 (J)	
8/29/2019					0.0088
10/16/2019	0.0018 (J)	0.00014 (J)	0.00015 (J)		0.0079
10/17/2019				<0.0005	
12/3/2019				9.7E-05 (J)	
3/5/2020	0.0018 (J)	0.00015 (J)	0.00015 (J)	9.2E-05 (J)	0.0082
8/19/2020	0.0014 (J)	0.00015 (J)	0.00015 (J)	0.00011 (J)	0.0079
9/16/2020	0.0015 (J)	0.00014 (J)	0.00014 (J)	8E-05 (J)	
9/17/2020					0.0073
3/3/2021	0.0013	0.00015 (J)		7.9E-05 (J)	
3/4/2021			0.00012 (J)		0.0077
9/22/2021	0.0012	0.00015 (J)		8.4E-05 (J)	
9/23/2021			0.00016 (J)		0.0071
2/1/2022	0.0013	0.00015 (J)	0.00015 (J)	8.7E-05 (J)	0.0072
8/23/2022	0.00241				0.00854
8/24/2022		<0.0005	0.00021 (J)	<0.0005	
Mean	0.001698	0.0001571	0.0001488	0.0001367	0.00868
Std. Dev.	0.0004897	5.047E-05	4.897E-05	7.288E-05	0.001148
Upper Lim.	0.001987	0.0002	0.0001748	0.00025	0.009374
Lower Lim.	0.001506	0.00012	0.0001173	8.4E-05	0.007986

Constituent: Cadmium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-33S	BRGWC-34S	BRGWC-36S	BRGWC-38S
9/7/2016	0.0005 (J)		8E-05 (J)	0.0004 (J)
9/8/2016		<0.001		
11/17/2016	0.0005 (J)	0.0009 (J)		
11/18/2016			<0.001	
11/21/2016				0.0005 (J)
2/22/2017	0.0006 (J)	0.0005 (J)		
2/23/2017			0.0001 (J)	0.0007 (J)
6/14/2017	0.0004 (J)	0.0004 (J)		
6/15/2017			<0.001	0.0006 (J)
9/27/2017	0.0004 (J)	0.0007 (J)		
9/28/2017			<0.001	0.0007 (J)
2/15/2018	<0.001	<0.001	<0.001	0.00069 (J)
6/27/2018	0.00038 (J)	0.00017 (J)		
6/28/2018			<0.001	0.00056 (J)
12/18/2018	0.00046 (J)	0.00023 (J)		
12/19/2018			<0.001 (X)	
12/20/2018				<0.001 (X)
8/27/2019	0.00032 (J)			
8/28/2019	0.00032 (J)	0.00025 (J)	<0.001	
8/29/2019				0.00053 (J)
10/16/2019	0.00039 (J)	0.0004 (J)		0.00057 (J)
10/17/2019			<0.001	
12/3/2019			<0.001	
3/5/2020	0.00038 (J)	0.00018 (J)	<0.001	0.00059 (J)
8/19/2020	0.00029 (J)	0.00018 (J)	<0.001	0.00056 (J)
9/16/2020	0.00032 (J)	0.00017 (J)	<0.001	
9/17/2020				0.0005 (J)
3/3/2021	0.00022 (J)	0.00015 (J)	<0.001	
3/4/2021				0.00042 (J)
9/22/2021	0.00019 (J)	0.00033 (J)	<0.001	
9/23/2021				0.00048 (J)
2/1/2022	0.00023 (J)	0.00012 (J)	<0.001	0.00058
8/23/2022	0.000509 (J)			0.000459 (J)
8/24/2022		0.000517 (J)	<0.001	
Mean	0.0004116	0.0004234	0.0008989	0.0005788
Std. Dev.	0.0001832	0.0003035	0.0002943	0.0001407
Upper Lim.	0.0005007	0.0005515	0.001	0.0006571
Lower Lim.	0.0003031	0.0002222	0.0001	0.0004921

Constituent: Chromium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

					,	
	BRGWC-17S	BRGWC-33S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	0.01 (J)	<0.01	0.0019 (J)	0.0073 (J)		0.0014 (J)
11/17/2016	0.0185	<0.01	0.0024 (J)			
11/18/2016				0.008 (J)		
11/21/2016						0.003 (J)
2/22/2017	0.0122	<0.01	0.004 (J)			
2/23/2017				0.0086 (J)	0.001 (J)	0.0028 (J)
4/17/2017					0.0018 (J)	
5/15/2017					0.0014 (J)	
6/14/2017		<0.01				
6/15/2017	0.0117		0.0033 (J)	0.0082 (J)	0.0013 (J)	0.0038 (J)
9/27/2017		<0.01				
9/28/2017	0.0114		0.0052 (J)	0.0083 (J)	0.0014 (J)	0.0037 (J)
2/15/2018	0.011	<0.01	<0.01	0.0086 (J)	<0.01	0.0044 (J)
6/27/2018	0.0098 (J)	<0.01	0.0062 (J)			
6/28/2018				0.0076 (J)	<0.01	0.0041 (J)
12/18/2018		<0.01				
12/19/2018	0.0095 (J)		0.0073 (J)	0.0085 (J)	<0.01	
12/20/2018						0.0041 (J)
8/27/2019		<0.01				
8/28/2019	0.013	<0.01	0.0071 (J)	0.0078 (J)	0.0017 (J)	
8/29/2019						0.0044 (J)
10/16/2019		0.00049 (J)	0.0064 (J)		0.0014 (J)	0.0038 (J)
12/3/2019	0.011			0.007 (J)		
3/3/2020	0.0081 (J)					
3/5/2020		<0.01	0.0076 (J)	0.0087 (J)	0.0016 (J)	0.0038 (J)
8/19/2020	0.012	<0.01	0.0073 (J)	0.0094 (J)	0.0017 (J)	0.0043 (J)
9/16/2020	0.012	<0.01	0.0058 (J)	0.0064 (J)	0.0018 (J)	
9/17/2020						0.0042 (J)
3/3/2021		<0.01		0.0067	0.0014 (J)	
3/4/2021	0.01		0.0053			0.004 (J)
9/22/2021	0.0091	<0.01		0.0065		
9/23/2021			0.0065		0.0016 (J)	0.004 (J)
2/1/2022	0.013	<0.01	0.0056	0.0068		0.0035 (J)
2/2/2022					0.0015 (J)	
8/23/2022		<0.01			<0.01	0.00398 (J)
8/24/2022	0.0127		0.00752 (J)	0.00713 (J)		
Mean	0.01147	0.009472	0.005848	0.007737	0.003506	0.003722
Std. Dev.	0.002307	0.002242	0.00206	0.0008931	0.003718	0.0007425
Upper Lim.	0.01278	0.01	0.007139	0.008297	0.01	0.004136
Lower Lim.	0.01004	0.00049	0.004557	0.007177	0.0014	0.00349

 $\label{lem:constituent: Cobalt (mg/L)} Constituent: Cobalt (mg/L) \quad Analysis Run 11/4/2022 1:25 \, PM \quad View: Pond E - Confidence Intervals \\ Plant Branch \quad Client: Southern Company \quad Data: Plant Branch AP$ 

	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-385
9/7/2016	0.0612		0.0023 (J)	0.236
9/8/2016		0.0029 (J)		
11/17/2016	0.0551	0.0028 (J)	0.0012 (J)	
11/21/2016				0.298
2/22/2017	0.0567	0.0041 (J)	0.0008 (J)	
2/23/2017				0.277
6/14/2017	0.0557	0.0036 (J)		
6/15/2017			0.0004 (J)	0.262
9/27/2017	0.049	0.0028 (J)		
9/28/2017			0.0003 (J)	0.279
2/15/2018	0.0536	<0.001	<0.001	0.279
6/27/2018	0.054	0.0041 (J)	<0.001	
6/28/2018				0.23
12/18/2018	0.049	0.0032 (J)		
12/19/2018			<0.001	
12/20/2018				0.25
8/27/2019	0.045			
8/28/2019	0.045	0.0037 (J)	<0.001	
8/29/2019				0.21
10/16/2019	0.042	0.0043 (J)	<0.001	0.21
3/5/2020	0.037	0.0031 (J)	<0.001	0.22
8/19/2020	0.036	0.0041 (J)	<0.001	0.22
9/16/2020	0.034	0.0042 (J)	<0.001	
9/17/2020				0.2
3/3/2021	0.028	0.0046 (J)		
3/4/2021			<0.001	0.2
9/22/2021	0.024	0.0075		
9/23/2021			<0.001	0.17
2/1/2022	0.027	0.0044 (J)	<0.001	0.18
8/23/2022	0.0639			0.173
8/24/2022		0.00438	<0.001	
Mean	0.04534	0.003811	0.001	0.2291
Std. Dev.	0.01209	0.001305	0.0004047	0.03971
Upper Lim.	0.05266	0.00438	0.0012	0.2539
Lower Lim.	0.03803	0.0029	0.0008	0.2042

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

		BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S
9.	/7/2016	1.18	0.541 (U)		0.189 (U)	0.638 (U)	
9.	/8/2016			0.998 (U)			
1	1/17/2016	0.145 (U)	1.02 (U)	0.613	0.729 (U)		
1	1/18/2016					1.22 (U)	
2	/22/2017	0.0213 (U)	0.482 (U)	1.01 (U)	0.293 (U)		
2	/23/2017					0.554 (U)	0.567 (U)
4.	/17/2017						0.335 (U)
5.	/15/2017						0.261 (U)
6	/14/2017		0.723 (U)	0.801 (U)			
6	/15/2017	0.41 (U)			1.09	0.77 (U)	0.188 (U)
9.	/27/2017		1.5	1.44			
9.	/28/2017	0.496 (U)			1.02 (U)	1.07 (U)	0.627 (U)
2	/15/2018	0.672 (U)	1.14 (U)	0.668 (U)	0.742 (U)	0.751 (U)	0.869 (U)
6	/27/2018	0.692 (U)	1.3 (U)	1.06 (U)	0.739 (U)		
6	/28/2018					0.392 (U)	0.336 (U)
1:	2/18/2018		1.64 (UX)	1.22			
1:	2/19/2018	0.325 (U)			0.465 (U)	0.693 (U)	0.454 (U)
8.	/27/2019		1.38				
8	/28/2019	0.24 (U)		0.811 (U)	0.995 (U)	0.866 (U)	0.809 (U)
1	0/16/2019		1.16 (U)	0.561 (U)	1.69		0.815 (U)
1:	2/18/2019	1.16 (U)				1.91	
3.	/3/2020	0.756 (U)					
3.	/5/2020		0.683 (U)	0.792 (U)	0.858 (U)	1.3	0.791 (U)
8.	/19/2020	0.985 (U)	1.14 (U)	1.21 (U)	0.162 (U)	1.4	0.582 (U)
9.	/16/2020	0.478 (U)	0.195 (U)	0.72 (U)	1.25 (U)	1.17 (U)	0.844 (U)
3.	/3/2021		0.708 (U)	1.12		0.307 (U)	1.12
3.	/4/2021	0.38 (U)			0.461 (U)		
9.	/22/2021	0.734 (U)	0.382 (U)	0.91 (U)		0.808 (U)	
9.	/23/2021				0.394 (U)		0.078 (U)
2	/1/2022	0.503 (U)	0.583 (U)	0.535 (U)	0.672 (U)	1.61 (U)	
2	/2/2022						0.654 (U)
8.	/23/2022		1.94				2.37
8	/24/2022	0.152		1.86	3.1	1.38	
M	lean	0.5488	0.9716	0.9605	0.8735	0.9905	0.6882
S	td. Dev.	0.3425	0.4857	0.3438	0.6993	0.4415	0.5156
U	pper Lim.	0.7634	1.276	1.176	1.178	1.267	0.9215
L	ower Lim.	0.3342	0.6673	0.7451	0.4487	0.7139	0.3675

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-38S
9/7/2016	0.816 (U)
11/21/2016	2.94
2/23/2017	1.92
6/15/2017	3.6
9/28/2017	3.3
2/15/2018	2.31 (J+X)
6/28/2018	1.75 (UX)
12/20/2018	2.8 (J+X)
8/29/2019	3.68
10/16/2019	2.66
3/5/2020	2.21
8/19/2020	3.17
9/17/2020	2.92
3/4/2021	1.99
9/23/2021	1.4
2/1/2022	7.64
8/23/2022	3.12
Mean	2.837
Std. Dev.	1.466
Upper Lim.	3.563
Lower Lim.	1.94

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

			Fiant	Diancii Ciletti. 300	utiletti Company L	oata. Flant Blanch AF
	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S
9/7/2016	6 0.22 (J)	0.19 (J)		0.34	0.18 (J)	
9/8/2016	6		0.17 (J)			
11/17/20	016 0.12 (J)	0.12 (J)	0.06 (J)	0.14 (J)		
11/18/20	016				0.03 (J)	
2/22/201	17 0.11 (J)	0.21 (J)	0.17 (J)	0.09 (J)		
2/23/201	17				0.07 (J)	0.1 (J)
4/17/201	17					0.08 (J)
5/15/201	17					0.02 (J)
6/14/201	17	0.18 (J)	0.1 (J)			
6/15/201	17 0.05 (J)			0.03 (J)	0.01 (J)	0.03 (J)
9/27/201	17	0.42	0.4			
9/28/201	17 0.05 (J)			<0.1	<0.1	<0.1
2/15/201	18 <0.1	0.42	<0.1	<0.1	<0.1	<0.1
6/27/201	18 0.093 (J)	0.32	0.21 (J)	0.22 (J)		
6/28/201	18				0.51 (J+X)	<0.1
12/18/20	018	0.28 (J)	0.12 (J)			
12/19/20	0.16 (J)			0.11 (J)	<0.1	0.094 (J)
3/19/201	19 0.1 (J)				<0.1	
3/20/201	19	0.14 (J)	0.074 (J)	0.088 (J)		0.062 (J)
8/27/201		0.11 (J)				
8/28/201	* *	0.11 (J)	0.057 (J)	0.056 (J)	<0.1	<0.1
10/16/20		0.17 (J)	0.13 (J)	0.08 (J)		0.059 (J)
12/3/201					0.15 (J)	
3/3/2020						
3/5/2020		0.088 (J)	0.072 (J)	0.067 (J)	<0.1	0.05 (J)
8/19/202		0.11	0.074 (J)	0.06 (J)	0.051 (J)	0.055 (J)
9/16/202		0.085 (J)	0.077 (J)	0.062 (J)	<0.1	<0.1
3/3/2021		0.069 (J)	0.071 (J)		<0.1	<0.1
3/4/2021	* *			0.076 (J)		
9/22/202		0.068 (J)	0.1	0.070 ( )	0.054 (J)	-0.1
9/23/202		0.052 ( )	0.007.0	0.073 (J)	-0.1	<0.1
2/1/2022		0.053 (J)	0.06 (J)	0.055 (J)	<0.1	-0.1
2/2/2022		0.407				<0.1
8/23/202		0.187	0.14	-0.1	0.104	0.105
8/24/202		0.1750	0.14	<0.1	0.194	0.00000
Mean	0.1183	0.1753	0.1214	0.1026	0.1194	0.08083
Std. Dev		0.1115	0.08229	0.07216	0.1078	0.02744
Upper L		0.2244	0.1433	0.1134	0.15	0.1
Lower L	.im. 0.08203	0.1072	0.07674	0.05857	0.054	0.055

Constituent: Fluoride (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-38S
9/7/2016	0.66
11/21/2016	0.9 (D)
2/23/2017	0.75
6/15/2017	0.77
9/28/2017	0.8
2/15/2018	0.82
6/28/2018	1.5 (J+X)
12/20/2018	0.68
3/20/2019	0.95
8/29/2019	0.9
10/16/2019	0.61
3/5/2020	0.92
8/19/2020	0.95
9/17/2020	0.68
3/4/2021	0.83
9/23/2021	0.85
2/1/2022	0.95
8/23/2022	0.609
Mean	0.8405
Std. Dev.	0.2015
Upper Lim.	0.9342
Lower Lim.	0.7224

Constituent: Lead (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S
9/7/2016	<0.002	0.0002 (J)		0.0001 (J)	<0.002	
9/8/2016			<0.002			
11/17/2016	0.0001 (J)	0.0002 (J)	0.0001 (J)	0.0002 (J)		
11/18/2016					<0.002	
2/22/2017	<0.002	0.0001 (J)	0.0003 (J)	0.0001 (J)		
2/23/2017					<0.002	<0.002
4/17/2017						0.0001 (J)
5/15/2017						<0.002
6/14/2017		9E-05 (J)	<0.002			
6/15/2017	<0.002			<0.002	<0.002	<0.002
9/27/2017		7E-05 (J)	9E-05 (J)			
9/28/2017	<0.002			<0.002	<0.002	0.0001 (J)
2/15/2018	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
6/27/2018	<0.002	<0.002	<0.002	<0.002		
6/28/2018					<0.002	<0.002
12/18/2018		<0.002	<0.002			
12/19/2018	<0.002			<0.002	<0.002	<0.002
8/27/2019		0.00013 (J)				
8/28/2019	<0.002	0.00013 (J)	<0.002	<0.002	<0.002	<0.002
10/16/2019		8.8E-05 (J)	<0.002	<0.002		<0.002
12/3/2019	<0.002				<0.002	
3/3/2020	<0.002					
3/5/2020		8.7E-05 (J)	<0.002	<0.002	<0.002	<0.002
8/19/2020	<0.002	6E-05 (J)	<0.002	<0.002	4.7E-05 (J)	<0.002
9/16/2020	5.4E-05 (J)	6.3E-05 (J)	<0.002	0.00012 (J)	<0.002	<0.002
3/3/2021		5.8E-05 (J)	<0.002		<0.002	<0.002
3/4/2021	<0.002			<0.002		
9/22/2021	<0.002	<0.002	<0.002		<0.002	
9/23/2021				<0.002		<0.002
2/1/2022	<0.002	<0.002	<0.002	<0.002	<0.002	
2/2/2022						<0.002
8/23/2022		<0.002				<0.002
8/24/2022	<0.002		<0.002	<0.002	<0.002	
Mean	0.001774	0.0007376	0.001676	0.00156	0.001885	0.001776
Std. Dev.	0.0006387	0.0009194	0.0007229	0.0008179	0.0004737	0.000631
Upper Lim.	0.002	0.002	0.002	0.002	0.002	0.002
Lower Lim.	0.0001	7E-05	0.0003	0.0002	4.7E-05	0.0001

Constituent: Lead (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-38S
9/7/2016	0.0004 (J)
11/21/2016	0.0005 (J)
2/23/2017	0.0005 (J)
6/15/2017	0.0004 (J)
9/28/2017	0.0004 (J)
2/15/2018	0.00047 (J)
6/28/2018	0.00036 (J)
12/20/2018	0.00039 (J)
8/29/2019	0.00035 (J)
10/16/2019	0.00035 (J)
3/5/2020	0.00041 (J)
8/19/2020	0.00031 (J)
9/17/2020	0.00032 (J)
3/4/2021	0.00034 (J)
9/23/2021	<0.002
2/1/2022	<0.002
8/23/2022	<0.002
Mean	0.0006765
Std. Dev.	0.000634
Upper Lim.	0.0005
Lower Lim.	0.00034

Constituent: Lithium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-38S
9/7/2016	<0.01	0.0092 (J)		0.0021 (J)	0.0024 (J)	0.0193 (J)
9/8/2016			<0.01			
11/17/2016	<0.01	0.0097 (J)	<0.01	0.0022 (J)		
11/18/2016					0.0026 (J)	
11/21/2016						0.0223 (J)
2/22/2017	<0.01	0.0106 (J)	<0.01	0.0023 (J)		
2/23/2017					0.0026 (J)	0.0229 (J)
6/14/2017		0.0097 (J)	<0.01			
6/15/2017	<0.01			0.0023 (J)	0.0026 (J)	0.0227 (J)
9/27/2017		0.0099 (J)	<0.01			
9/28/2017	<0.01			0.0021 (J)	0.0025 (J)	0.023 (J)
2/15/2018	<0.01	0.0106 (J)	<0.01	0.0021 (J)	<0.01	0.0254 (J)
6/27/2018	<0.01	0.01 (J)	<0.01	0.0021 (J)		
6/28/2018					0.0022 (J)	0.021 (J)
12/18/2018		0.011 (J)	<0.01			
12/19/2018	<0.01			0.0021 (J)	0.0026 (J)	
12/20/2018						0.022 (J)
8/27/2019		0.01 (J)				
8/28/2019	0.00097 (J)	0.01 (J)	0.0009 (J)	0.0021 (J)	0.0025 (J)	
8/29/2019						0.021 (J)
10/16/2019		0.0098 (J)	0.00078 (J)	0.0022 (J)		0.02 (J)
12/3/2019	0.001 (J)				0.0024 (J)	
3/3/2020	<0.01					
3/5/2020		0.011 (J)	0.00089 (J)	0.0021 (J)	0.0025 (J)	0.021 (J)
8/19/2020	0.001 (J)	0.009 (J)	0.00082 (J)	0.0021 (J)	0.0024 (J)	0.021 (J)
9/16/2020	0.00096 (J)	0.0089 (J)	<0.01	0.002 (J)	0.0022 (J)	
9/17/2020						0.02 (J)
3/3/2021		0.0085 (J)	0.00096 (J)		0.0024 (J)	
3/4/2021	0.00086 (J)			0.0021 (J)		0.021 (J)
9/22/2021	0.0011 (J)	0.008 (J)	<0.01		0.0026 (J)	
9/23/2021				0.0022 (J)		0.019 (J)
2/1/2022	0.00096 (J)	0.0083 (J)	0.00085 (J)	0.0021 (J)	0.0023 (J)	0.02 (J)
8/23/2022		0.0109				0.0214
8/24/2022	<0.01		<0.01	<0.01	<0.01	
Mean	0.006285	0.009728	0.006776	0.0026	0.003341	0.02135
Std. Dev.	0.004577	0.0009209	0.004499	0.001909	0.00251	0.001591
Upper Lim.	0.01	0.01028	0.01	0.0023	0.0026	0.02235
Lower Lim.	0.00097	0.009171	0.00089	0.002	0.0023	0.02036

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S
9/7/2016	<0.0002	<0.0002		<0.0002	<0.0002	
9/8/2016			<0.0002			
11/17/2016	<0.0002	<0.0002	<0.0002	<0.0002		
11/18/2016					<0.0002	
2/22/2017	<0.0002	<0.0002	<0.0002	<0.0002		
2/23/2017					<0.0002	<0.0002
4/17/2017						<0.0002
5/15/2017						<0.0002
6/14/2017		7E-05 (J)	7E-05 (J)			
6/15/2017	6E-05 (J)			7E-05 (J)	7E-05 (J)	6E-05 (J)
9/27/2017		4E-05 (J)	4E-05 (J)			
9/28/2017	<0.0002			<0.0002	<0.0002	<0.0002
2/15/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
6/27/2018	<0.0002	<0.0002	<0.0002	<0.0002		
6/28/2018					<0.0002	<0.0002
12/18/2018		<0.0002	<0.0002			
12/19/2018	<0.0002			<0.0002	<0.0002	<0.0002
8/27/2019		<0.0002				
8/28/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/19/2020	8.4E-05 (J)	<0.0002	0.00012 (J)	0.00013 (J)	0.00013 (J)	0.00014 (J)
9/16/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/3/2021		<0.0002	<0.0002		<0.0002	<0.0002
3/4/2021	<0.0002			<0.0002		
9/22/2021	0.0001 (J)	0.00012 (J)	0.00015 (J)		0.0001 (J)	
9/23/2021				0.00011 (J)		0.00011 (J)
2/1/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
2/2/2022						<0.0002
8/23/2022		<0.0002				<0.0002
8/24/2022	<0.0002		<0.0002	<0.0002	<0.0002	
Mean	0.0001763	0.0001769	0.000172	0.0001807	0.00018	0.0001807
Std. Dev.	4.972E-05	5.186E-05	5.321E-05	4.166E-05	4.293E-05	4.284E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Lower Lim.	0.0001	0.00012	0.00012	0.00013	0.00013	0.00014

Constituent: Mercury (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-38S
9/7/2016	7E-05 (J)
11/21/2016	0.00012 (J)
2/23/2017	7E-05 (J)
6/15/2017	0.00016 (J)
9/28/2017	0.00011 (J)
2/15/2018	0.00015 (J)
6/28/2018	<0.0002 (X)
12/20/2018	0.00017 (J)
8/29/2019	0.00018 (J)
8/19/2020	0.00018 (J)
9/17/2020	0.00011 (J)
3/4/2021	8.5E-05 (J)
9/23/2021	0.00022
2/1/2022	<0.0002
8/23/2022	0.000117 (J)
Mean	0.0001428
Std. Dev.	4.902E-05
Upper Lim.	0.000176
Lower Lim.	0.0001096

Constituent: Selenium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-36S	BRGWC-38S
9/7/2016	0.0024 (J)	0.0032 (J)	0.0079 (J)	0.0311
11/17/2016	0.0028 (J)	0.0028 (J)		
11/18/2016			0.0082 (J)	
11/21/2016				0.0409
2/22/2017	0.0018 (J)	0.0018 (J)		
2/23/2017			0.0061 (J)	0.0354
6/14/2017		0.004 (J)		
6/15/2017	0.0024 (J)		0.0046 (J)	0.0511
9/27/2017		0.0036 (J)		
9/28/2017	<0.005		0.0042 (J)	0.0484
2/15/2018	<0.005	<0.005	0.0045 (J)	0.0435
6/27/2018	0.002 (J)	0.0017 (J)		
6/28/2018			0.0033 (J)	0.037
12/18/2018		<0.005		
12/19/2018	0.0014 (J)		0.0042 (J)	
12/20/2018				0.037
8/27/2019		<0.005		
8/28/2019	0.003 (J)	<0.005	0.0041 (J)	
8/29/2019				0.036
10/16/2019		0.0028 (J)		0.033
12/3/2019	0.0041 (J)		0.0035 (J)	
3/3/2020	0.0019 (J)			
3/5/2020		<0.005	0.0034 (J)	0.032
8/19/2020	0.003 (J)	<0.005	0.002 (J)	0.041
9/16/2020	<0.005	0.0028 (J)	0.0031 (J)	
9/17/2020				0.029
3/3/2021		<0.005	0.0024 (J)	
3/4/2021	<0.005			0.039
9/22/2021	0.0015 (J)	<0.005	0.0032 (J)	
9/23/2021				0.031
2/1/2022	0.0021 (J)	<0.005	0.0025 (J)	0.029
8/23/2022		0.0061		0.0296
8/24/2022	0.00208 (J)		0.00246 (J)	
Mean	0.002969	0.0041	0.004098	0.03671
Std. Dev.	0.001325	0.001294	0.001795	0.006628
Upper Lim.	0.002547	0.005	0.005033	0.04086
Lower Lim.	0.001775	0.0028	0.002974	0.03255

Constituent: Thallium (mg/L) Analysis Run 11/4/2022 1:25 PM View: Pond E - Confidence Intervals

Plant Branch AP

Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-38S
9/7/2016	<0.002	0.0002 (J)	<0.002
11/17/2016	<0.002	0.0002 (J)	
11/21/2016			0.0004 (J)
2/22/2017	<0.002	0.0002 (J)	
2/23/2017			0.0003 (J)
6/14/2017		0.0002 (J)	
6/15/2017	<0.002		0.0003 (J)
9/27/2017		0.0002 (J)	
9/28/2017	<0.002		0.0003 (J)
2/15/2018	<0.002	0.00024 (J)	0.00026 (J)
6/27/2018	<0.002	0.00022 (J)	
6/28/2018			0.00018 (J)
12/18/2018		0.00022 (J)	
12/19/2018	<0.002		
12/20/2018			<0.002 (X)
8/27/2019		0.00016 (J)	
8/28/2019	<0.002	0.00016 (J)	
8/29/2019			0.00021 (J)
10/16/2019		0.00019 (J)	0.0002 (J)
12/3/2019	6.6E-05 (J)		
3/3/2020	<0.002		
3/5/2020		0.0002 (J)	0.0002 (J)
8/19/2020	<0.002	0.00018 (J)	0.00019 (J)
9/16/2020	<0.002	0.00018 (J)	
9/17/2020			0.00017 (J)
3/3/2021		0.00018 (J)	
3/4/2021	<0.002		<0.002
9/22/2021	<0.002	<0.002	
9/23/2021			0.00022 (J)
2/1/2022	<0.002	<0.002	<0.002
8/23/2022		<0.002	<0.002
8/24/2022	<0.002		
Mean	0.001886	0.0004961	0.0007606
Std. Dev.	0.0004691	0.0006923	0.0008266
Upper Lim.	0.002	0.00024	0.002
Lower Lim.	6.6E-05	0.00018	0.00019

# FIGURE I.

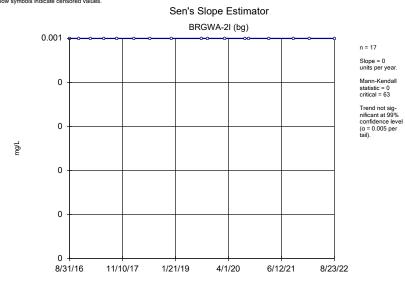
# Appendix IV Trend Tests - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:21 PM

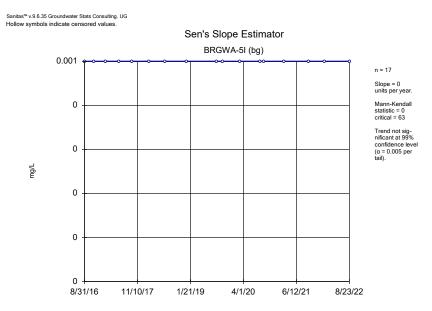
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality Normality	<u>Xform</u>	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	-0.0004476	-77	-68	Yes	18	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0004021	-70	-63	Yes	17	11.76	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-33S	-0.006188	-105	-68	Yes	18	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-38S	-0.01947	-98	-63	Yes	17	0	n/a	n/a	0.01	NP

# Appendix IV Trend Tests - All Results

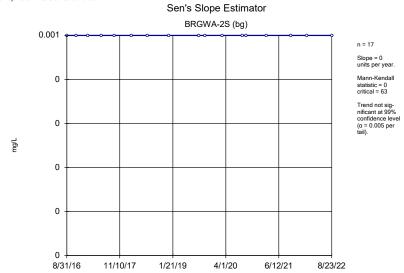
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:21 PM Well Calc. Critical Method Constituent Slope Sig. N <u>%NDs</u> <u>Normality</u> <u>Xform</u> <u>Alpha</u> BRGWA-2I (bg) 0 Beryllium (mg/L) 0 63 No 17 100 n/a n/a 0.01 NP 0 Beryllium (mg/L) BRGWA-2S (bg) 0 63 No 17 100 0.01 NP n/a n/a Beryllium (mg/L) BRGWA-5I (bg) 0 0 63 No 17 100 0.01 NP n/a n/a Beryllium (mg/L) BRGWA-5S (bg) 0 0 63 No 17 100 n/a 0.01 NP n/a BRGWA-6S (bg) 0 Beryllium (mg/L) NP 0 63 No 17 100 n/a n/a 0.01 Beryllium (mg/L) BRGWC-38S 0 0.01 NP -0.0004476 -77 -68 Yes 18 n/a n/a Cobalt (mg/L) BRGWA-2I (bg) NP 17 70.59 n/a 0.01 -16 -63 No n/a Cobalt (mg/L) BRGWA-2S (bg) -0.0004021 -70 Yes 17 NP -63 11.76 n/a n/a 0.01 Cobalt (mg/L) BRGWA-5I (bg) -0.0001378 -49 -53 No 15 0 0.01 NP n/a n/a Cobalt (mg/L) BRGWA-5S (bg) 26 63 17 70.59 n/a 0.01 NP No n/a Cobalt (mg/L) BRGWA-6S (bg) 0 9 0.01 NP 63 17 70.59 No n/a n/a Cobalt (mg/L) BRGWC-33S -0.006188 -105 -68 Yes 18 0 n/a n/a 0.01 NP Cobalt (mg/L) BRGWC-38S -0.01947 NP -98 -63 Yes 17 0 n/a n/a 0.01



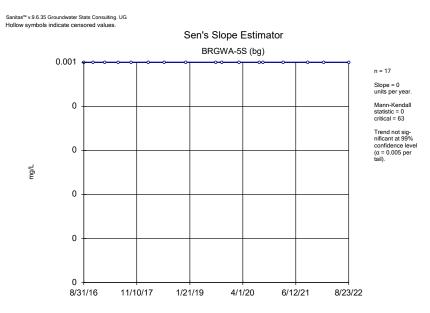
Constituent: Beryllium Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Beryllium Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

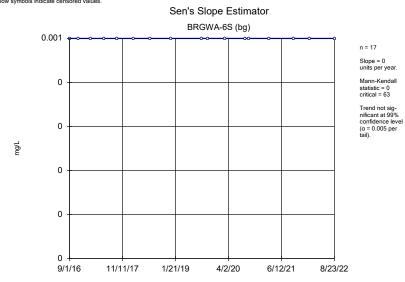


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Plant Branch Client: Southern Company Data: Plant Branch AP

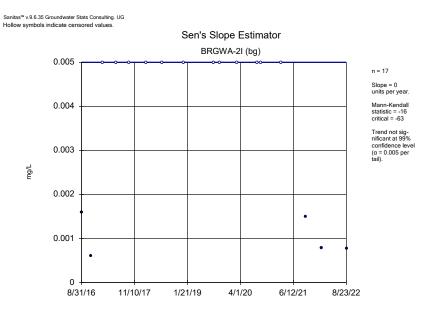


Constituent: Beryllium Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests

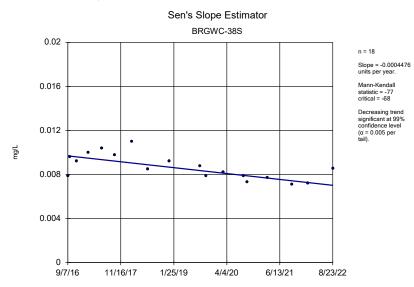
Plant Branch Client: Southern Company Data: Plant Branch AP



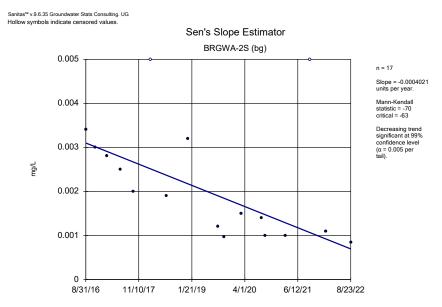
Constituent: Beryllium Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

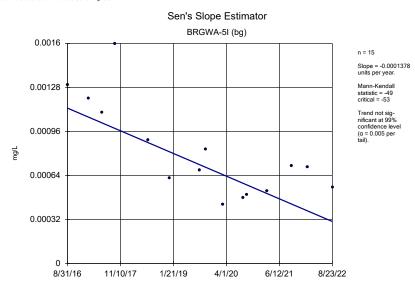


Constituent: Beryllium Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

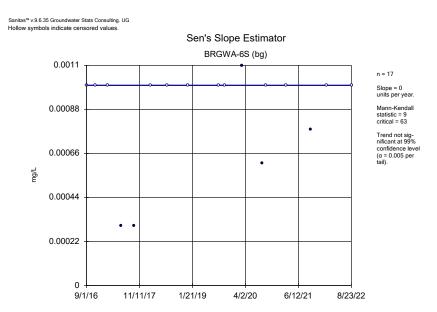


Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

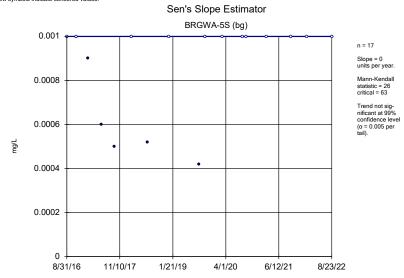


Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



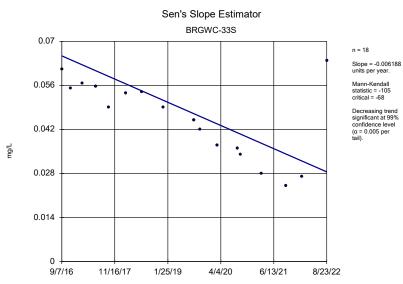
Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



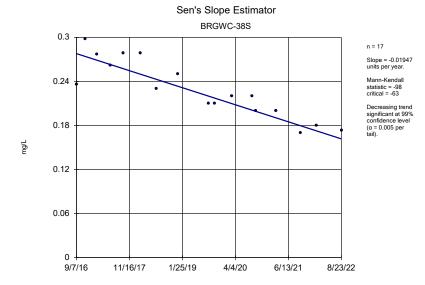
Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG



Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP



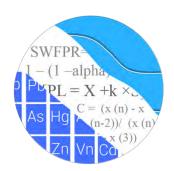
Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

January/February 2023

# GROUNDWATER STATS CONSULTING

July 31, 2023

Southern Company Services Attn: Mr. Joju Abraham 241 Ralph McGill Blvd NE, Bin 10160 Atlanta, Georgia 30308-3374



Re: Plant Branch Pond E – January/February 2023 Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the January/February 2023 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical Analysis of groundwater data for Georgia Power Company's Plant Branch Pond E. 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 for the Appendix III parameters began in 2016, and at least 8 background samples were collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of Appendix IV constituents has been performed for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. A list of all parameters is provided below.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- Upgradient well: BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, and BRGWA-6S
- Downgradient wells: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, and BRGWC-38S
- o **Assessment wells:** PZ-13S, PZ-52D, PZ-53D, and PZ-70I

Data from assessment wells are evaluated using confidence intervals when a minimum of 4 samples are available. Currently, only assessment well PZ-13S has the required minimum number of samples.

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) monitoring 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 downgradient and assessment well/constituent pairs with 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

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 methods were 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.

- 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, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, 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 (Figure C). Although outliers were screened for all wells, only outliers in upgradient wells will affect the interwell prediction limits.

When suspected outliers were evaluated using the Tukey box plot method during the previous screening, a few 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.

#### <u>Seasonality</u>

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.

#### <u>Trend Test Evaluation</u>

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 in upgradient wells 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 showed a number of statistically significant decreasing and increasing trends for the Appendix III parameters. All trends noted were relatively low in magnitude when compared to average concentrations and were in downgradient wells; therefore, they did not affect the interwell limits, and no adjustments were made to the data sets. Trend test results were included with the background screening report.

#### <u>Appendix III – Determination of Spatial Variation</u>

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for 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 – January/February 2023**

#### **Interwell Prediction Limits**

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through January 2023 (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 January 2023 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 and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. A summary table of the background prediction limits follows this letter. Exceedances were identified for the following well/constituent pairs:

Boron: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

Calcium: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

Chloride: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

Fluoride: BRGWC-17S, BRGWC-33S, BRGWC-35S, and BRGWC-38S

pH (lower limit): BRGWC-33S and BRGWC-38S

• Sulfate: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

TDS: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S,

BRGWC-36S, and BRGWC-38S

#### <u>Trend Test Evaluation – Appendix III</u>

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level 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 variability in groundwater unrelated to practices at the site. Statistically significant trends were identified for the following well/constituent pairs:

#### Increasing:

Boron: BRGWC-35S and BRGWC-36S

Calcium: BRGWA-6S (upgradient) and BRGWC-17S

Chloride: BRGWC-17S and BRGWC-36S

#### Decreasing:

• Calcium: BRGWC-34S and BRGWC-38S

• Chloride: BRGWA-5I (upgradient) and BRGWC-34S

• Fluoride: BRGWC-33S

pH: BRGWA-2I (upgradient), BRGWA-2S (upgradient),

BRGWA-5S (upgradient), and BRGWC-38S

• Sulfate: BRGWC-34S, BRGWC-36S, and BRGWC-38S

• TDS: BRGWA-5S (upgradient), BRGWC-34S, BRGWC-36S, and

BRGWC-38S

A summary of the trend test results follows this letter.

#### **Evaluation of Appendix IV Parameters – January/February 2023**

For Appendix IV parameters, confidence intervals for each downgradient well/constituent 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, which includes all downgradient wells for molybdenum. 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 January 2023 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). These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. When data followed a normal or transformed-normal distribution, parametric confidence intervals were used for Appendix IV parameters. Nonparametric confidence intervals, which use the highest and lowest values in background as interval limits, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects. The lower confidence limit, which is constructed with 99% confidence for parametric confidence intervals, is compared to the GWPS prepared as described above.

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:

• Beryllium: BRGWC-38S

Cobalt: BRGWC-33S and BRGWC-38S

#### <u>Trend Test Evaluation – Appendix IV</u>

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level 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 variability in groundwater quality unrelated to practices at the site. A summary of the Appendix IV trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

#### Increasing:

None

#### Decreasing:

• Beryllium: BRGWC-38S

• Cobalt: BRGWA-2S (upgradient), BRGWC-33S, and BRGWC-38S

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Branch Pond E. 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

Kristina Rayner

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

### 100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 3/20/2023 11:04 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Antimony (mg/L)

BRGWC-33S, BRGWC-34S, BRGWC-35S, PZ-13S, PZ-53D, PZ-52D, PZ-70I

Arsenic (mg/L)

BRGWC-34S, PZ-53D

Beryllium (mg/L)

BRGWC-17S, BRGWC-37S, PZ-53D, PZ-52D

Cadmium (mg/L)

BRGWC-17S, BRGWC-35S, BRGWC-37S, PZ-53D, PZ-52D, PZ-70I

Chromium (mg/L)

BRGWC-34S, PZ-53D, PZ-52D, PZ-70I

Cobalt (mg/L)

BRGWC-17S, BRGWC-36S, BRGWC-37S, PZ-53D

Lead (mg/L)

PZ-53D, PZ-52D, PZ-70I

Lithium (mg/L) BRGWC-37S

Mercury (mg/L) PZ-13S, PZ-53D, PZ-52D, PZ-70I

Molybdenum (mg/L)

BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, BRGWC-38S, PZ-13S

Selenium (mg/L)

BRGWC-34S, BRGWC-35S, BRGWC-37S, PZ-53D, PZ-52D

Thallium (mg/L)

BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, PZ-13S, PZ-53D, PZ-52D, PZ-70I

# Appendix III Interwell Prediction Limits - Significant Results

	PI		Plant Branch Client: Southern Company I			Data: Plant Branch AP Printed 2/27/2023			27/2023, 2:33 PM					
Constituent			N Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	<u>Method</u>					
Boron (mg/L)	BRGWC-17S	0.0187	n/a	1/24/2023	0.0326	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2	
Boron (mg/L)	BRGWC-33S	0.0187	n/a	1/24/2023	1.19	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2	
Boron (mg/L)	BRGWC-34S	0.0187	n/a	1/24/2023	2.21	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2	
Boron (mg/L)	BRGWC-35S	0.0187	n/a	1/24/2023	2.23	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2	
Boron (mg/L)	BRGWC-36S	0.0187	n/a	1/25/2023	1.18	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2	
Boron (mg/L)	BRGWC-38S	0.0187	n/a	1/25/2023	1.63	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2	
Calcium (mg/L)	BRGWC-17S	24	n/a	1/24/2023	41.3	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Calcium (mg/L)	BRGWC-33S	24	n/a	1/24/2023	116	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Calcium (mg/L)	BRGWC-34S	24	n/a	1/24/2023	80	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Calcium (mg/L)	BRGWC-35S	24	n/a	1/24/2023	67.5	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Calcium (mg/L)	BRGWC-36S	24	n/a	1/25/2023	48.2	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Calcium (mg/L)	BRGWC-38S	24	n/a	1/25/2023	32.8	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Chloride (mg/L)	BRGWC-17S	4.8	n/a	1/24/2023	6.31	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Chloride (mg/L)	BRGWC-33S	4.8	n/a	1/24/2023	29	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Chloride (mg/L)	BRGWC-34S	4.8	n/a	1/24/2023	7.5	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Chloride (mg/L)	BRGWC-35S	4.8	n/a	1/24/2023	6.46	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Chloride (mg/L)	BRGWC-36S	4.8	n/a	1/25/2023	7.93	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Chloride (mg/L)	BRGWC-38S	4.8	n/a	1/25/2023	6.53	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Fluoride (mg/L)	BRGWC-17S	0.19	n/a	1/24/2023	0.216	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2	
Fluoride (mg/L)	BRGWC-33S	0.19	n/a	1/24/2023	0.193	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2	
Fluoride (mg/L)	BRGWC-35S	0.19	n/a	1/24/2023	0.239	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2	
Fluoride (mg/L)	BRGWC-38S	0.19	n/a	1/25/2023	0.708	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2	
pH, Field (S.U.)	BRGWC-33S	7.44	5.26	1/24/2023	4.79	Yes 94	n/a	n/a	0	n/a	n/a	0.0004389	NP Inter (normality) 1 of 2	
pH, Field (S.U.)	BRGWC-38S	7.44	5.26	1/25/2023	4.75	Yes 94	n/a	n/a	0	n/a	n/a	0.0004389	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BRGWC-17S	7.5	n/a	1/24/2023	153	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BRGWC-33S	7.5	n/a	1/24/2023	375	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BRGWC-34S	7.5	n/a	1/24/2023	267	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BRGWC-35S	7.5	n/a	1/24/2023	334	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BRGWC-36S	7.5	n/a	1/25/2023	237	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	BRGWC-38S	7.5	n/a	1/25/2023	291	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BRGWC-17S	299	n/a	1/24/2023	344	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BRGWC-33S	299	n/a	1/24/2023	615	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BRGWC-34S	299	n/a	1/24/2023	433	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BRGWC-35S	299	n/a	1/24/2023	507	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BRGWC-36S	299	n/a	1/25/2023	418	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	BRGWC-38S	299	n/a	1/25/2023	484	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2	

#### Appendix III Interwell Prediction Limits - All Results

Data: Plant Branch AP Printed 2/27/2023, 2:33 PM Client: Southern Company Constituent Well Sig. Bg N Bg Mean %NDs ND Adj. Observ. Std. Dev. Method Yes 85 BRGWC-17S 1/24/2023 0.0326 NP Inter (NDs) 1 of 2 Boron (mg/L) 0.0187 n/a n/a 65.88 0.0002677 n/a n/a n/a Boron (mg/L) BRGWC-33S 0.0187 n/a 1/24/2023 1.19 Yes 85 n/a n/a 65.88 n/a n/a 0.0002677 NP Inter (NDs) 1 of 2 BRGWC-34S 1/24/2023 NP Inter (NDs) 1 of 2 Boron (ma/L) 0.0187 2.21 65.88 0.0002677 n/a Yes 85 n/a n/a n/a n/a Boron (mg/L) BRGWC-35S 0.0187 n/a 1/24/2023 2.23 Yes 85 65.88 n/a 0.0002677 NP Inter (NDs) 1 of 2 BRGWC-36S 1/25/2023 NP Inter (NDs) 1 of 2 0.0187 1.18 Yes 85 n/a 0.0002677 Boron (ma/L) n/a n/a 65.88 n/a n/a Boron (mg/L) BRGWC-37S 0.0187 1/25/2023 0.015ND 85 0.0002677 NP Inter (NDs) 1 of 2 n/a No n/a 65.88 n/a n/a Boron (mg/L) BRGWC-38S 0.0187 n/a 1/25/2023 1.63 Yes 85 n/a n/a 65.88 n/a n/a 0.0002677 NP Inter (NDs) 1 of 2 Calcium (mg/L) BRGWC-17S 24 1/24/2023 41.3 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-33S 24 n/a 1/24/2023 116 Yes 85 n/a n/a 3.529 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-34S 24 n/a 1/24/2023 80 Yes 85 n/a n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-35S 24 n/a 1/24/2023 67.5 Yes 85 n/a n/a 3.529 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-36S 24 1/25/2023 Yes 85 0.0002677 NP Inter (normality) 1 of 2 n/a n/a n/a n/a BRGWC-37S 1/25/2023 n/a NP Inter (normality) 1 of 2 Calcium (mg/L) 24 n/a 3.65 No 85 n/a 3.529 n/a n/a 0.0002677 Calcium (mg/L) BRGWC-38S 24 n/a 1/25/2023 32.8 Yes 85 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (mg/L) BRGWC-17S 4.8 n/a 1/24/2023 6.31 Yes 85 n/a n/a 0 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (mg/L) Yes 85 0.0002677 NP Inter (normality) 1 of 2 n/a n/a n/a n/a Chloride (mg/L) BRGWC-34S 4.8 n/a 1/24/2023 7.5 Yes 85 n/a n/a n n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (mg/L) BRGWC-35S 1/24/2023 0 0.0002677 NP Inter (normality) 1 of 2 4.8 n/a 6.46 Yes 85 n/a n/a n/a n/a Chloride (mg/L) BRGWC-36S 4.8 n/a 1/25/2023 7.93 Yes 85 n/a n/a 0 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (ma/L) BRGWC-37S 4.8 1/25/2023 1 92 No 85 n/a n/a 0 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 n/a Chloride (mg/L) BRGWC-38S n/a 1/25/2023 6.53 0.0002677 NP Inter (normality) 1 of 2 4.8 Yes 85 n/a 0 n/a n/a Fluoride (ma/L) BRGWC-17S 1/24/2023 0.216 55.79 0.000215 NP Inter (NDs) 1 of 2 0.19 n/a Yes 95 n/a n/a n/a n/a NP Inter (NDs) 1 of 2 BRGWC-33S 1/24/2023 0.193 0.000215 Fluoride (mg/L) 0.19 Fluoride (mg/L) BRGWC-34S 0.19 n/a 1/24/2023 0.122 No 95 n/a n/a 55.79 n/a n/a 0.000215 NP Inter (NDs) 1 of 2 Fluoride (mg/L) BRGWC-35S 0.19 n/a 1/24/2023 0.239 Yes 55.79 n/a 0.000215 NP Inter (NDs) 1 of 2 Fluoride (ma/L) BRGWC-36S 0.19 1/25/2023 0.183 NP Inter (NDs) 1 of 2 n/a Nο 95 n/a n/a 55.79 n/a n/a 0.000215 BRGWC-37S 0.19 1/25/2023 0.114 95 0.000215 NP Inter (NDs) 1 of 2 Fluoride (mg/L) n/a No n/a 55.79 n/a BRGWC-38S Fluoride (mg/L) 0.19 n/a 1/25/2023 0.708 Yes 95 n/a n/a 55.79 n/a n/a 0.000215 NP Inter (NDs) 1 of 2 BRGWC-17S 5.26 1/24/2023 pH, Field (S.U.) 7.44 6.37 94 0 n/a 0.0004389 NP Inter (normality) 1 of 2 pH, Field (S.U.) BRGWC-33S 7.44 5.26 1/24/2023 4.79 Yes 94 n/a n/a 0 n/a n/a 0.0004389 NP Inter (normality) 1 of 2 pH. Field (S.U.) BRGWC-34S 7.44 5.26 1/24/2023 5.93 No 94 0 n/a 0.0004389 NP Inter (normality) 1 of 2 BRGWC-35S pH, Field (S.U.) 7 44 5 26 1/24/2023 6.08 Nο 94 n/a n/a n n/a n/a 0.0004389 NP Inter (normality) 1 of 2 pH, Field (S.U.) BRGWC-36S 7.44 5.26 1/25/2023 5.64 No 0.0004389 NP Inter (normality) 1 of 2 n/a n/a n/a n/a BRGWC-37S pH, Field (S.U.) 7.44 5.26 1/25/2023 5.84 Nο 94 n/a n/a 0 n/a n/a 0.0004389 NP Inter (normality) 1 of 2 pH, Field (S.U.) BRGWC-38S 1/25/2023 0.0004389 NP Inter (normality) 1 of 2 7.44 5.26 Yes 94 n/a n/a n/a Sulfate (mg/L) BRGWC-17S 7.5 n/a 1/24/2023 153 Yes 85 n/a n/a 18.82 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Sulfate (mg/L) BRGWC-33S 7.5 n/a 1/24/2023 375 Yes 85 n/a n/a 18.82 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 n/a Sulfate (mg/L) BRGWC-34S 7.5 1/24/2023 267 Yes 85 n/a n/a 18.82 n/a 0.0002677 NP Inter (normality) 1 of 2 n/a BRGWC-35S 7.5 1/24/2023 334 Yes 85 n/a 0.0002677 NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a 18.82 n/a n/a Sulfate (mg/L) BRGWC-36S n/a 1/25/2023 237 0.0002677 NP Inter (normality) 1 of 2 7.5 Yes 85 n/a 18.82 n/a n/a No 85 BRGWC-37S 7.5 1/25/2023 0.325J NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a n/a 18.82 n/a n/a 0.0002677 BRGWC-38S 1/25/2023 0.0002677 Sulfate (mg/L) 7.5 291 85 18.82 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) BRGWC-17S 299 1/24/2023 Yes 85 n/a 0.0002677 NP Inter (normality) 1 of 2 n/a n/a 2.353 n/a n/a Total Dissolved Solids (mg/L) BRGWC-33S 299 n/a 1/24/2023 615 2.353 n/a 0.0002677 NP Inter (normality) 1 of 2 Yes 85 n/a n/a Total Dissolved Solids (mg/L) BRGWC-34S 1/24/2023 299 433 Yes 85 0.0002677 NP Inter (normality) 1 of 2 n/a n/a n/a 2.353 n/a n/a 1/24/2023 Total Dissolved Solids (mg/L) BRGWC-35S 507 85 2.353 0.0002677 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) 1/25/2023 418 BRGWC-36S 299 n/a Yes 85 n/a n/a 2.353 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) BRGWC-37S 1/25/2023 28 0.0002677 299 n/a No 85 n/a n/a 2.353 n/a n/a NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) BRGWC-38S 299 n/a 1/25/2023 484 Yes 85 n/a n/a 2.353 n/a n/a 0.0002677 NP Inter (normality) 1 of 2

# Appendix III Trend Tests - Prediction Limits Exceedances - Significant Results

	Plant Branch Client: Southern Compar	ny Data: Plan	t Branch A	Printe	d 2/27	/2023, 2	2:45 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-35S	0.1697	113	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-36S	0.03668	75	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.14	75	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-17S	1.91	83	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-34S	-4.023	-90	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-38S	-1.805	-92	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.16	-71	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-17S	0.2181	69	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-34S	-0.23	-68	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-36S	0.7848	90	63	Yes	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-33S	-0.02655	-84	-81	Yes	20	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.08596	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.04386	-89	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05239	-85	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-38S	-0.1079	-93	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-30.64	-115	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-13.29	-79	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-38S	-32.45	-99	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.706	-76	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-34S	-44.75	-84	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.84	-107	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.71	-112	-63	Yes	17	0	n/a	n/a	0.01	NP

# Appendix III Trend Tests - Prediction Limits Exceedances - All Results

Appendix III 1							A1 10		, XII I X	Jour	
	Plant Branch Client: Southern Compar	ny Data: Plar	nt Branch A	AP Printe	d 2/27	/2023, 2	2:45 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWA-2I (bg)	0.0003815	30	63	No	17	29.41	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	-1	-63	No	17	88.24	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	-4	-63	No	17	76.47	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-1	-63	No	17	58.82	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	4	63	No	17	76.47	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-17S	-0.0009889	-28	-68	No	18	38.89	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-33S	-0.004253	-12	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-34S	0.00246	17	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-35S	0.1697	113	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-36S	0.03668	75	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-38S	-0.03581	-38	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.4268	41	63	No	17		n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	0.111	46	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	0.1199	19	63	No	17	5.882		n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.4249	-40	-63	No	17	5.882		n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.14	75	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-17S	1.91	83	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-33S	-1.413	-24	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-34S	-4.023 1.017	-90	-63	Yes	<b>17</b> 17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-35S BRGWC-36S	1.917 -0.4778	63 -39	63 -63	No No	17	0	n/a n/a	n/a n/a	0.01	NP NP
Calcium (mg/L)  Calcium (mg/L)	BRGWC-38S	-1.805	-92	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2I (bg)	-0.03727	-34	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2S (bg)	0	-9	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.16	-71	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5S (bg)	-0.07107	-60	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-6S (bg)	-0.01018	-24	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-17S	0.2181	69	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-33S	0.4692	22	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-34S	-0.23	-68	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-35S	0.06042	36	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-36S	0.7848	90	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-38S	0.1365	24	63	No	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	0	-16	-74	No	19	52.63	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	56	74	No	19	63.16	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	72	74	No	19	68.42	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	0	-4	-74	No	19	36.84	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0.006099	73	74	No	19	57.89	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-17S	0	7	74	No	19	5.263	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-33S	-0.02655	-84	-81	Yes	20	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-35S	-0.007584	-42	-74	No	19	15.79	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-38S	0.004963	8	74	No	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.08596	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.04386	-89	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5I (bg)	-0.02414	-43	-74	No	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05239	-85	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-6S (bg)	0.002505	5	68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-33S	-0.01054	-49	-81	No	20	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-38S	-0.1079	-93	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2I (bg)	-0.2241	-48	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2S (bg)	0	5	63	No	17	35.29		n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5I (bg)	-0.2579	-48	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5S (bg)	-0.009734	-26	-63	No	17	35.29		n/a	0.01	NP
Sulfate (mg/L)	BRGWA-6S (bg)	0	4	63	No	17	23.53		n/a	0.01	NP
Sulfate (mg/L)	BRGWC-17S	5.176	59	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-33S	-16.3	-37	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-30.64	-115	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-35S	-0.09626	-1	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-13.29 32.45	-79	-63 62		17 17	0	n/a	n/a	0.01	NP ND
Sulfate (mg/L)	BRGWC-38S	-32.45	-99	-63	Yes	17	U	n/a	n/a	0.01	NP

# Appendix III Trend Tests - Prediction Limits Exceedances - All Results $^{\circ}$

	Plant Branch Client: Southern Compar	ny Data: Plar	nt Branch /	AP Printe	d 2/27	/2023, 2	2:45 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Total Dissolved Solids (mg/L)	BRGWA-2I (bg)	-7.505	-40	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-2S (bg)	0.6809	10	63	No	17	5.882	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5I (bg)	-3.081	-32	-63	No	17	5.882	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.706	-76	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-6S (bg)	-2.032	-19	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-17S	3.177	27	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-33S	-26.14	-31	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-34S	-44.75	-84	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-35S	2.399	17	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.84	-107	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.71	-112	-63	Yes	17	0	n/a	n/a	0.01	NP

# **Upper Tolerance Limits Summary Table**

Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:00 AM %NDs ND Adj. Constituent <u>Well</u> Upper Lim. Lower Lim. <u>Date</u> Observ. Sig.Bg N Bg Mean Std. Dev. Transform Alpha Method 0.003 n/a 90 92.22 n/a 0.009888 NP Inter(NDs) Antimony (mg/L) n/a n/a n/a n/a n/a n/a n/a 0.005 76.67 n/a 0.009888 NP Inter(NDs) Arsenic (mg/L) n/a n/a n/a n/a n/a 90 n/a n/a n/a Barium (mg/L) 0.063 n/a 90 0 0.009888 NP Inter(normality) n/a n/a n/a n/a n/a n/a n/a n/a 0.009888 NP Inter(NDs) Beryllium (mg/L) n/a 0.0005 n/a n/a 90 100 n/a n/a 0.009888 NP Inter(NDs) Cadmium (mg/L) n/a 0.001 n/a n/a n/a n/a 90 n/a n/a 100 n/a n/a 0.009888 NP Inter(normality) Chromium (mg/L) n/a 0.016 n/a n/a n/a 90 15.56 n/a n/a 0.0034 0.01096 NP Inter(normality) Cobalt (mg/L) n/a n/a n/a n/a 88 n/a 45.45 n/a n/a n/a n/a Combined Radium 226 + 228 (pCi/L) n/a 1.736 n/a n/a 90 0.7922 0.2703 0 None 0.05 Fluoride (mg/L) 0.19 n/a 95 55.79 n/a n/a 0.007651 NP Inter(NDs) n/a n/a n/a n/a n/a n/a Lead (mg/L) n/a 0.002 n/a 90 0.009888 NP Inter(NDs) 0.089 0.009888 NP Inter(normality) Lithium (mg/L) n/a 90 44.44 n/a n/a n/a n/a n/a n/a n/a n/a Mercury (mg/L) n/a 0.00021 n/a 80 87.5 0.01652 NP Inter(NDs) 0.009888 NP Inter(NDs) 0.008 Molybdenum (mg/L) n/a n/a n/a n/a n/a 90 n/a n/a 67.78 n/a n/a Selenium (mg/L) n/a 0.005 n/a 90 100 0.009888 NP Inter(NDs) Thallium (mg/L) 0.002 100 n/a 0.009888 NP Inter(NDs) n/a n/a n/a n/a n/a 90 n/a n/a n/a

PLANT BRANCH POND E GWPS									
		CCR-Rule							
Constituent Name	MCL	Specified	Background Limit	GWPS					
Antimony, Total (mg/L)	0.006		0.003	0.006					
Arsenic, Total (mg/L)	0.01		0.005	0.01					
Barium, Total (mg/L)	2		0.063	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	0.0034	0.006					
Combined Radium, Total (pCi/L)	5		1.74	5					
Fluoride, Total (mg/L)	4		0.19	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		0.005	0.05					
Thallium, Total (mg/L)	0.002		0.002	0.002					

<sup>\*</sup>Highlighted cells indicate Background is higher than MCLs

<sup>\*</sup>MCL = Maximum Contaminant Level

<sup>\*</sup>CCR = Coal Combustion Residuals

<sup>\*</sup>GWPS = Groundwater Protection Standard

# Confidence Intervals - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:11 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	<u>Mean</u>	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	0.009297	0.00797	0.004	Yes	19	0.008634	0.001134	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-33S	0.05312	0.03893	0.006	Yes	19	0.04602	0.01212	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-38S	0.2505	0.1997	0.006	Yes	18	0.2251	0.04201	0	None	No	0.01	Param.

#### Confidence Intervals - All Results

Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:11 AM Constituent Wel Sig. Std. Dev. %NDs ND Adj. <u>Alpha</u> Method Upper Lim. Lower Lim. N BRGWC-17S 0.000495 Antimony (mg/L) 0.003 0.0009 0.002883 94.44 None No NP (NDs) 0.003 0.0016 0.0009876 NP (NDs) Antimony (mg/L) BRGWC-36S 0.006 No 0.002502 77.78 None 0.01 18 No Antimony (mg/L) BRGWC-37S 0.003 0.0006 0.006 No 18 0.002722 0.0008092 88.89 None Nο 0.01 NP (NDs) BRGWC-38S 0.003 0.0009 0.002756 0.0007123 88.89 None NP (NDs) Antimony (mg/L) 0.006 No 18 No 0.01 Arsenic (mg/L) BRGWC-17S 0.005 0.0033 0.01 No 18 0.004178 0.001678 77.78 None No 0.01 NP (NDs) BRGWC-33S 0.005 0.00262 0.004252 0.001547 NP (NDs) Arsenic (ma/L) 0.01 No 19 78.95 None No 0.01 0.01 Arsenic (mg/L) BRGWC-35S 0.005 0.0006 No 0.004247 0.001734 83.33 None No 0.01 NP (NDs) Arsenic (ma/L) BRGWC-36S 0.004286 0.001645 83.33 None No NP (NDs) BRGWC-37S 0.004144 0.001728 NP (NDs) 0.005 0.003 0.01 No 77.78 None 0.01 Arsenic (ma/L) No BRGWC-38S 0.003395 0.001906 0.002651 Arsenic (mg/L) 0.01 Nο 18 0.001231 11 11 None Nο 0.01 Param 0.0625 NP (NDs) Arsenic (mg/L) PZ-13S 0.005 0.00388 0.01 No 0.00472 0.00056 75 None No BRGWC-17S 0.04387 0.0392 2 0.04153 0 Barium (mg/L) No 18 0.003865 None No 0.01 Param Barium (mg/L) BRGWC-33S 0.0243 0.02 0.02321 0.005815 2 No 19 0 None Nο 0.01 NP (normality) 0.006961 Barium (mg/L) BRGWC-34S 0.0347 0.0232 2 No 18 0.02892 0 No NP (normality) None 0.01 BRGWC-35S 0.0518 0.0339 No 0.04662 0.01897 0 0.01 NP (normality) Barium (mg/L) No None BRGWC-36S 0.0415 0.0296 2 Barium (mg/L) No 0.03725 0.01041 0 0.01 NP (normality) 18 None No Barium (mg/L) BRGWC-37S 0.02518 0.0233 2 Nο 18 0.02424 0.001557 0 None No 0.01 Param. BRGWC-38S 0.0247 0.015 2 0.009558 Barium (mg/L) No 0.02104 0 None No 0.01 NP (normality) PZ-13S 0.1734 -0.01055 2 0.08143 0.04051 0 Barium (mg/L) No None No 0.01 Param. Beryllium (mg/L) BRGWC-33S 0.002005 0.001591 0.004 No 0.001798 0.0003539 5.263 None Nο 0.01 Param 0.0002 0.000157 0.00012 0.0002178 Beryllium (mg/L) BRGWC-34S 0.004 No 22.22 None No 0.01 NP (normality) Beryllium (mg/L) BRGWC-35S 0.0001 0.004 No 0.0001961 0.000143 16.67 None No 0.01 NP (normality) BRGWC-36S 0.0005 0.0002216 0.0001945 NP (normality) Beryllium (mg/L) 0.000084 0.004 Nο 19 31 58 None Nο 0.01 Beryllium (mg/L) BRGWC-38S 0.009297 0.00797 0.004 Yes 0.008634 0.001134 0 None No 0.01 Param. Beryllium (mg/L) PZ-13S 0.0005713 0.0002552 0.004 0.0004133 0.00006962 0 None No BRGWC-33S Cadmium (mg/L) 0.0004548 0.0003232 0.005 19 0.000389 0.0001124 5.263 None No 0.01 Param. No Cadmium (mg/L) BRGWC-34S 0.0003893 0.0001816 0.005 No 18 0.0004554 0.0003243 16.67 Kaplan-Meier In(x) 0.01 Cadmium (mg/L) 0.001 0.0001 0.005 No 0.0009042 0.0002869 NP (NDs) Cadmium (mg/L) BRGWC-38S 0.0005984 0.000487 0.005 No 18 0.0005427 0.00009208 5.556 None No 0.01 Param. Cadmium (mg/L) PZ-13S 0.001 0.00011 0.005 No 0.0007775 0.000445 75 None Nο 0.0625 NP (NDs) Chromium (mg/L) BRGWC-17S 0.01259 0.009933 0.1 No 0.01133 0.002321 0 None sqrt(x) 0.01 Param. Chromium (mg/L) BRGWC-33S 0.01 0.00049 0.1 No 0.009499 0.002182 94.74 None No 0.01 NP (NDs) Chromium (ma/L) BRGWC-35S 0.006574 0.004499 0.1 18 0.005537 0.001715 5.556 None 0.01 Param. No No Chromium (mg/L) BRGWC-36S 0.008226 0.007146 0.1 No 18 0.007686 0.000893 0 None No 0.01 Param. Chromium (mg/L) BRGWC-37S 0.0014 0.1 No 0.003867 0.003919 27.78 None No 0.01 NP (normality) BRGWC-38S 0.00411 0.003717 Param. Chromium (mg/L) 0.003499 0.1 No 18 0.0007207 0 None x^3 0.01 Chromium (mg/L) PZ-13S 0.0305 0.006047 0.1 No 0.01828 0.005386 0 None Nο 0.01 Param. Cobalt (mg/L) BRGWC-33S 0.05312 0.03893 0.006 0.04602 0.01212 0 None No 0.01 Cobalt (mg/L) BRGWC-34S 0.004512 0.003371 0.006 No 18 0.004016 0.001087 5.556 None In(x) 0.01 Param Cobalt (mg/L) BRGWC-35S 0.0012 0.0008 18 0 001 0.0003926 72 22 None NP (NDs) 0.006 Nο Nο 0.01 Cobalt (mg/L) BRGWC-38S 0.2505 0.1997 0.006 0.2251 0.04201 0 No 0.01 Param None Cobalt (mg/L) 0.00037 No 0.0008425 0.000315 75 None No 0.0625 NP (NDs) Combined Radium 226 + 228 (pCi/L) 0.7614 0.3561 5 No 0.5587 0 0.01 Param BRGWC-17S 18 0.335 None Nο Combined Radium 226 + 228 (pCi/L) BRGWC-33S 1.433 0.6495 5 No 18 1.102 0.7251 0 None 0.01 Param. sqrt(x) Combined Radium 226 + 228 (pCi/L) BRGWC-34S 1.244 0.7613 5 No 1.026 0.4342 0 None sqrt(x) 0.01 Param. Combined Radium 226 + 228 (pCi/L) 0.4806 5 0.8935 BRGWC-35S 1.363 No 18 1.011 0 None 0.01 Param. sqrt(x) Combined Radium 226 + 228 (pCi/L) BRGWC-36S 1.43 0.6703 5 Nο 18 1 206 1.008 0 None In(x) 0.01 Param Combined Radium 226 + 228 (pCi/L) BRGWC-37S 0.3975 5 0.7428 0.9846 No 18 0.5511 0 None sqrt(x) 0.01 Combined Radium 226 + 228 (pCi/L) BRGWC-38S 3.583 2.021 5 2.89 0 No 1.44 None 0.01 Param. sqrt(x) Combined Radium 226 + 228 (pCi/L) 5 PZ-13S 5.806 -1.875 2.053 25 No 1.88 Kaplan-Meier No 0.01 Param. Fluoride (mg/L) BRGWC-17S 0.1553 0.08879 4 No 19 0.1261 0.06127 5.263 None 0.01 Param. sqrt(x) Fluoride (mg/L) BRGWC-33S 0.2225 0.1111 No 20 0.1762 0.1086 0 None 0.01 Param. sqrt(x) Fluoride (mg/L) 0.08016 19 0.1241 5.263 None BRGWC-34S 0.1454 4 No 0.08005 In(x) 0.01 Param. Fluoride (mg/L) BRGWC-35S 0.125 0.06256 4 No 19 0.1098 0.07679 15.79 Kaplan-Meier ln(x) 0.01 Param. Fluoride (mg/L) BRGWC-36S 0.18 0.054 4 No 0.1227 0.1058 47.37 None No NP (normality) BRGWC-37S 0.1 0.055 4 No 0.08258 0.02773 42 11 None 0.01 NP (normality) Fluoride (ma/L) 19 No BRGWC-38S 0 7211 4 Fluoride (mg/L) 0.9214 Nο 19 0.8335 0.1982 n None In(x) 0.01 Param Fluoride (mg/L) PZ-13S 0.1439 0.01015 No 0.097 0.02798 0.01 Param. 4 50 Kaplan-Meier

#### Confidence Intervals - All Results

Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:11 AM Constituent Well Upper Lim. Lower Lim. Compliance Sig. <u>N</u> Mean Std. Dev. %NDs ND Adj. <u>Transform</u> Alpha Method BRGWC-17S 0.002 0.0001 0.015 0.001786 0.0006219 88.89 None No NP (NDs) Lead (mg/L) 18 BRGWC-33S 0.002 0.00007 0.0009393 0.015 19 0.000804 0.01 NP (normality) Lead (mg/L) No 36.84 None No 0.002 Lead (mg/L) BRGWC-34S 0.0003 0.015 No 18 0.001694 0.0007055 83.33 None Nο 0.01 NP (NDs) Lead (mg/L) BRGWC-35S 0.002 0.0002 0.015 No 18 0.001584 0.0008002 77.78 None No 0.01 NP (NDs) Lead (mg/L) BRGWC-36S 0.002 0.000047 0.015 No 18 0.001892 0.0004603 94.44 None No 0.01 NP (NDs) Lead (mg/L) BRGWC-37S 0.002 0.0001 0.015 18 0.001789 0.0006144 88.89 None 0.01 NP (NDs) No No Lead (mg/L) BRGWC-38S 0.0005 0.00035 0.015 No 18 0.00075 0.0006896 22.22 None No 0.01 NP (normality) Lead (mg/L) PZ-13S 0.002 0.00035 0.015 0.001588 0.000825 0.0625 NP (NDs) BRGWC-17S 0.01 0.00097 0.006492 0.004526 0.01 NP (NDs) Lithium (ma/L) 0.089 No 61.11 None No 0.0104 BRGWC-33S 0.009245 19 0.009821 0.000983 0.01 Param Lithium (mg/L) 0.089 Nο None Nο BRGWC-34S 0.01 0.00089 0.089 18 0.006956 0.00443 66.67 None NP (NDs) Lithium (mg/L) No Lithium (mg/L) BRGWC-35S 0.0023 0.0021 0.089 18 0.002456 0.0009288 11.11 None 0.01 NP (normality) No No 0.0023 Lithium (mg/L) BRGWC-36S 0.0026 0.089 18 0.003711 0.002897 16.67 None 0.01 NP (normality) No Nο Lithium (mg/L) BRGWC-38S 0.0227 0.02048 0.089 No 18 0.02159 0.001839 0 None No 0.01 Param. 0.002281 Lithium (mg/L) 0.0006748 0.089 No 0.005675 0.005002 50 Kaplan-Meier x^(1/3) 0.01 0.0002 BRGWC-17S 0.0001 0.0000484 NP (NDs) Mercury (mg/L) 0.002 No 16 0.0001777 81.25 None 0.01 No 0.0002 Mercury (mg/L) BRGWC-33S 0.00012 0.002 No 17 0.0001782 0.00005053 82.35 None No 0.01 NP (NDs) BRGWC-34S 0.0002 0.00012 0.002 16 0.0001737 0.00005188 75 NP (NDs) Mercury (mg/L) None No 0.01 0.0002 0.00013 BRGWC-35S 0.002 16 0.0001819 0.00004053 0.01 NP (NDs) Mercury (mg/L) No 81.25 None No 0.00013 Mercury (mg/L) BRGWC-36S 0.0002 0.002 No 16 0.0001812 0.00004177 81.25 None Nο 0.01 NP (NDs) Mercury (mg/L) BRGWC-37S 0.0002 0.00014 0.002 No 0.0001819 0.00004167 81.25 None No 0.01 NP (NDs) Mercury (mg/L) BRGWC-38S 0.000154 0.0000953 0.002 No 0.0001464 0.00004947 18.75 Kaplan-Meier 0.01 Param. BRGWC-17S 0.002487 0.00177 0.05 18 0.002903 0.001315 22 22 Kaplan-Meier Param Selenium (mg/L) Nο In(x) 0.01 Selenium (mg/L) BRGWC-33S 0.005 0.0028 0.05 No 19 0.004142 0.001271 47.37 None No 0.01 NP (normality) BRGWC-36S 0.004886 0.002917 18 0.004002 0.001788 Selenium (mg/L) 0.05 None sqrt(x) 0.01 Param. BRGWC-38S 0.0403 0.03213 18 0.03622 0.006757 Selenium (ma/L) 0.05 No 0 None 0.01 Param. No Selenium (mg/L) PZ-13S 0.004543 0.0006174 0.05 No 4 0.00258 0.0008644 0 None No 0.01 Param Thallium (mg/L) 0.002 0.000066 0.0004558 BRGWC-17S 0.002 No 0.001893 94.44 None No NP (NDs) Thallium (mg/L) BRGWC-33S 0.00024 0.00018 0.002 19 0.0005753 0.0007561 NP (normality) No 21.05 None No 0.01 0.002 0.0002 18 0.0008294 NP (normality) Thallium (mg/L) BRGWC-38S 0.002 Nο 0.0008535 33.33 None Nο

# Appendix IV Trend Tests - Confidence Interval Exceedances - Significant Results

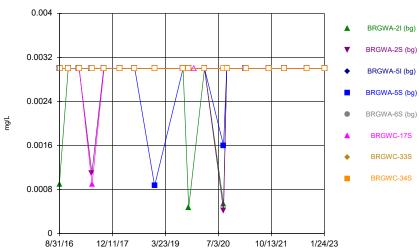
	Plant Branch Client: Southern Compa	ny Data: Pla	nt Branch	AP Print	ed 2/27	7/2023,	3:39 PM	I			
Constituent	<u>Well</u>	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality Normality	<u>Xform</u>	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	-0.0004273	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0003527	-101	-68	Yes	18	11.11	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-33S	-0.005794	-91	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-38S	-0.02005	-115	-68	Yes	18	0	n/a	n/a	0.01	NP

# Appendix IV Trend Tests - Confidence Interval Exceedances - All Results

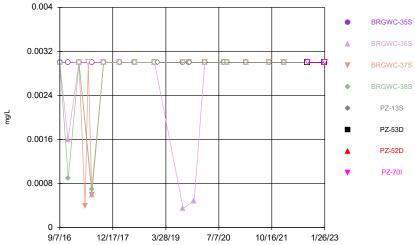
	Plant Branch Client: Southern Compan	y Data: Plan	t Branch A	Printe	d 2/27/	2023, 3	:39 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWA-2I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-2S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-6S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWC-38S	-0.0004273	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2I (bg)	0	-25	-68	No	18	66.67	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0003527	-101	-68	Yes	18	11.11	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5I (bg)	-0.000106	-52	-58	No	16	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5S (bg)	0	31	68	No	18	72.22	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-6S (bg)	0	12	68	No	18	72.22	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-33S	-0.005794	-91	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-38S	-0.02005	-115	-68	Yes	18	0	n/a	n/a	0.01	NP

# FIGURE A.



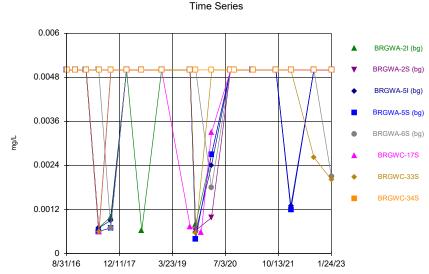


Constituent: Antimony Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

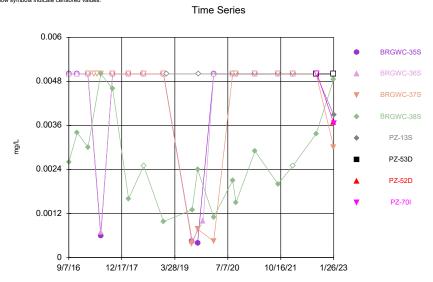


Constituent: Antimony Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Arsenic Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

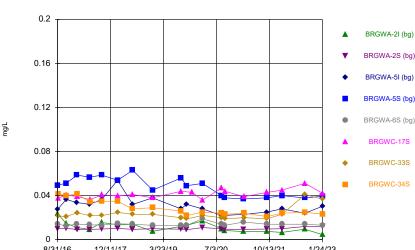


Constituent: Arsenic Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

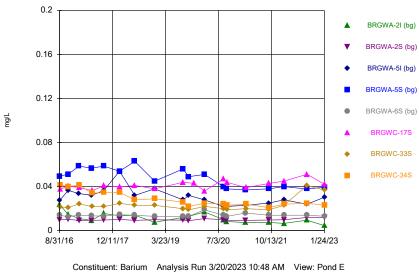
0.2

0.16

0.12

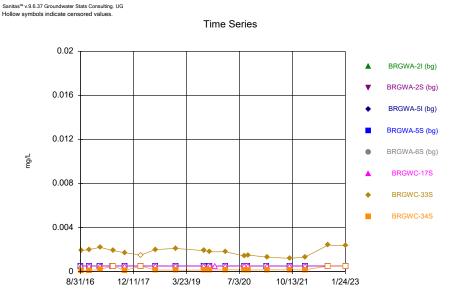


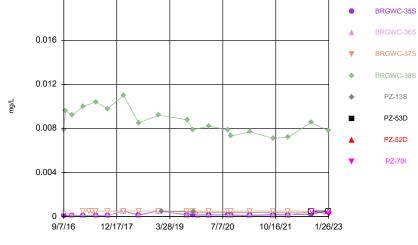
Time Series



Plant Branch Client: Southern Company Data: Plant Branch AP







Time Series

7/7/20

10/16/21

BRGWC-35S

BRGWC-36S

BRGWC-37S

BRGWC-38S

PZ-13S

PZ-53D

PZ-52D

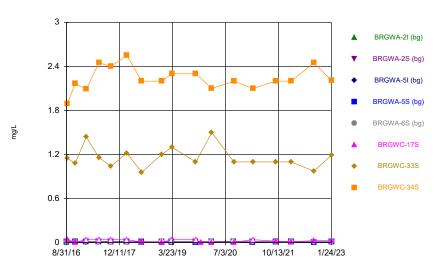
PZ-70I

1/26/23

Constituent: Beryllium Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

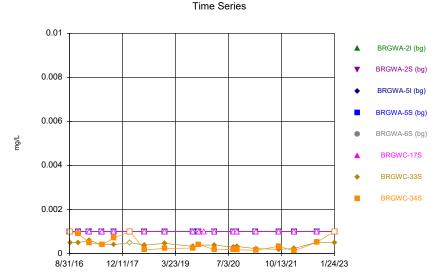
Constituent: Beryllium Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP





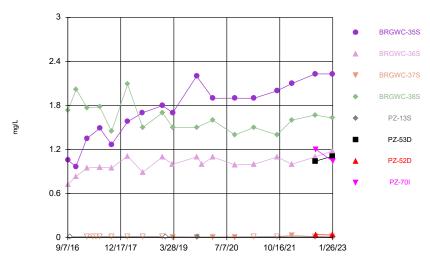
Constituent: Boron Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

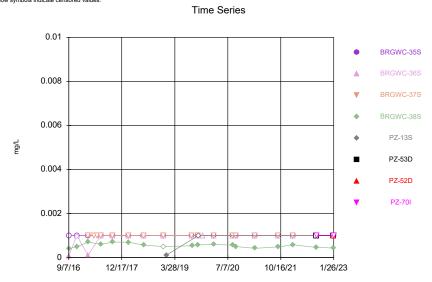


Constituent: Cadmium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

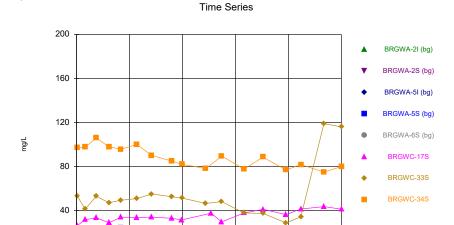
#### Time Series



Constituent: Boron Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Cadmium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Calcium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

7/3/20

10/13/21

1/24/23

3/23/19

# 200 BRGWC-35S BRGWC-36S BRGWC-37S BRGWC-37S PZ-13S PZ-53D PZ-52D PZ-70I

Time Series

Constituent: Calcium Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

3/28/19

7/7/20

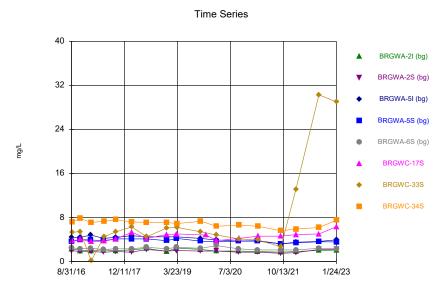
10/16/21

1/26/23

#### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

8/31/16

12/11/17

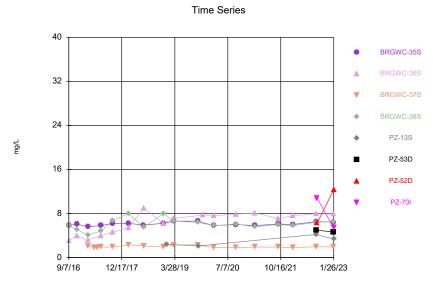


Constituent: Chloride Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

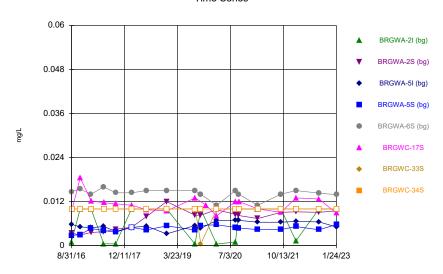
9/7/16

12/17/17



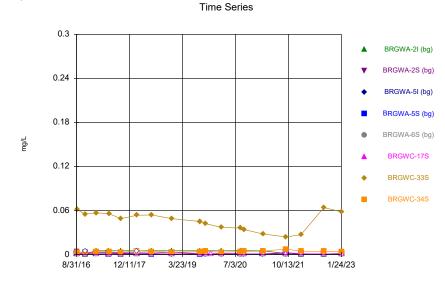
Constituent: Chloride Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP





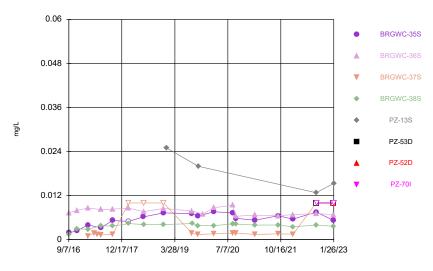
Constituent: Chromium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Cobalt Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

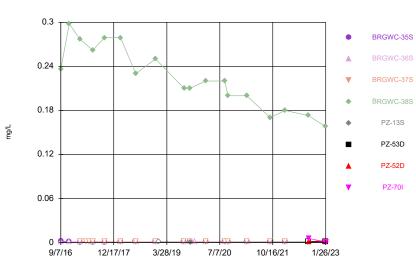
#### Time Series



Constituent: Chromium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

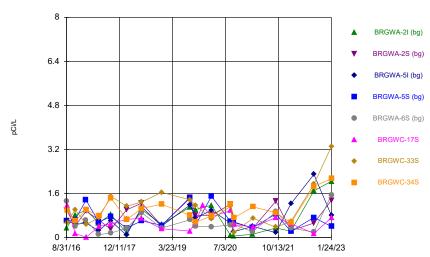
#### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

#### Time Series



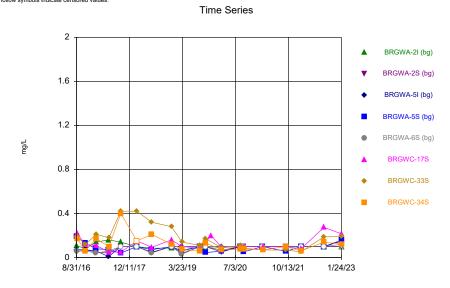
Constituent: Cobalt Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP





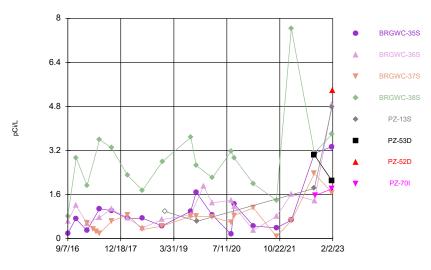
Constituent: Combined Radium 226 + 228 Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

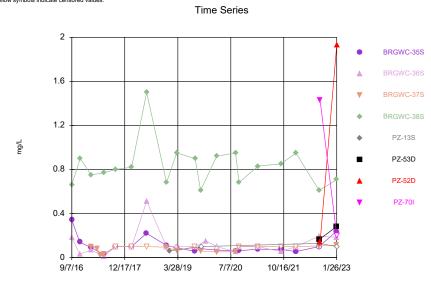


Constituent: Fluoride Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series

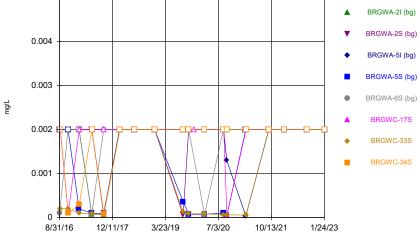


Constituent: Combined Radium 226 + 228 Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Fluoride Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP





Constituent: Lead Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

## 0.005 BRGWC-35S BRGWC-36S 0.004 BRGWC-37S BRGWC-38S 0.003 PZ-13S mg/L PZ-53D 0.002 PZ-52D PZ-70I 0.001

Time Series

Constituent: Lead Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

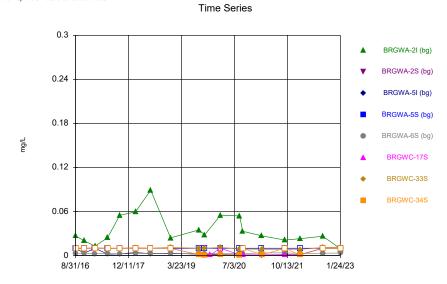
7/7/20

3/28/19

1/26/23

10/16/21

#### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values

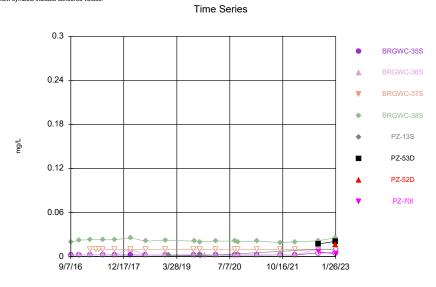


Constituent: Lithium Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

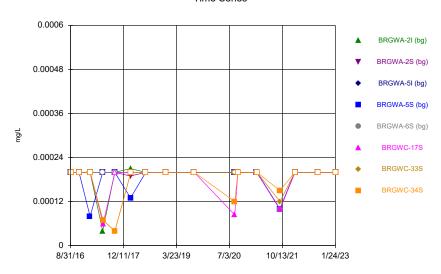
9/7/16

12/17/17



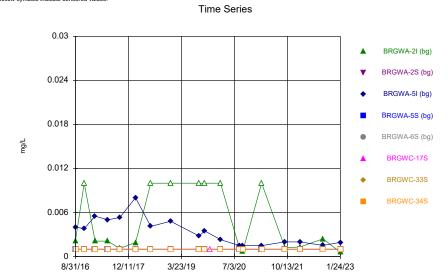
Constituent: Lithium Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP





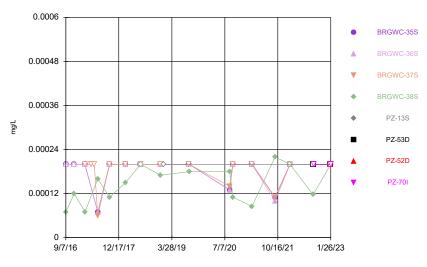
Constituent: Mercury Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

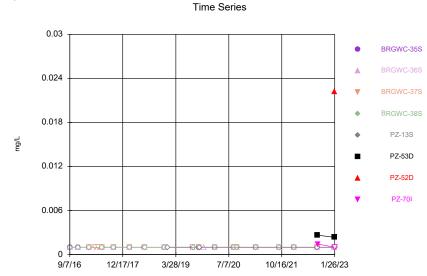


Constituent: Molybdenum Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series



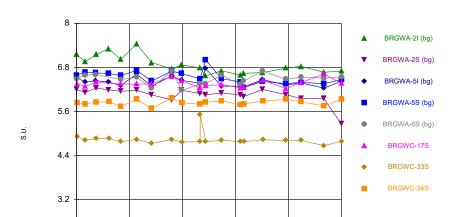
Constituent: Mercury Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Molybdenum Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/16

12/11/17



Time Series

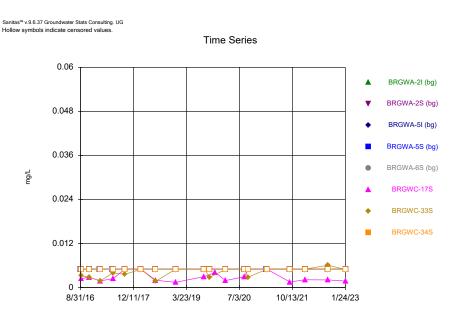
Constituent: pH, Field Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

7/3/20

3/23/19

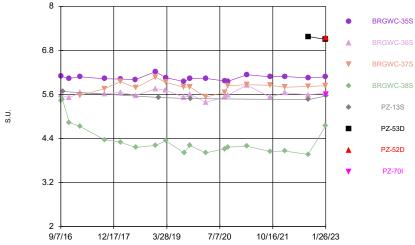
10/13/21

1/24/23

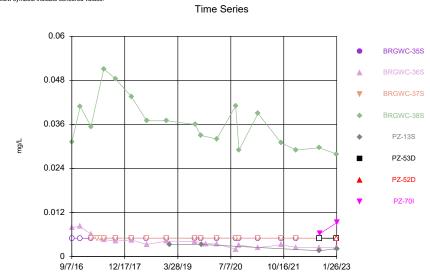


Constituent: Selenium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



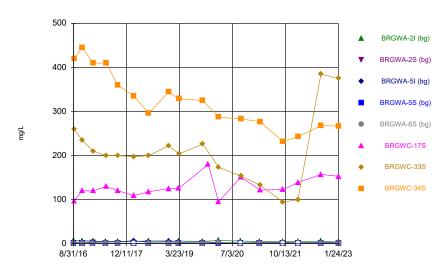


Constituent: pH, Field Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP



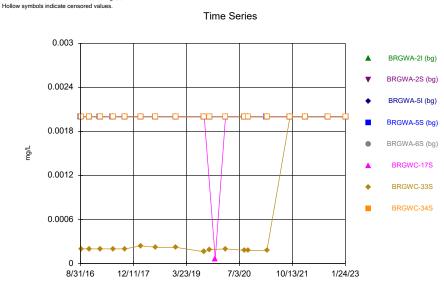
Constituent: Selenium Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP





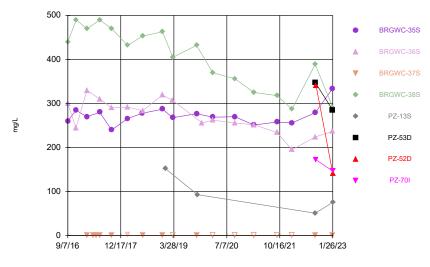
Constituent: Sulfate Analysis Run 3/20/2023 10:48 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

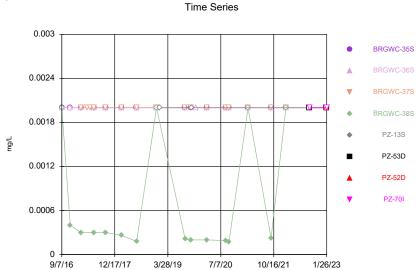


Constituent: Thallium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Time Series



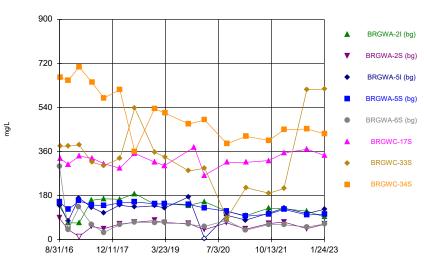
Constituent: Sulfate Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Thallium Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

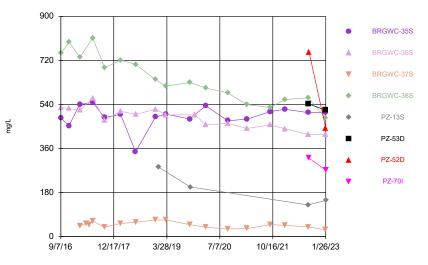
Time Series



Constituent: Total Dissolved Solids Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Time Series



Constituent: Total Dissolved Solids Analysis Run 3/20/2023 10:48 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Constituent: Antimony (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

0/24/2046	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0009 (J)	<0.003	<0.003	<0.003	-0.000			
9/1/2016					<0.003		.0.000	
9/7/2016						<0.003	<0.003	
9/8/2016								<0.003
11/15/2016				<0.003	<0.003			
11/16/2016	<0.003	<0.003	<0.003					
11/17/2016						<0.003	<0.003	<0.003
2/20/2017			<0.003	<0.003	<0.003			
2/21/2017	<0.003	<0.003						
2/22/2017						<0.003	<0.003	<0.003
6/12/2017	<0.003		<0.003	<0.003	<0.003			
6/13/2017		0.0011 (J)						
6/14/2017							<0.003	<0.003
6/15/2017						0.0009 (J)		
9/26/2017	<0.003	<0.003	<0.003	<0.003	<0.003			
9/27/2017							<0.003	<0.003
9/28/2017						<0.003		
2/13/2018	<0.003	<0.003	<0.003	<0.003	<0.003			
2/15/2018						<0.003	<0.003	<0.003
6/26/2018	<0.003	<0.003	<0.003	<0.003	<0.003			
6/27/2018						<0.003	<0.003	<0.003
12/18/2018	<0.003	<0.003	<0.003	0.00087 (J)	<0.003		<0.003	<0.003
12/19/2018						<0.003		
8/27/2019	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	
8/28/2019						<0.003	<0.003	<0.003
10/15/2019	0.00047 (J)	<0.003	<0.003	<0.003	<0.003			
10/16/2019							<0.003	<0.003
12/3/2019						<0.003		
3/3/2020	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		
3/5/2020							<0.003	<0.003
8/18/2020	0.00054 (J)	0.00042 (J)	<0.003	0.0016 (J)	<0.003			
8/19/2020						<0.003	<0.003	<0.003
9/15/2020	<0.003	<0.003	<0.003	<0.003	<0.003			
9/16/2020						<0.003	<0.003	<0.003
3/1/2021	<0.003				<0.003			
3/2/2021		<0.003	<0.003	<0.003				
3/3/2021							<0.003	<0.003
3/4/2021						<0.003		
9/21/2021			<0.003	<0.003				
9/22/2021	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003
2/1/2022	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
8/23/2022	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	
8/24/2022						<0.003		<0.003
1/24/2023	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003

Constituent: Antimony (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.003	<0.003		<0.003				
11/17/2016	<0.003							
11/18/2016		0.0016 (J)						
11/21/2016				0.0009 (J)				
2/22/2017	<0.003							
2/23/2017		<0.003	<0.003	<0.003				
4/17/2017			0.0004 (J)					
5/15/2017			<0.003					
6/15/2017	<0.003	0.0006 (J)	0.0006 (J)	0.0007 (J)				
9/28/2017	<0.003	<0.003	<0.003	<0.003				
2/15/2018	<0.003	<0.003	<0.003	<0.003				
6/27/2018	<0.003							
6/28/2018		<0.003	<0.003	<0.003				
12/19/2018	<0.003	<0.003	<0.003					
12/20/2018				<0.003				
1/15/2019					<0.003			
8/28/2019	<0.003	0.00035 (J)	<0.003					
8/29/2019				<0.003				
10/16/2019	<0.003		<0.003	<0.003				
10/22/2019					<0.003			
12/3/2019		0.00049 (J)						
3/5/2020	<0.003	<0.003	<0.003	<0.003				
8/19/2020	<0.003	<0.003	<0.003	<0.003				
9/16/2020	<0.003	<0.003	<0.003					
9/17/2020				<0.003				
3/3/2021		<0.003	<0.003					
3/4/2021	<0.003			<0.003				
9/22/2021		<0.003						
9/23/2021	<0.003		<0.003	<0.003				
2/1/2022	<0.003	<0.003	-0.000	<0.003				
2/2/2022			<0.003	-0.000	-0.000	-0.000		
8/23/2022	10.000	10.000	<0.003	<0.003	<0.003	<0.003		
8/24/2022	<0.003	<0.003						<0.003
9/1/2022 1/24/2023	<0.003							<0.003
1/24/2023	-0.003	<0.003	<0.003	<0.003		<0.003	<0.003	
1/25/2023		-0.000	-0.000	-0.000	<0.003	-0.000	-0.003	<0.003
1/20/2023					-0.000			·0.000

Constituent: Arsenic (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.005	BRGWA-2S (bg) <0.005	BRGWA-5I (bg) <0.005	BRGWA-5S (bg) <0.005	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.000	0.000	0.000	0.000	<0.005			
9/7/2016					0.000	<0.005	<0.005	
9/8/2016						0.000	0.000	<0.005
11/15/2016				<0.005	<0.005			-0.000
11/16/2016	<0.005	<0.005	<0.005	-0.000	-0.000			
11/17/2016	-0.000	-0.000	-0.000			<0.005	<0.005	<0.005
2/20/2017			<0.005	<0.005	<0.005	-0.000	-0.000	-0.000
2/21/2017	<0.005	<0.005	-0.003	10.003	10.000			
2/22/2017	10.000	10.000				<0.005	<0.005	<0.005
6/12/2017	0.0007 (J)		0.0007 (J)	0.0006 (J)	<0.005	-0.000	-0.000	-0.000
6/13/2017	0.0007 (0)	<0.005	0.0007 (0)	0.0000 (3)	10.000			
6/14/2017		10.000					0.0006 (J)	<0.005
6/15/2017						0.0006 (J)	0.0000 (0)	-0.000
9/26/2017	0.001 (J)	<0.005	0.0009 (J)	0.0007 (J)	0.0007 (J)	0.0000 (0)		
9/27/2017	0.001 (0)	-0.000	0.0000 (0)	0.0007 (0)	0.0007 (0)		<0.005	<0.005
9/28/2017						<0.005	10.000	-0.003
2/13/2018	<0.005	<0.005	<0.005	<0.005	<0.005	-0.000		
2/15/2018	-0.000	-0.000	-0.000	-0.000	-0.000	<0.005	<0.005	<0.005
6/26/2018	0.00062 (J)	<0.005	<0.005	<0.005	<0.005	10.000	10.000	-0.003
6/27/2018	0.00002 (0)	0.000	0.000	0.000	0.000	<0.005	<0.005	<0.005
12/18/2018	<0.005	<0.005 (X)	<0.005 (X)	<0.005 (X)	<0.005 (X)	0.000	<0.005 (X)	<0.005
12/19/2018	0.000	0.000 (7.)	0.000 (7.)	0.000 (71)	0.000 (7.)	<0.005	0.000 (7.)	0.000
8/27/2019	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	<0.005	
8/28/2019	0.000	0.000	0.000	0.000	0.000	0.00073 (J)	<0.005	<0.005
10/15/2019	0.0008 (J)	0.00063 (J)	0.00058 (J)	0.00039 (J)	<0.005	0.00070 (0)	0.000	0.000
10/16/2019	0.0000 (0)	0.00000 (0)	0.00000 (0)	0.00000 (0)	0.000		0.00056 (J)	<0.005
12/3/2019						0.00058 (J)		
3/3/2020	0.0027 (J)	0.00098 (J)	0.0024 (J)	0.0027 (J)	0.0018 (J)	0.0033 (J)		
3/5/2020	(3)	(1)	(-)	(5)	(-)	(,,	<0.005	<0.005
8/18/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
8/19/2020						<0.005	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
9/16/2020						<0.005	<0.005	<0.005
3/1/2021	<0.005				<0.005			
3/2/2021		<0.005	<0.005	<0.005				
3/3/2021							<0.005	<0.005
3/4/2021						<0.005		
9/21/2021			<0.005	<0.005				
9/22/2021	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005
2/1/2022	0.0012 (J)	<0.005	0.0013 (J)	0.0012 (J)	<0.005	<0.005	<0.005	<0.005
8/23/2022	<0.005	<0.005	<0.005	<0.005	<0.005		0.00262 (J)	
8/24/2022						<0.005	. ,	<0.005
1/24/2023	<0.005	<0.005	<0.005	<0.005	0.0021 (J)	<0.005	0.00201 (J)	<0.005
					· · · · · · · · · · · · · · · · · · ·		(-)	

Constituent: Arsenic (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.005	<0.005		0.0026 (J)				
11/17/2016	<0.005							
11/18/2016		<0.005						
11/21/2016				0.0034 (J)				
2/22/2017	<0.005							
2/23/2017		<0.005	<0.005	0.003 (J)				
4/17/2017			<0.005					
5/15/2017			<0.005					
6/15/2017	0.0006 (J)	0.0007 (J)	<0.005	0.005 (J)				
9/28/2017	<0.005	<0.005	<0.005	0.0046 (J)				
2/15/2018	<0.005	<0.005	<0.005	0.0016 (J)				
6/27/2018	<0.005							
6/28/2018		<0.005 (X)	<0.005 (X)	<0.005 (X)				
12/19/2018	<0.005	<0.005	<0.005					
12/20/2018				0.00098 (J)				
1/15/2019					<0.005			
8/28/2019	0.00044 (J)	0.00045 (J)	0.00038 (J)					
8/29/2019				0.0013 (J)				
10/16/2019	0.0004 (J)		0.00078 (J)	0.0024 (J)				
10/22/2019					<0.005			
12/3/2019		0.001 (J)						
3/5/2020	<0.005	<0.005	0.00044 (J)	0.0011 (J)				
8/19/2020	<0.005	<0.005	<0.005	0.0021 (J)				
9/16/2020	<0.005	<0.005	<0.005					
9/17/2020				0.0015 (J)				
3/3/2021		<0.005	<0.005					
3/4/2021	<0.005			0.0029 (J)				
9/22/2021		<0.005						
9/23/2021	<0.005		<0.005	0.002 (J)				
2/1/2022	<0.005	<0.005		<0.005				
2/2/2022			<0.005					
8/23/2022			<0.005	0.00337 (J)	<0.005	<0.005		
8/24/2022	<0.005	<0.005						
9/1/2022								<0.005
1/24/2023	<0.005							
1/25/2023		<0.005	0.003 (J)	0.00486 (J)		<0.005	0.00368 (J)	
1/26/2023					0.00388 (J)			0.00366 (J)

Constituent: Barium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 0.0239	BRGWA-2S (bg) 0.0099 (J)	BRGWA-5I (bg) 0.0273	BRGWA-5S (bg) 0.0495	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.0239	0.0099 (3)	0.0273	0.0493	0.0142			
					0.0142	0.0277	0.0014	
9/7/2016						0.0377	0.0214	0.0445
9/8/2016				0.0540	0.0100			0.0415
11/15/2016				0.0512	0.0126			
11/16/2016	0.0147	0.0102	0.0365					
11/17/2016						0.0405	0.0211	0.04
2/20/2017			0.0336	0.0586	0.0142			
2/21/2017	0.0109	0.0094 (J)						
2/22/2017						0.0392	0.0243	0.0415
6/12/2017	0.0094 (J)		0.0322	0.0567	0.0134			
6/13/2017		0.0094 (J)						
6/14/2017							0.0218	0.0341
6/15/2017						0.0364		
9/26/2017	0.0156	0.0096 (J)	0.0364	0.0586	0.0133			
9/27/2017							0.0219	0.0347
9/28/2017						0.0408		
2/13/2018	0.0134	0.0102	0.054	0.054	0.0145			
2/15/2018						0.0396	0.0248	0.0346
6/26/2018	0.014	0.0093 (J)	0.032	0.063	0.014			
6/27/2018						0.041	0.023	0.028
12/18/2018	0.0076 (J)	0.01	0.038	0.045	0.013		0.023	0.029
12/19/2018						0.038		
8/27/2019	0.012	0.0095 (J)	0.028	0.056	0.013		0.02	
8/28/2019						0.044	0.02	0.026
10/15/2019	0.013	0.0091 (J)	0.032	0.049	0.013			
10/16/2019							0.019	0.022
12/3/2019						0.043		
3/3/2020	0.017	0.011	0.028	0.051	0.019	0.036		
3/5/2020							0.022	0.025
8/18/2020	0.01 (J)	0.01	0.022	0.04	0.014			
8/19/2020						0.047	0.02	0.024
9/15/2020	0.0083 (J)	0.0094 (J)	0.022	0.038	0.013			
9/16/2020						0.044	0.019	0.023
3/1/2021	0.0074				0.016			
3/2/2021		0.0094	0.023	0.037				
3/3/2021							0.02	0.024
3/4/2021						0.039		
9/21/2021			0.025	0.038				
9/22/2021	0.0075	0.0097			0.014	0.043	0.019	0.021
2/1/2022	0.0066	0.01	0.028	0.04	0.014	0.045	0.023	0.024
8/23/2022	0.00954	0.012	0.0241	0.0379	0.014		0.0409	
8/24/2022						0.0512		0.0249
1/24/2023	0.00453	0.0118	0.0303	0.0394	0.0132	0.0422	0.0368	0.0232
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Constituent: Barium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	0.101	0.0674		0.044				
11/17/2016	0.0808							
11/18/2016		0.0546						
11/21/2016				0.0428 (J)				
2/22/2017	0.0701							
2/23/2017		0.0489	0.0229	0.0338				
4/17/2017			0.0227					
5/15/2017			0.0227					
6/15/2017	0.0518	0.0415	0.0218	0.0239				
9/28/2017	0.047	0.0397	0.0222	0.0247				
2/15/2018	0.0485	0.038	0.0243	0.0215				
6/27/2018	0.046							
6/28/2018		0.035	0.023	0.018				
12/19/2018	0.04	0.035	0.024					
12/20/2018				0.017				
1/15/2019					0.14			
8/28/2019	0.039	0.034	0.027					
8/29/2019				0.016				
10/16/2019	0.037		0.024	0.015				
10/22/2019					0.077			
12/3/2019		0.031						
3/5/2020	0.039	0.033	0.025	0.016				
8/19/2020	0.04	0.037	0.026	0.016				
9/16/2020	0.033	0.03	0.024					
9/17/2020				0.014				
3/3/2021		0.031	0.024					
3/4/2021	0.034			0.015				
9/22/2021		0.028						
9/23/2021	0.036		0.027	0.014				
2/1/2022	0.033	0.029		0.015				
2/2/2022			0.025					
8/23/2022			0.026	0.0141	0.0562	0.0547		
8/24/2022	0.0339	0.0296						
9/1/2022								0.0444
1/24/2023	0.0291							
1/25/2023		0.0278	0.0247	0.018		0.0536	0.0171	
1/26/2023					0.0525			0.025

Constituent: Beryllium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

0/04/0040	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
9/1/2016					<0.0005	10.0005	0.0010 (1)	
9/7/2016						<0.0005	0.0019 (J)	0.0001 (1)
9/8/2016				.0.005	.0.005			0.0001 (J)
11/15/2016	.0.0005	.0.0005	.0.005	<0.0005	<0.0005			
11/16/2016	<0.0005	<0.0005	<0.0005					
11/17/2016						<0.0005	0.002 (J)	0.0001 (J)
2/20/2017			<0.0005	<0.0005	<0.0005			
2/21/2017	<0.0005	<0.0005						
2/22/2017						<0.0005	0.0022 (J)	0.0002 (J)
6/12/2017	<0.0005		<0.0005	<0.0005	<0.0005			
6/13/2017		<0.0005						
6/14/2017							0.0019 (J)	<0.0005
6/15/2017						<0.0005		
9/26/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
9/27/2017							0.0017 (J)	0.0001 (J)
9/28/2017						<0.0005		
2/13/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
2/15/2018						<0.0005	<0.003	<0.0005
6/26/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
6/27/2018						<0.0005	0.002 (J)	0.00013 (J)
12/18/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.0021 (J)	0.00012 (J)
12/19/2018						<0.0005		
8/27/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.0019 (J)	
8/28/2019						<0.0005	0.0019 (J)	0.00014 (J)
10/15/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
10/16/2019							0.0018 (J)	0.00014 (J)
10/17/2019						<0.0005		
12/3/2019						<0.0005		
3/3/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
3/5/2020							0.0018 (J)	0.00015 (J)
8/18/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
8/19/2020						<0.0005	0.0014 (J)	0.00015 (J)
9/15/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
9/16/2020						<0.0005	0.0015 (J)	0.00014 (J)
3/1/2021	<0.0005				<0.0005			
3/2/2021		<0.0005	<0.0005	<0.0005				
3/3/2021							0.0013	0.00015 (J)
3/4/2021						<0.0005		, ,
9/21/2021			<0.0005	<0.0005				
9/22/2021	<0.0005	<0.0005			<0.0005	<0.0005	0.0012	0.00015 (J)
2/1/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	0.00015 (J)
8/23/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.00241	
8/24/2022						<0.0005		<0.0005
1/24/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00235	<0.0005

Constituent: Beryllium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

9/7/2016	BRGWC-35S 9E-05 (J)	BRGWC-36S <0.0005	BRGWC-37S	BRGWC-38S 0.0079	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/23/2016	(1)			0.0096 (R)				
11/17/2016	0.0001 (J)							
11/18/2016		0.0001 (J)						
11/21/2016				0.0092				
2/22/2017	0.0001 (J)							
2/23/2017		0.0001 (J)	<0.0005	0.01				
4/17/2017			<0.0005					
5/15/2017			<0.0005					
6/15/2017	0.0001 (J)	9E-05 (J)	<0.0005	0.0104				
9/28/2017	0.0001 (J)	0.0001 (J)	<0.0005	0.0098				
2/15/2018	<0.0005	<0.0005	<0.0005	0.011 (J)				
6/27/2018	0.00015 (J)							
6/28/2018		8.1E-05 (J)	<0.0005	0.0085				
12/19/2018	<0.0005 (X)	<0.0005 (X)	<0.0005					
12/20/2018				0.0092				
1/15/2019					0.0005 (J)			
8/28/2019	0.00016 (J)	0.00011 (J)	<0.0005					
8/29/2019				0.0088				
10/16/2019	0.00015 (J)		<0.0005	0.0079				
10/17/2019		<0.0005						
10/22/2019					0.0004 (J)			
12/3/2019		9.7E-05 (J)						
3/5/2020	0.00015 (J)	9.2E-05 (J)	<0.0005	0.0082				
8/19/2020	0.00015 (J)	0.00011 (J)	<0.0005	0.0079				
9/16/2020	0.00014 (J)	8E-05 (J)	<0.0005					
9/17/2020				0.0073				
3/3/2021		7.9E-05 (J)	<0.0005					
3/4/2021	0.00012 (J)			0.0077				
9/22/2021		8.4E-05 (J)						
9/23/2021	0.00016 (J)		<0.0005	0.0071				
2/1/2022	0.00015 (J)	8.7E-05 (J)		0.0072				
2/2/2022			<0.0005					
8/23/2022			<0.0005	0.00854	0.000331 (J)	<0.0005		
8/24/2022	0.00021 (J)	<0.0005						
9/1/2022								<0.0005
1/24/2023	<0.0005							
1/25/2023		<0.0005	<0.0005	0.0078	0.000405 ( "	<0.0005	<0.0005	0.000047 (1)
1/26/2023					0.000422 (J)			0.000217 (J)

Constituent: Boron (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0072 (J)	<0.015	<0.015	<0.015				
9/1/2016					<0.015			
9/7/2016						0.0449 (J)	1.15	
9/8/2016								1.89
11/15/2016				0.0085 (J)	0.0123 (J)			
11/16/2016	0.0117 (J)	0.0109 (J)	0.0187 (J)					
11/17/2016						0.0067 (J)	1.08	2.17
2/20/2017			0.0066 (J)	0.0093 (J)	0.0157 (J)			
2/21/2017	0.0088 (J)	<0.015						
2/22/2017						<0.04	1.44	2.09
6/12/2017	0.0133 (J)		<0.015	<0.015	<0.015			
6/13/2017		<0.015						
6/14/2017							1.16	2.45
6/15/2017						<0.04		
9/26/2017	0.0093 (J)	<0.015	<0.015	<0.015	<0.015			
9/27/2017							1.04	2.4
9/28/2017						<0.04		
2/13/2018	0.0141 (J)	<0.015	<0.015	<0.015	<0.015			
2/15/2018						<0.04	1.22	2.55
6/26/2018	0.012 (J)	<0.015	0.0042 (J)	0.0056 (J)	0.0041 (J)			
6/27/2018						0.0088 (J+X)	0.96 (J+X)	2.2 (J+X)
12/18/2018	0.0086 (J)	<0.015	<0.015	0.0062 (J)	<0.015		1.2	2.2
12/19/2018						0.0045 (J)		
3/19/2019	0.00565 (JD)	<0.015	<0.015	<0.015	<0.015	<0.04		
3/20/2019							1.3	2.3
10/15/2019	0.0067 (J)	<0.015	<0.015	0.006 (J)	0.01 (J)			
10/16/2019							1.1	2.3
10/17/2019						<0.04		
12/3/2019						0.0063 (J)		
3/3/2020	0.0082 (J)	<0.015	<0.015	<0.015	<0.015	0.0075 (J)		
3/5/2020							1.5	2.1
9/15/2020	<0.015	<0.015	<0.015	<0.015	<0.015			
9/16/2020						0.0066 (J)	1.1	2.2
3/1/2021	<0.015				<0.015			
3/2/2021		<0.015	0.0053 (J)	0.0071 (J)				
3/3/2021							1.1	2.1
3/4/2021						<0.04		
9/21/2021			<0.015	<0.015				
9/22/2021	<0.015	<0.015			<0.015	0.02 (J)	1.1	2.2
2/1/2022	<0.015	<0.015	<0.015	<0.015	<0.015	0.013 (J)	1.1	2.2
8/23/2022	0.00592 (J)	0.00532 (J)	<0.015	0.00538 (J)	<0.015		0.975	
8/24/2022						0.0273		2.45
1/24/2023	<0.015	<0.015	<0.015	<0.015	<0.015	0.0326	1.19	2.21

Constituent: Boron (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	1.06	0.725		1.73				
9/26/2016					<0.015			
11/17/2016	0.967							
11/18/2016		0.831						
11/21/2016				2.02				
2/22/2017	1.35							
2/23/2017		0.949	<0.015	1.77				
4/17/2017			<0.015					
5/15/2017			<0.015					
6/15/2017	1.49	0.961	<0.015	1.78				
9/28/2017	1.27	0.948	<0.015	1.45				
2/15/2018	1.58	1.11	<0.015	2.09				
6/27/2018	1.7 (J+X)							
6/28/2018		0.89	<0.015 (X)	1.5				
12/19/2018	1.8	1.1	<0.015					
12/20/2018				1.7				
1/15/2019					<0.015			
3/19/2019		1						
3/20/2019	1.7		0.004 (J)	1.5				
10/16/2019	2.2		0.0055 (J)	1.5				
10/17/2019		1.1						
10/22/2019					0.0098 (J)			
12/3/2019		1						
3/5/2020	1.9	1.1	0.0076 (J)	1.6				
9/16/2020	1.9	0.99	0.0062 (J)					
9/17/2020				1.4				
3/3/2021		1	<0.015					
3/4/2021	1.9			1.5				
9/22/2021		1.1						
9/23/2021	2		<0.015	1.4				
2/1/2022	2.1	1		1.6				
2/2/2022			0.032 (J)					
8/23/2022			<0.015	1.67	<0.015	1.04		
8/24/2022	2.23	1.1						
9/1/2022							0.0403	1.2
1/24/2023	2.23							
1/25/2023		1.18	<0.015	1.63		1.11	0.0362	
1/26/2023					0.0104 (J)			1.04

Constituent: Cadmium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

0/04/0040	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	<0.001	<0.001	<0.001	<0.001	-0.001			
9/1/2016					<0.001	-0.001	0.0005 (1)	
9/7/2016						<0.001	0.0005 (J)	0.004
9/8/2016								<0.001
11/15/2016				<0.001	<0.001			
11/16/2016	<0.001	<0.001	<0.001					
11/17/2016						<0.001	0.0005 (J)	0.0009 (J)
2/20/2017			<0.001	<0.001	<0.001			
2/21/2017	<0.001	<0.001						
2/22/2017						<0.001	0.0006 (J)	0.0005 (J)
6/12/2017	<0.001		<0.001	<0.001	<0.001			
6/13/2017		<0.001						
6/14/2017							0.0004 (J)	0.0004 (J)
6/15/2017						<0.001		
9/26/2017	<0.001	<0.001	<0.001	<0.001	<0.001			
9/27/2017							0.0004 (J)	0.0007 (J)
9/28/2017						<0.001		
2/13/2018	<0.001	<0.001	<0.001	<0.001	<0.001			
2/15/2018						<0.001	<0.001	<0.001
6/26/2018	<0.001	<0.001	<0.001	<0.001	<0.001			
6/27/2018						<0.001	0.00038 (J)	0.00017 (J)
12/18/2018	<0.001	<0.001	<0.001	<0.001	<0.001		0.00046 (J)	0.00023 (J)
12/19/2018						<0.001		
8/27/2019	<0.001	<0.001	<0.001	<0.001	<0.001		0.00032 (J)	
8/28/2019						<0.001	0.00032 (J)	0.00025 (J)
10/15/2019	<0.001	<0.001	<0.001	<0.001	<0.001			
10/16/2019							0.00039 (J)	0.0004 (J)
10/17/2019						<0.001		
12/3/2019						<0.001		
3/3/2020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
3/5/2020							0.00038 (J)	0.00018 (J)
8/18/2020	<0.001	<0.001	<0.001	<0.001	<0.001			
8/19/2020						<0.001	0.00029 (J)	0.00018 (J)
9/15/2020	<0.001	<0.001	<0.001	<0.001	<0.001		, ,	.,
9/16/2020						<0.001	0.00032 (J)	0.00017 (J)
3/1/2021	<0.001				<0.001		( )	,
3/2/2021		<0.001	<0.001	<0.001				
3/3/2021							0.00022 (J)	0.00015 (J)
3/4/2021						<0.001	(0)	
9/21/2021			<0.001	<0.001				
9/22/2021	<0.001	<0.001	3.00.	2.00.	<0.001	<0.001	0.00019 (J)	0.00033 (J)
2/1/2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00013 (J)	0.00033 (J) 0.00012 (J)
8/23/2022	<0.001	<0.001	<0.001	<0.001	<0.001	5.00	0.00023 (J)	
8/24/2022	5.001	5.501	5.001	3.001	3.001	<0.001	3.00000 (0)	0.000517 (J)
1/24/2023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.000482 (J)	<0.001
112712020	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.000 <del>1</del> 02 (0)	-0.001

Constituent: Cadmium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.001	8E-05 (J)		0.0004 (J)				
11/17/2016	<0.001							
11/18/2016		<0.001						
11/21/2016				0.0005 (J)				
2/22/2017	<0.001							
2/23/2017		0.0001 (J)	<0.001	0.0007 (J)				
4/17/2017			<0.001					
5/15/2017			<0.001					
6/15/2017	<0.001	<0.001	<0.001	0.0006 (J)				
9/28/2017	<0.001	<0.001	<0.001	0.0007 (J)				
2/15/2018	<0.001	<0.001	<0.001	0.00069 (J)				
6/27/2018	<0.001							
6/28/2018		<0.001	<0.001	0.00056 (J)				
12/19/2018	<0.001	<0.001 (X)	<0.001					
12/20/2018				<0.001 (X)				
1/15/2019					0.00011 (J)			
8/28/2019	<0.001	<0.001	<0.001					
8/29/2019				0.00053 (J)				
10/16/2019	<0.001		<0.001	0.00057 (J)				
10/17/2019		<0.001						
10/22/2019					<0.001			
12/3/2019		<0.001						
3/5/2020	<0.001	<0.001	<0.001	0.00059 (J)				
8/19/2020	<0.001	<0.001	<0.001	0.00056 (J)				
9/16/2020	<0.001	<0.001	<0.001					
9/17/2020				0.0005 (J)				
3/3/2021		<0.001	<0.001					
3/4/2021	<0.001			0.00042 (J)				
9/22/2021		<0.001						
9/23/2021	<0.001		<0.001	0.00048 (J)				
2/1/2022	<0.001	<0.001		0.00058				
2/2/2022			<0.001					
8/23/2022			<0.001	0.000459 (J)	<0.001	<0.001		
8/24/2022	<0.001	<0.001						
9/1/2022								<0.001
1/24/2023	<0.001							
1/25/2023		<0.001	<0.001	0.00043 (J)		<0.001	<0.001	
1/26/2023					<0.001			<0.001

Constituent: Calcium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	12.6	4.09	13.5	19.6				
9/1/2016					3.3			
9/7/2016						26.3	53.4	
9/8/2016								97.3
11/15/2016				21.7	3.44			
11/16/2016	12.1	4.25	14.9					
11/17/2016						31.8	41.3	97.6
2/20/2017			13.9	21.1	3.52			
2/21/2017	11.4	4.02						
2/22/2017						33.5	53.1	106
6/12/2017	9.34		13.7	21.5	3.11			
6/13/2017		3.84						
6/14/2017							47.1	98
6/15/2017						29		
9/26/2017	14.3	3.31	14.4	24	3.15			
9/27/2017							49.5	95.8
9/28/2017						34.1		
2/13/2018	<25	3.94	<25	<25	3.65			
2/15/2018						33.8	50.9	100
6/26/2018	16 (J)	3.6	13.5 (J)	23.5 (J)	3.3			
6/27/2018						34.1	55.1	90.1
12/18/2018	14.5 (J)	3.8	16.4 (J)	19.8 (J)	3.5		52.7	85.1
12/19/2018						33.1		
3/19/2019	14.3 (JD)	3.9	12.3 (J)	21.4 (J)	3.6	31.6		
3/20/2019							51.4	82
10/15/2019	15.1	3.7	14.4	20	3.5			
10/16/2019							46.5	78.2
12/3/2019						37.7		
3/3/2020	20	4	14.9	23.2	5	29.7		
3/5/2020							48.1	89.6
9/15/2020	14.1	3.9	12.7	16.8	3.7			
9/16/2020						37.9	37.9	77.7
3/1/2021	15.4				4.2			
3/2/2021		4	13.2	16.8				
3/3/2021							37.5	88.6
3/4/2021						41.2		
9/21/2021			14.1	19.1				
9/22/2021	15.9	4.3			4.1	36.4	28.9	76.9
2/1/2022	14.4	4.4	14.5	19.1	4.2	41.5	34.3	81.7
8/23/2022	13.9	4.65	14.3	18.2	3.97		119	
8/24/2022						43.6		75
1/24/2023	14.2	4.86	15.8	19.4	3.9	41.3	116	80

Constituent: Calcium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	54.1	50.6		45.9				
11/17/2016	62.6							
11/18/2016		53.9						
11/21/2016				46.4				
2/22/2017	64.6							
2/23/2017		51	3.26	43.5				
4/17/2017			3.23					
5/15/2017			2.97 (B-01)					
6/15/2017	61.3	53.8	3.15	45.3				
9/28/2017	60.8	51.8	3.26	45.1				
2/15/2018	56.6	50.1	3.39	45.3				
6/27/2018	66.2							
6/28/2018		51	3.1	45.9				
12/19/2018	64.4	57.1	3.6					
12/20/2018				41.8				
1/15/2019					23.5 (J)			
3/19/2019		49.5						
3/20/2019	61.8		3.3	38.2				
10/16/2019	61.2		3.4	38.4				
10/22/2019					14.8			
12/3/2019		47.8						
3/5/2020	69.9	51.7	3.7	39.8				
9/16/2020	61.8	45.9	3.2					
9/17/2020				33.1				
3/3/2021		53	3.6					
3/4/2021	71.8			41				
9/22/2021		53.7						
9/23/2021	70.5		3.7	36.8				
2/1/2022	73.8	49.7		37.8				
2/2/2022			3.7					
8/23/2022			3.7	37.1	9.69	76.4		
8/24/2022	68.5	48.1						
9/1/2022							69	42.6
1/24/2023	67.5							
1/25/2023		48.2	3.65	32.8		78.5	46.3	
1/26/2023					16.8			33.4

Constituent: Chloride (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	2.3	2	4.4	3.6				
9/1/2016					2.5			
9/7/2016						3.7	5.3	
9/8/2016								7.2
11/15/2016				4	2.3			
11/16/2016	2	1.8	4.4					
11/17/2016						4.05 (D)	5.45 (D)	7.8 (D)
2/20/2017			4.8	3.9	2.4			
2/21/2017	2	1.8						
2/22/2017						3.6	0.12 (J)	7.1
6/12/2017	2.1		4.2	3.8	2.2			
6/13/2017		1.7						
6/14/2017							4.5	7.3
6/15/2017						3.7		
9/26/2017	2	1.8	4.4	4.1	2.3			
9/27/2017							5.4	7.6
9/28/2017						4.1		
2/13/2018	2.1	1.7	4.7	4.1	2.3			
2/15/2018						5.3	6.3	7.2
6/26/2018	2.4	2.2	4.5	4.1	2.6			
6/27/2018						4.2	4.5	7.1
12/18/2018	1.8	1.9	4.5	3.8	2.3		6.1	7.1
12/19/2018						4.9 (J-X)		
3/19/2019	2.45 (D)	2	4.5	4.2	2.6	5		
3/20/2019							6.2	6.9
10/15/2019	2.2	1.9	4.2	3.7	2.4			
10/16/2019							5.4	7.3
12/3/2019						4.8		
3/3/2020	1.9	1.9	3.9	3.6	2.9	3.8		
3/5/2020							4.8	6.4
9/15/2020	1.9	1.7	3.7	3.7	2.3			
9/16/2020						4.2	4.1	6.6
3/1/2021	1.8				2.1			
3/2/2021		1.7	3.8	3.7				
3/3/2021							3.9	6.4
3/4/2021						4.6		
9/21/2021			3.2	3.2				
9/22/2021	1.7	1.5			2.1	4.6	2.7	5.6
2/1/2022	1.8	1.6	3.5	3.4	2.1	4.9	13.1	5.9
8/23/2022	2.02	2.18	3.64	3.59	2.39		30.3	
8/24/2022						5		6.17
1/24/2023	2.09	2.16	3.93	3.56	2.3	6.31	29	7.5

Constituent: Chloride (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	5.8	3.1		5.8				
11/17/2016	6.1 (D)							
11/18/2016		3.95 (D)						
11/21/2016				5.05 (D)				
2/22/2017	5.6							
2/23/2017		3.2	2.1	4.1				
4/17/2017			1.8					
5/15/2017			1.8					
6/15/2017	5.8	4	1.9	4.8				
9/28/2017	6.2	4.6	1.9	6.7				
2/15/2018	6.2	5.4	2.3	8				
6/27/2018	5.9							
6/28/2018		9 (J-X)	2.1 (J-X)	5.5 (J-X)				
12/19/2018	6.2 (J-X)	6.2 (J-X)	1.9 (J-X)					
12/20/2018				8 (J-X)				
1/15/2019					2.4			
3/19/2019		7.1						
3/20/2019	6.6		2.3	6.6				
10/16/2019	6.6		2.3	6.4				
10/22/2019					2.1			
12/3/2019		7.7						
3/5/2020	5.8	7.6	1.8	5.8				
9/16/2020	6	7.9	1.8					
9/17/2020				6.1				
3/3/2021		8.1	1.9					
3/4/2021	5.8			5.6				
9/22/2021		7.1						
9/23/2021	6.1		1.9	6				
2/1/2022	6	7.6		5.8				
2/2/2022			1.8					
8/23/2022			1.97	6.42	4.2	4.94		
8/24/2022	6.53	7.96						
9/1/2022							6.24	10.8
1/24/2023	6.46							
1/25/2023		7.93	1.92	6.53		4.66		
1/26/2023					3.36		12.3	5.37

Constituent: Chromium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 0.001 (J)	BRGWA-2S (bg) 0.0034 (J)	BRGWA-5I (bg) 0.0058 (J)	BRGWA-5S (bg) 0.0028 (J)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.001 (3)	0.0054 (0)	0.0000 (0)	0.0020 (3)	0.0147			
9/7/2016					0.0147	0.01 (J)	<0.01	
9/8/2016						0.01 (3)	40.01	<0.01
11/15/2016				0.003 (J)	0.0154 (B)			<b>\0.01</b>
11/16/2016	<0.01	0.0029 (J)	0.0051 (J)	0.003 (3)	0.0134 (В)			
11/17/2016	<b>~0.01</b>	0.0029 (3)	0.0031 (3)			0.0185	<0.01	<0.01
2/20/2017			0.0049 (J)	0.0047 (J)	0.014	0.0165	<0.01	<0.01
2/21/2017	<0.01	0.0036 (1)	0.0049 (3)	0.0047 (3)	0.014			
2/22/2017	<0.01	0.0036 (J)				0.0122	<0.01	<0.01
6/12/2017	0.0005 (J)		0.0052 (J)	0.0041 (J)	0.016	0.0122	<b>~0.01</b>	<b>\0.01</b>
6/13/2017	0.0003 (3)	0.0038 (J)	0.0032 (3)	0.0041 (3)	0.010			
6/14/2017		0.0038 (3)					<0.01	<0.01
6/15/2017						0.0117	<b>~0.01</b>	<b>\0.01</b>
	0.0005 (1)	0.0045 (1)	0.0030 (1)	0.0027 (1)	0.0144	0.0117		
9/26/2017	0.0005 (J)	0.0045 (J)	0.0039 (J)	0.0037 (J)	0.0144		-0.01	z0.01
9/27/2017 9/28/2017						0.0114	<0.01	<0.01
	-0.01	-0.01	-0.01	z0.01	0.0144	0.0114		
2/13/2018	<0.01	<0.01	<0.01	<0.01	0.0144	0.011	10.01	-0.04
2/15/2018	-0.01	0.009 (1)	0.0052 (1)	0.0042 (1)	0.015	0.011	<0.01	<0.01
6/26/2018	<0.01	0.008 (J)	0.0053 (J)	0.0043 (J)	0.015	0.0008 (1)	-0.01	z0.01
6/27/2018	-0.01	0.010	0.0000 (1)	0.005471	0.015	0.0098 (J)	<0.01	<0.01
12/18/2018	<0.01	0.012	0.0032 (J)	0.0054 (J)	0.015	0.0005 (1)	<0.01	<0.01
12/19/2018	0.000471)	0.0002 (1)	0.0055 (1)	0.0042 (1)	0.015	0.0095 (J)	10.01	
8/27/2019	0.0004 (J)	0.0083 (J)	0.0055 (J)	0.0043 (J)	0.015	0.010	<0.01	-0.04
8/28/2019	-0.01	0.0002 (1)	0.0047 (1)	0.0055 (1)	0.014	0.013	<0.01	<0.01
10/15/2019	<0.01	0.0083 (J)	0.0047 (J)	0.0055 (J)	0.014		0.00040 (1)	-0.04
10/16/2019						0.011	0.00049 (J)	<0.01
12/3/2019	0.0004770	0.0000 (1)	0.0000 (1)	0.0057 (1)	0.014	0.011		
3/3/2020	0.00047 (J)	0.0098 (J)	0.0069 (J)	0.0057 (J)	0.011	0.0081 (J)	.0.04	.0.04
3/5/2020	0.00000 (1)	0.0005 (1)	0.0000 (1)	0.005 (1)	0.045		<0.01	<0.01
8/18/2020	0.00096 (J)	0.0085 (J)	0.0069 (J)	0.005 (J)	0.015	0.010	.0.04	.0.04
8/19/2020						0.012	<0.01	<0.01
9/15/2020	<0.01	0.0082 (J)	0.0069 (J)	0.0048 (J)	0.014			
9/16/2020						0.012	<0.01	<0.01
3/1/2021	<0.01				0.011			
3/2/2021		0.0074	0.0064	0.0044 (J)				
3/3/2021							<0.01	<0.01
3/4/2021						0.01		
9/21/2021			0.0064	0.0044 (J)				
9/22/2021	<0.01	0.0091			0.014	0.0091	<0.01	<0.01
2/1/2022	0.0013 (J)	0.0092	0.0066	0.0052	0.015	0.013	<0.01	<0.01
8/23/2022	<0.01	0.00908 (J)	0.00647 (J)	0.00435 (J)	0.0143		<0.01	
8/24/2022						0.0127		<0.01
1/24/2023	<0.01	0.0095 (J)	0.00513 (J)	0.00572 (J)	0.0139	0.00886 (J)	<0.01	<0.01

Constituent: Chromium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	0.0019 (J)	0.0073 (J)		0.0014 (J)				
11/17/2016	0.0024 (J)							
11/18/2016		0.008 (J)						
11/21/2016				0.003 (J)				
2/22/2017	0.004 (J)							
2/23/2017		0.0086 (J)	0.001 (J)	0.0028 (J)				
4/17/2017			0.0018 (J)					
5/15/2017			0.0014 (J)					
6/15/2017	0.0033 (J)	0.0082 (J)	0.0013 (J)	0.0038 (J)				
9/28/2017	0.0052 (J)	0.0083 (J)	0.0014 (J)	0.0037 (J)				
2/15/2018	<0.01	0.0086 (J)	<0.01	0.0044 (J)				
6/27/2018	0.0062 (J)							
6/28/2018		0.0076 (J)	<0.01	0.0041 (J)				
12/19/2018	0.0073 (J)	0.0085 (J)	<0.01					
12/20/2018				0.0041 (J)				
1/15/2019					0.025			
8/28/2019	0.0071 (J)	0.0078 (J)	0.0017 (J)					
8/29/2019				0.0044 (J)				
10/16/2019	0.0064 (J)		0.0014 (J)	0.0038 (J)				
10/22/2019					0.02			
12/3/2019		0.007 (J)						
3/5/2020	0.0076 (J)	0.0087 (J)	0.0016 (J)	0.0038 (J)				
8/19/2020	0.0073 (J)	0.0094 (J)	0.0017 (J)	0.0043 (J)				
9/16/2020	0.0058 (J)	0.0064 (J)	0.0018 (J)					
9/17/2020				0.0042 (J)				
3/3/2021		0.0067	0.0014 (J)					
3/4/2021	0.0053			0.004 (J)				
9/22/2021		0.0065						
9/23/2021	0.0065		0.0016 (J)	0.004 (J)				
2/1/2022	0.0056	0.0068		0.0035 (J)				
2/2/2022			0.0015 (J)					
8/23/2022			<0.01	0.00398 (J)	0.0128	<0.01		
8/24/2022	0.00752 (J)	0.00713 (J)						
9/1/2022								<0.01
1/24/2023	0.00524 (J)							
1/25/2023		0.00682 (J)	<0.01	0.00362 (J)		<0.01	<0.01	
1/26/2023					0.0153			<0.01

Constituent: Cobalt (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 0.0016 (J)	BRGWA-2S (bg) 0.0034 (J)	BRGWA-5I (bg) 0.0013 (J)	BRGWA-5S (bg) <0.001	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.0010 (0)	0.0054 (0)	0.0013 (0)	40.001	<0.001			
9/7/2016					10.001	<0.001	0.0612	
						<0.001	0.0612	0.0000 (1)
9/8/2016								0.0029 (J)
11/15/2016				<0.001	<0.001			
11/16/2016	0.0006 (J)	0.003 (J)	<0.01 (o)					
11/17/2016						<0.001	0.0551	0.0028 (J)
2/20/2017			0.0012 (J)	0.0009 (J)	<0.001			
2/21/2017	<0.005	0.0028 (J)						
2/22/2017						<0.001	0.0567	0.0041 (J)
6/12/2017	<0.005		0.0011 (J)	0.0006 (J)	0.0003 (J)			
6/13/2017		0.0025 (J)						
6/14/2017							0.0557	0.0036 (J)
6/15/2017						<0.001		
9/26/2017	<0.005	0.002 (J)	0.0016 (J)	0.0005 (J)	0.0003 (J)			
9/27/2017							0.049	0.0028 (J)
9/28/2017						<0.001		
2/13/2018	<0.005	<0.005	<0.01 (o)	<0.001	<0.001			
2/15/2018						<0.001	0.0536	<0.01
6/26/2018	<0.005	0.0019 (J)	0.0009 (J)	0.00052 (J)	<0.001			
6/27/2018						<0.001	0.054	0.0041 (J)
12/18/2018	<0.005	0.0032 (J)	0.00062 (J)	<0.001	<0.001		0.049	0.0032 (J)
12/19/2018		(-)	(,,			<0.001		(-,
8/27/2019	<0.005	0.0012 (J)	0.00068 (J)	0.00042 (J)	<0.001		0.045	
8/28/2019	0.000	0.0012 (0)	0.00000 (0)	0.000 12 (0)	0.001	<0.001	0.045	0.0037 (J)
10/15/2019	<0.005	0.00097 (J)	0.00083 (J)	<0.001	<0.001	-0.001	0.040	0.0007 (0)
10/16/2019	-0.000	0.00007 (0)	0.00000 (0)	10.001	-0.001		0.042	0.0043 (J)
10/17/2019						<0.001	0.042	0.0043 (3)
12/3/2019						<0.001		
	-0.005	0.0045 (1)	0.00040 (1)	-0.001	0.0011 (1)			
3/3/2020	<0.005	0.0015 (J)	0.00043 (J)	<0.001	0.0011 (J)	<0.001	0.007	0.0001 (1)
3/5/2020	-0.005	0.0014 (1)	0.00040 (1)	-0.001	0.00001 (1)		0.037	0.0031 (J)
8/18/2020	<0.005	0.0014 (J)	0.00048 (J)	<0.001	0.00061 (J)			
8/19/2020						<0.001	0.036	0.0041 (J)
9/15/2020	<0.005	0.001 (J)	0.0005 (J)	<0.001	<0.001			
9/16/2020						<0.001	0.034	0.0042 (J)
3/1/2021	<0.005				<0.001			
3/2/2021		0.001 (J)	0.00053 (J)	<0.001				
3/3/2021							0.028	0.0046 (J)
3/4/2021						<0.001		
9/21/2021			0.00071 (J)	<0.001				
9/22/2021	0.0015 (J)	<0.005			0.00078 (J)	<0.001	0.024	0.0075
2/1/2022	0.00079 (J)	0.0011 (J)	0.0007 (J)	<0.001	<0.001	<0.001	0.027	0.0044 (J)
8/23/2022	0.000767 (J)	0.000844 (J)	0.000553 (J)	<0.001	<0.001		0.0639	
8/24/2022						<0.001		0.00438
1/24/2023	0.00154	0.000829 (J)	0.000677 (J)	<0.001	<0.001	<0.001	0.0582	0.00351

Constituent: Cobalt (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

0/7/2016	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016 11/17/2016	0.0023 (J) 0.0012 (J)	<0.001		0.236				
11/18/2016	0.0012 (3)	<0.001						
11/21/2016		<b>~0.001</b>		0.298				
2/22/2017	0.0008 (J)			0.230				
2/23/2017	0.0000 (0)	<0.001	<0.001	0.277				
4/17/2017		0.001	<0.001	0.277				
5/15/2017			<0.001					
6/15/2017	0.0004 (J)	<0.001	<0.001	0.262				
9/28/2017	0.0003 (J)	<0.001	<0.001	0.279				
2/15/2018	<0.001	<0.001	<0.001	0.279				
6/27/2018	<0.001							
6/28/2018		<0.001	<0.001	0.23				
12/19/2018	<0.001	<0.001	<0.001					
12/20/2018				0.25				
1/15/2019					<0.001			
8/28/2019	<0.001	<0.001	<0.001					
8/29/2019				0.21				
10/16/2019	<0.001		<0.001	0.21				
10/17/2019		<0.001						
10/22/2019					0.00037 (J)			
12/3/2019		<0.001						
3/5/2020	<0.001	<0.001	<0.001	0.22				
8/19/2020	<0.001	<0.001	<0.001	0.22				
9/16/2020	<0.001	<0.001	<0.001					
9/17/2020				0.2				
3/3/2021		<0.001	<0.001					
3/4/2021	<0.001			0.2				
9/22/2021		<0.001						
9/23/2021	<0.001		<0.001	0.17				
2/1/2022	<0.001	<0.001		0.18				
2/2/2022			<0.001					
8/23/2022			<0.001	0.173	<0.001	<0.001		
8/24/2022	<0.001	<0.001						
9/1/2022							0.0015	0.0056
1/24/2023	<0.001							
1/25/2023		<0.001	<0.001	0.158		<0.001	0.00249	
1/26/2023					<0.001			0.000682 (J)

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.351 (U)	1 (U)	0.62 (U)	0.603 (U)				
9/1/2016					1.33			
9/7/2016						1.18	0.541 (U)	
9/8/2016								0.998 (U)
11/15/2016				0.645 (U)	0.412 (U)			
11/16/2016	0.824 (U)	0.43 (U)	0.493 (U)					
11/17/2016						0.145 (U)	1.02 (U)	0.613
2/20/2017			0.534 (U)	1.36	0.633 (U)			
2/21/2017	1.01 (U)	0.96 (U)						
2/22/2017						0.0213 (U)	0.482 (U)	1.01 (U)
6/12/2017	0.532 (U)		0.254 (U)	0.566 (U)	0.112 (U)			
6/13/2017		0.645 (U)						
6/14/2017							0.723 (U)	0.801 (U)
6/15/2017						0.41 (U)		
9/26/2017	0.845 (U)	0.299 (U)	0.62 (U)	0.762 (U)	0.167 (U)			
9/27/2017							1.5	1.44
9/28/2017						0.496 (U)		
2/13/2018	0.176 (U)	1.01 (U)	0.0914 (U)	0.349 (U)	0.347 (U)			
2/15/2018						0.672 (U)	1.14 (U)	0.668 (U)
6/26/2018	1.02 (U)	1.26 (J+X)	1.11 (U)	0.614 (U)	0.903 (U)			
6/27/2018						0.692 (U)	1.3 (U)	1.06 (U)
12/18/2018	0.487 (U)	0.44 (U)	0.42 (U)	0.445 (U)	0.353 (U)		1.64 (UX)	1.22
12/19/2018						0.325 (U)		
8/27/2019	1.11	1.47	1.19	1.44	0.65 (U)		1.38	
8/28/2019						0.24 (U)		0.811 (U)
10/15/2019	1.02 (U)	0.807 (U)	0.714 (U)	0.467 (U)	0.402 (U)			
10/16/2019							1.16 (U)	0.561 (U)
12/18/2019						1.16 (U)		
3/3/2020	1.18 (U)	0.818 (U)	0.996 (U)	1.5	0.397 (U)	0.756 (U)		
3/5/2020							0.683 (U)	0.792 (U)
8/18/2020	0.0861 (U)	1.22 (U)	0.53 (U)	0.581 (U)	0.453 (U)			
8/19/2020						0.985 (U)	1.14 (U)	1.21 (U)
9/15/2020	0.0583 (U)	0.579 (U)	0.215 (U)	0.55 (U)	0.474 (U)			
9/16/2020						0.478 (U)	0.195 (U)	0.72 (U)
3/1/2021	0.127 (U)				0.215 (U)			
3/2/2021		0.342 (U)	0.409 (U)	0.362 (U)				
3/3/2021							0.708 (U)	1.12
3/4/2021						0.38 (U)		
9/21/2021			0.182 (U)	0.86 (U)				
9/22/2021	0.349 (U)	1.33 (U)			0.943 (U)	0.734 (U)	0.382 (U)	0.91 (U)
2/1/2022	0.233 (U)	0.251 (U)	1.23	0.23 (U)	0.349 (U)	0.503 (U)	0.583 (U)	0.535 (U)
8/23/2022	1.7	0.531	2.3	0.735	0.203		1.94	
8/24/2022						0.152		1.86
1/24/2023	2.05 (U)	1.35 (U)	0.811 (U)	0.402 (U)	1.55 (U)	0.728 (U)	3.31 (U)	2.14 (U)

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	0.189 (U)	0.638 (U)		0.816 (U)				
11/17/2016	0.729 (U)							
11/18/2016		1.22 (U)						
11/21/2016				2.94				
2/22/2017	0.293 (U)							
2/23/2017		0.554 (U)	0.567 (U)	1.92				
4/17/2017			0.335 (U)					
5/15/2017			0.261 (U)					
6/15/2017	1.09	0.77 (U)	0.188 (U)	3.6				
9/28/2017	1.02 (U)	1.07 (U)	0.627 (U)	3.3				
2/15/2018	0.742 (U)	0.751 (U)	0.869 (U)	2.31 (J+X)				
6/27/2018	0.739 (U)							
6/28/2018		0.392 (U)	0.336 (U)	1.75 (UX)				
12/19/2018	0.465 (U)	0.693 (U)	0.454 (U)					
12/20/2018				2.8 (J+X)				
1/15/2019					<0.983			
8/28/2019	0.995 (U)	0.866 (U)	0.809 (U)					
8/29/2019				3.68				
10/16/2019	1.69		0.815 (U)	2.66				
10/22/2019					0.631 (U)			
12/18/2019		1.91						
3/5/2020	0.858 (U)	1.3	0.791 (U)	2.21				
8/19/2020	0.162 (U)	1.4	0.582 (U)	3.17				
9/16/2020	1.25 (U)	1.17 (U)	0.844 (U)					
9/17/2020				2.92				
3/3/2021		0.307 (U)	1.12					
3/4/2021	0.461 (U)			1.99				
9/22/2021		0.808 (U)						
9/23/2021	0.394 (U)		0.078 (U)	1.4				
2/1/2022	0.672 (U)	1.61 (U)		7.64				
2/2/2022			0.654 (U)					
8/23/2022			2.37	3.12	1.83	3.04		
8/24/2022	3.1	1.38						
9/1/2022								1.57
1/24/2023	3.34	4.00	1.07.41)	0.70		0.1.41)		
1/25/2023		4.86	1.67 (U)	3.79	4 77	2.1 (U)		101(1)
1/26/2023					4.77		F 20	1.81 (U)
2/2/2023							5.39	

Constituent: Fluoride (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

					. ,			
9/21/2016	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.11 (J)	0.05 (J)	0.07 (J)	0.19 (J)	0.06 (1)			
9/1/2016					0.06 (J)	0.00 (1)	0.10 (1)	
9/7/2016						0.22 (J)	0.19 (J)	0.47 (1)
9/8/2016								0.17 (J)
11/15/2016				0.13 (J)	0.06 (J)			
11/16/2016	0.08 (J)	0.07 (J)	0.07 (J)					
11/17/2016						0.12 (J)	0.12 (J)	0.06 (J)
2/20/2017			0.06 (J)	0.08 (J)	0.04 (J)			
2/21/2017	0.14 (J)	0.05 (J)						
2/22/2017						0.11 (J)	0.21 (J)	0.17 (J)
6/12/2017	0.16 (J)		0.008 (J)	0.07 (J)	0.06 (J)			
6/13/2017		0.04 (J)						
6/14/2017							0.18 (J)	0.1 (J)
6/15/2017						0.05 (J)		
9/26/2017	0.14 (J)	<0.1	<0.1	0.04 (J)	<0.1			
9/27/2017							0.42	0.4
9/28/2017						0.05 (J)		
2/13/2018	<0.1	<0.1	<0.1	<0.1	<0.1			
2/15/2018						<0.3	0.42	<0.3
6/26/2018	0.085 (J)	0.048 (J)	0.045 (J)	0.072 (J)	0.041 (J)			
6/27/2018						0.093 (J)	0.32	0.21 (J)
12/18/2018	0.085 (J)	<0.1	<0.1	<0.1	<0.1		0.28 (J)	0.12 (J)
12/19/2018						0.16 (J)		
3/19/2019	0.0655 (JD)	0.037 (J)	<0.1	0.06 (J)	0.03 (J)	0.1 (J)		
3/20/2019							0.14 (J)	0.074 (J)
8/27/2019	<0.1	<0.1	<0.1	<0.1	<0.1		0.11 (J)	.,
8/28/2019						0.085 (J)	0.11 (J)	0.057 (J)
10/15/2019	<0.1	<0.1	<0.1	0.045 (J)	<0.1	. ,	. ,	,
10/16/2019				(-)			0.17 (J)	0.13 (J)
12/3/2019						0.2 (J)	(-)	(0)
3/3/2020	0.066 (J)	0.05 (J)	<0.1	0.057 (J)	0.09 (J)	0.093 (J)		
3/5/2020	0.000 (0)	0.00 (0)		0.007 (0)	0.00 (0)	0.000 (0)	0.088 (J)	0.072 (J)
8/18/2020	<0.1	<0.1	<0.1	<0.1	<0.1		0.000 (0)	0.072 (0)
8/19/2020	40.1	-0.1	-0.1	30.1	-0.1	0.1	0.11	0.074 (J)
9/15/2020	<0.1	<0.1	<0.1	0.051 (J)	<0.1	0.1	0.11	0.074 (3)
9/16/2020	<b>~0.1</b>	<b>~0.1</b>	<b>~0.1</b>	0.031 (3)	<b>~0.1</b>	0.1	0.095 (1)	0.077 (1)
	-0.1				-0.1	0.1	0.085 (J)	0.077 (J)
3/1/2021	<0.1	-0.1	-0.1	-0.1	<0.1			
3/2/2021		<0.1	<0.1	<0.1			0.000 ( 1)	0.074 (1)
3/3/2021						0.000 (1)	0.069 (J)	0.071 (J)
3/4/2021						0.096 (J)		
9/21/2021	.0.4	.0.4	<0.1	0.056 (J)		0.1	0.000 (1)	
9/22/2021	<0.1	<0.1			<0.1	0.1	0.068 (J)	0.1
2/1/2022	<0.1	<0.1	<0.1	<0.1	<0.1	0.079 (J)	0.053 (J)	0.06 (J)
8/23/2022	<0.1	<0.1	<0.1	<0.1	<0.1		0.187	
8/24/2022						0.274		0.14
1/24/2023	<0.1	<0.1	0.149	0.158	0.12	0.216	0.193	0.122

Constituent: Fluoride (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	0.34	0.18 (J)		0.66				
11/17/2016	0.14 (J)							
11/18/2016		0.03 (J)						
11/21/2016				0.9 (D)				
2/22/2017	0.09 (J)							
2/23/2017		0.07 (J)	0.1 (J)	0.75				
4/17/2017			0.08 (J)					
5/15/2017			0.02 (J)					
6/15/2017	0.03 (J)	0.01 (J)	0.03 (J)	0.77				
9/28/2017	<0.1	<0.1	<0.1	0.8				
2/15/2018	<0.1	<0.1	<0.1	0.82				
6/27/2018	0.22 (J)							
6/28/2018		0.51 (J+X)	<0.1	1.5 (J+X)				
12/19/2018	0.11 (J)	<0.1	0.094 (J)					
12/20/2018				0.68				
1/15/2019					0.06 (J)			
3/19/2019		<0.1						
3/20/2019	0.088 (J)		0.062 (J)	0.95				
8/28/2019	0.056 (J)	<0.1	<0.1					
8/29/2019				0.9				
10/16/2019	0.08 (J)		0.059 (J)	0.61				
10/22/2019					<0.1			
12/3/2019		0.15 (J)						
3/5/2020	0.067 (J)	<0.1	0.05 (J)	0.92				
8/19/2020	0.06 (J)	0.051 (J)	0.055 (J)	0.95				
9/16/2020	0.062 (J)	<0.1	<0.1					
9/17/2020				0.68				
3/3/2021		<0.1	<0.1					
3/4/2021	0.076 (J)			0.83				
9/22/2021		0.054 (J)						
9/23/2021	0.073 (J)		<0.1	0.85				
2/1/2022	0.055 (J)	<0.1		0.95				
2/2/2022			<0.1					
8/23/2022			0.105	0.609	0.128	0.164		
8/24/2022	<0.1	0.194						
9/1/2022							0.14	1.43
1/24/2023	0.239							
1/25/2023		0.183	0.114	0.708		0.282		
1/26/2023					<0.1		1.93	<0.2

Constituent: Lead (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.002	BRGWA-2S (bg) <0.002	BRGWA-5I (bg) <0.002	BRGWA-5S (bg) <0.002	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.002	0.002	0.002	0.002	0.0001 (J)			
9/7/2016					0.000 (0)	<0.002	0.0002 (J)	
9/8/2016						10.002	0.0002 (0)	<0.002
11/15/2016				<0.002	<0.002			-0.002
11/16/2016	<0.002	<0.002	<0.002	10.002	10.002			
11/17/2016	-0.002	-0.002	-0.002			0.0001 (J)	0.0002 (J)	0.0001 (J)
2/20/2017			<0.002	0.0002 (J)	<0.002	0.0001 (3)	0.0002 (0)	0.0001 (0)
2/21/2017	<0.002	<0.002	10.002	0.0002 (0)	10.002			
2/21/2017	<b>~0.002</b>	<b>~0.002</b>				<0.002	0.0001 (J)	0.0003 (J)
6/12/2017	8E-05 (J)		<0.002	0.0001 (J)	8E-05 (J)	10.002	0.0001 (0)	0.0003 (3)
6/13/2017	0L-03 (0)	<0.002	10.002	0.0001 (0)	0L-03 (0)			
6/14/2017		10.002					9E-05 (J)	<0.002
6/15/2017						<0.002	02 00 (0)	0.002
9/26/2017	7E-05 (J)	7E-05 (J)	<0.002	0.0001 (J)	<0.002	0.002		
9/27/2017	, 2 00 (0)	, 2 00 (0)	0.002	0.000 . (0)	0.002		7E-05 (J)	9E-05 (J)
9/28/2017						<0.002	72 00 (0)	02 00 (0)
2/13/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
2/15/2018						<0.002	<0.002	<0.002
6/26/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
6/27/2018						<0.002	<0.002	<0.002
12/18/2018	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002
12/19/2018						<0.002		
8/27/2019	<0.002	5.8E-05 (J)	<0.002	0.00036 (J)	<0.002		0.00013 (J)	
8/28/2019						<0.002	0.00013 (J)	<0.002
10/15/2019	<0.002	<0.002	<0.002	7.9E-05 (J)	<0.002			
10/16/2019							8.8E-05 (J)	<0.002
12/3/2019						<0.002		
3/3/2020	<0.002	<0.002	<0.002	7.9E-05 (J)	7.3E-05 (J)	<0.002		
3/5/2020							8.7E-05 (J)	<0.002
8/18/2020	<0.002	<0.002	<0.002	0.0001 (J)	<0.002			
8/19/2020						<0.002	6E-05 (J)	<0.002
9/15/2020	<0.002	<0.002	0.0013 (J)	4.3E-05 (J)	<0.002			
9/16/2020						5.4E-05 (J)	6.3E-05 (J)	<0.002
3/1/2021	<0.002				<0.002			
3/2/2021		<0.002	3.7E-05 (J)	<0.002				
3/3/2021							5.8E-05 (J)	<0.002
3/4/2021						<0.002		
9/21/2021			<0.002	<0.002				
9/22/2021	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
2/1/2022	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
8/23/2022	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	
8/24/2022						<0.002		<0.002
1/24/2023	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Constituent: Lead (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	0.0001 (J)	<0.002		0.0004 (J)				
11/17/2016	0.0002 (J)							
11/18/2016		<0.002						
11/21/2016				0.0005 (J)				
2/22/2017	0.0001 (J)							
2/23/2017		<0.002	<0.002	0.0005 (J)				
4/17/2017			0.0001 (J)					
5/15/2017			<0.002					
6/15/2017	<0.002	<0.002	<0.002	0.0004 (J)				
9/28/2017	<0.002	<0.002	0.0001 (J)	0.0004 (J)				
2/15/2018	<0.002	<0.002	<0.002	0.00047 (J)				
6/27/2018	<0.002							
6/28/2018		<0.002	<0.002	0.00036 (J)				
12/19/2018	<0.002	<0.002	<0.002					
12/20/2018				0.00039 (J)				
1/15/2019					<0.002			
8/28/2019	<0.002	<0.002	<0.002					
8/29/2019				0.00035 (J)				
10/16/2019	<0.002		<0.002	0.00035 (J)				
10/22/2019					0.00035 (J)			
12/3/2019		<0.002						
3/5/2020	<0.002	<0.002	<0.002	0.00041 (J)				
8/19/2020	<0.002	4.7E-05 (J)	<0.002	0.00031 (J)				
9/16/2020	0.00012 (J)	<0.002	<0.002					
9/17/2020				0.00032 (J)				
3/3/2021		<0.002	<0.002					
3/4/2021	<0.002			0.00034 (J)				
9/22/2021		<0.002						
9/23/2021	<0.002		<0.002	<0.002				
2/1/2022	<0.002	<0.002	-0.000	<0.002				
2/2/2022			<0.002	-0.000	-0.000	-0.000		
8/23/2022	10.000	-0.000	<0.002	<0.002	<0.002	<0.002		
8/24/2022	<0.002	<0.002						±0.000
9/1/2022 1/24/2023	<0.002							<0.002
1/24/2023	~U.UUZ	<0.002	<0.002	<0.002		<0.002	<0.002	
1/25/2023		~U.UUZ	NO.002	~U.UUZ	<0.002	~U.UUZ	~U.UUZ	<0.002
1/20/2023					~0.002			~U.UUZ

Constituent: Lithium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0268 (J)	<0.01	<0.01	<0.01				
9/1/2016					0.003 (J)			
9/7/2016						<0.01	0.0092 (J)	
9/8/2016								<0.01
11/15/2016				<0.01	0.0033 (J)			
11/16/2016	0.0201 (J)	<0.01	0.0033 (J)					
11/17/2016						<0.01	0.0097 (J)	<0.01
2/20/2017			<0.01	<0.01	0.0025 (J)			
2/21/2017	0.0128 (J)	<0.01						
2/22/2017						<0.01	0.0106 (J)	<0.01
6/12/2017	0.0245 (J)		0.0019 (J)	<0.01	0.0027 (J)			
6/13/2017		<0.01						
6/14/2017							0.0097 (J)	<0.01
6/15/2017						<0.01		
9/26/2017	0.0549	<0.01	0.0022 (J)	<0.01	0.0023 (J)			
9/27/2017							0.0099 (J)	<0.01
9/28/2017						<0.01		
2/13/2018	0.0595	<0.01	0.0041 (J)	<0.01	0.0027 (J)			
2/15/2018						<0.01	0.0106 (J)	<0.01
6/26/2018	0.089	<0.01	0.0025 (J)	<0.01	0.0029 (J)			
6/27/2018						<0.01	0.01 (J)	<0.01
12/18/2018	0.024 (J)	<0.01	0.0032 (J)	<0.01	0.0026 (J)		0.011 (J)	<0.01
12/19/2018						<0.01		
8/27/2019	0.035	<0.01	0.0019 (J)	<0.01	0.0028 (J)		0.01 (J)	
8/28/2019						0.00097 (J)	0.01 (J)	0.0009 (J)
10/15/2019	0.028 (J)	<0.01	0.002 (J)	<0.01	0.0024 (J)			
10/16/2019							0.0098 (J)	0.00078 (J)
12/3/2019						0.001 (J)		
3/3/2020	0.055	<0.01	0.0013 (J)	<0.01	0.0026 (J)	<0.01		
3/5/2020							0.011 (J)	0.00089 (J)
8/18/2020	0.054	<0.01	0.00095 (J)	<0.01	0.0026 (J)			
8/19/2020						0.001 (J)	0.009 (J)	0.00082 (J)
9/15/2020	0.033	<0.01	0.001 (J)	<0.01	0.0027 (J)			
9/16/2020						0.00096 (J)	0.0089 (J)	<0.01
3/1/2021	0.027 (J)				0.0036 (J)			
3/2/2021		<0.01	0.00081 (J)	<0.01				
3/3/2021							0.0085 (J)	0.00096 (J)
3/4/2021						0.00086 (J)		
9/21/2021			0.0012 (J)	<0.01				
9/22/2021	0.021 (J)	<0.01			0.0035 (J)	0.0011 (J)	0.008 (J)	<0.01
2/1/2022	0.023 (J)	<0.01	0.0011 (J)	<0.01	0.0029 (J)	0.00096 (J)	0.0083 (J)	0.00085 (J)
8/23/2022	0.0262	<0.01	<0.01	<0.01	0.00314 (J)		0.0109	
8/24/2022						<0.01		<0.01
1/24/2023	0.00919 (J)	<0.01	<0.01	<0.01	0.00341 (J)	<0.01	0.0115	<0.01

Constituent: Lithium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	0.0021 (J)	0.0024 (J)		0.0193 (J)				
11/17/2016	0.0022 (J)							
11/18/2016		0.0026 (J)						
11/21/2016				0.0223 (J)				
2/22/2017	0.0023 (J)							
2/23/2017		0.0026 (J)	<0.01	0.0229 (J)				
4/17/2017			<0.01					
5/15/2017			<0.01					
6/15/2017	0.0023 (J)	0.0026 (J)	<0.01	0.0227 (J)				
9/28/2017	0.0021 (J)	0.0025 (J)	<0.01	0.023 (J)				
2/15/2018	0.0021 (J)	<0.01	<0.01	0.0254 (J)				
6/27/2018	0.0021 (J)	0.0000 ( 1)	.0.04	0.004 (1)				
6/28/2018		0.0022 (J)	<0.01	0.021 (J)				
12/19/2018	0.0021 (J)	0.0026 (J)	<0.01	0.000 (1)				
12/20/2018				0.022 (J)	0.0047 ( 1)			
1/15/2019	0.0001 (1)	0.0005 (1)	-0.01		0.0017 (J)			
8/28/2019	0.0021 (J)	0.0025 (J)	<0.01	0.001 (1)				
8/29/2019	0.0022 ( 1)		<0.01	0.021 (J)				
10/16/2019 10/22/2019	0.0022 (J)		<0.01	0.02 (J)	0.001 (J)			
12/3/2019		0.0024 (J)			0.001 (3)			
3/5/2020	0.0021 (J)	0.0024 (J) 0.0025 (J)	<0.01	0.021 (J)				
8/19/2020	0.0021 (J)	0.0023 (J) 0.0024 (J)	<0.01	0.021 (J)				
9/16/2020	0.002 f (3) 0.002 (J)	0.0024 (J)	<0.01	0.021 (3)				
9/17/2020	0.002 (0)	0.0022 (0)	-0.01	0.02 (J)				
3/3/2021		0.0024 (J)	<0.01	0.02 (0)				
3/4/2021	0.0021 (J)	0.0024 (0)	-0.01	0.021 (J)				
9/22/2021		0.0026 (J)						
9/23/2021	0.0022 (J)	(-)	<0.01	0.019 (J)				
2/1/2022	0.0021 (J)	0.0023 (J)		0.02 (J)				
2/2/2022		(-)	<0.01	(0)				
8/23/2022			<0.01	0.0214	<0.01	0.0171		
8/24/2022	<0.01	<0.01						
9/1/2022								0.00615 (J)
1/24/2023	<0.01							• •
1/25/2023		<0.01	<0.01	0.0256		0.0207	0.0165	
1/26/2023					<0.01			0.00381 (J)

Constituent: Mercury (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.0002	BRGWA-2S (bg) <0.0002	BRGWA-5I (bg) <0.0002	BRGWA-5S (bg) <0.0002	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	<b>~</b> 0.0002	<0.000Z	<0.000Z	<0.000Z	<0.0002			
9/7/2016					-0.000Z	<0.0002	<0.0002	
9/8/2016						-0.0002	-0.0002	<0.0002
11/15/2016				<0.0002	<0.0002			-0.0002
11/16/2016	<0.0002	<0.0002	<0.0002	0.0002	0.0002			
11/17/2016						<0.0002	<0.0002	<0.0002
2/20/2017			<0.0002	8E-05 (J)	<0.0002			
2/21/2017	<0.0002	<0.0002		,				
2/22/2017						<0.0002	<0.0002	<0.0002
6/12/2017	4E-05 (J)		<0.0002	<0.0002	<0.0002			
6/13/2017		<0.0002						
6/14/2017							7E-05 (J)	7E-05 (J)
6/15/2017						6E-05 (J)		
9/26/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
9/27/2017							4E-05 (J)	4E-05 (J)
9/28/2017						<0.0002		
2/13/2018	0.00021	0.00019 (J)	<0.0002	0.00013 (J)	<0.0002			
2/15/2018						<0.0002	<0.0002	<0.0002
6/26/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
6/27/2018						<0.0002	<0.0002	<0.0002
12/18/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
12/19/2018						<0.0002		
8/27/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	
8/28/2019						<0.0002	<0.0002	<0.0002
8/18/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
8/19/2020						8.4E-05 (J)	<0.0002	0.00012 (J)
9/15/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
9/16/2020						<0.0002	<0.0002	<0.0002
3/1/2021	<0.0002				<0.0002			
3/2/2021		<0.0002	<0.0002	<0.0002				
3/3/2021							<0.0002	<0.0002
3/4/2021			0.0004 (1)	0.0004 (1)		<0.0002		
9/21/2021	0.0001 / 1)	0.0001 (1)	0.0001 (J)	0.0001 (J)	0.0001 (1)	0.0001 (1)	0.00010 (1)	0.00045 (1)
9/22/2021	0.0001 (J)	0.0001 (J)	-0.0000	-0.0000	0.0001 (J)	0.0001 (J)	0.00012 (J)	0.00015 (J)
2/1/2022 8/23/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/23/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/24/2023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/24/2023	~0.000Z	~0.000Z	-0.000Z	~0.000Z	~0.000Z	~0.000Z	~0.000Z	-0.0002

Constituent: Mercury (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.0002	<0.0002		7E-05 (J)				
11/17/2016	<0.0002							
11/18/2016		<0.0002						
11/21/2016				0.00012 (J)				
2/22/2017	<0.0002							
2/23/2017		<0.0002	<0.0002	7E-05 (J)				
4/17/2017			<0.0002					
5/15/2017			<0.0002					
6/15/2017	7E-05 (J)	7E-05 (J)	6E-05 (J)	0.00016 (J)				
9/28/2017	<0.0002	<0.0002	<0.0002	0.00011 (J)				
2/15/2018	<0.0002	<0.0002	<0.0002	0.00015 (J)				
6/27/2018	<0.0002							
6/28/2018		<0.0002	<0.0002	<0.0002 (X)				
12/19/2018	<0.0002	<0.0002	<0.0002					
12/20/2018				0.00017 (J)				
1/15/2019					<0.0002			
8/28/2019	<0.0002	<0.0002	<0.0002					
8/29/2019				0.00018 (J)				
8/19/2020	0.00013 (J)	0.00013 (J)	0.00014 (J)	0.00018 (J)				
9/16/2020	<0.0002	<0.0002	<0.0002					
9/17/2020				0.00011 (J)				
3/3/2021		<0.0002	<0.0002					
3/4/2021	<0.0002			8.5E-05 (J)				
9/22/2021		0.0001 (J)						
9/23/2021	0.00011 (J)		0.00011 (J)	0.00022				
2/1/2022	<0.0002	<0.0002		<0.0002				
2/2/2022			<0.0002					
8/23/2022			<0.0002	0.000117 (J)	<0.0002	<0.0002		
8/24/2022	<0.0002	<0.0002						
9/1/2022								<0.0002
1/24/2023	<0.0002							
1/25/2023		<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	
1/26/2023					<0.0002			<0.0002

Constituent: Molybdenum (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	0.0021 (J)	<0.001	0.004 (J)	<0.001				
9/1/2016					<0.001			
9/7/2016						<0.001	<0.001	
9/8/2016								<0.001
11/15/2016				<0.001	<0.001			
11/16/2016	<0.01	<0.001	0.0038 (J)					
11/17/2016						<0.001	<0.001	<0.001
2/20/2017			0.0055 (J)	<0.001	<0.001			
2/21/2017	0.0021 (J)	<0.001						
2/22/2017						<0.001	<0.001	<0.001
6/12/2017	0.0021 (J)		0.005 (J)	<0.001	<0.001			
6/13/2017		<0.001						
6/14/2017							<0.001	<0.001
6/15/2017						<0.001		
9/26/2017	0.0011 (J)	<0.001	0.0053 (J)	<0.001	<0.001			
9/27/2017							<0.001	<0.001
9/28/2017						<0.001		
2/13/2018	0.0019 (J)	<0.001	0.008 (J)	<0.001	<0.001			
2/15/2018						<0.001	<0.001	<0.001
6/26/2018	<0.01	<0.001	0.0041 (J)	<0.001	<0.001			
6/27/2018						<0.001	<0.001	<0.001
12/18/2018	<0.01	<0.001	0.0048 (J)	<0.001	<0.001		<0.001	<0.001
12/19/2018						<0.001		
8/27/2019	<0.01	<0.001	0.0028 (J)	<0.001	<0.001		<0.001	
8/28/2019						<0.001	<0.001	<0.001
10/15/2019	<0.01	<0.001	0.0035 (J)	<0.001	<0.001			
10/16/2019							<0.001	<0.001
12/3/2019						<0.001		
3/3/2020	<0.01	<0.001	0.0023 (J)	<0.001	<0.001	<0.001		
3/5/2020							<0.001	<0.001
8/18/2020	0.0011 (J)	<0.001	0.0015 (J)	<0.001	<0.001			
8/19/2020						<0.001	<0.001	<0.001
9/15/2020	0.0007 (J)	<0.001	0.0015 (J)	<0.001	<0.001			
9/16/2020						<0.001	<0.001	<0.001
3/1/2021	<0.01				<0.001			
3/2/2021		<0.001	0.0015 (J)	<0.001				
3/3/2021							<0.001	<0.001
3/4/2021						<0.001		
9/21/2021			0.002 (J)	<0.001				
9/22/2021	0.0012 (J)	<0.001			<0.001	<0.001	<0.001	<0.001
2/1/2022	0.0013 (J)	<0.001	0.002 (J)	<0.001	<0.001	<0.001	<0.001	<0.001
8/23/2022	0.0024	<0.001	0.00151	<0.001	<0.001		<0.001	
8/24/2022						<0.001		<0.001
1/24/2023	0.000601 (J)	<0.001	0.00192	<0.001	<0.001	<0.001	<0.001	<0.001

Constituent: Molybdenum (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.001	<0.001		<0.001				
11/17/2016	<0.001							
11/18/2016		<0.001						
11/21/2016				<0.001				
2/22/2017	<0.001							
2/23/2017		<0.001	<0.001	<0.001				
4/17/2017			<0.001					
5/15/2017			<0.001					
6/15/2017	<0.001	<0.001	<0.001	<0.001				
9/28/2017	<0.001	<0.001	<0.001	<0.001				
2/15/2018	<0.001	<0.001	<0.001	<0.001				
6/27/2018	<0.001							
6/28/2018		<0.001	<0.001	<0.001				
12/19/2018	<0.001	<0.001	<0.001					
12/20/2018				<0.001				
1/15/2019					<0.001			
8/28/2019	<0.001	<0.001	<0.001					
8/29/2019				<0.001				
10/16/2019	<0.001		<0.001	<0.001				
10/22/2019					<0.001			
12/3/2019		<0.001						
3/5/2020	<0.001	<0.001	<0.001	<0.001				
8/19/2020	<0.001	<0.001	<0.001	<0.001				
9/16/2020	<0.001	<0.001	<0.001					
9/17/2020				<0.001				
3/3/2021		<0.001	<0.001					
3/4/2021	<0.001			<0.001				
9/22/2021		<0.001						
9/23/2021	<0.001		<0.001	<0.001				
2/1/2022	<0.001	<0.001		<0.001				
2/2/2022			<0.001					
8/23/2022			<0.001	<0.001	<0.001	0.00265		
8/24/2022	<0.001	<0.001						
9/1/2022								0.00142
1/24/2023	<0.001							
1/25/2023		<0.001	<0.001	<0.001		0.00234	0.0222	
1/26/2023					<0.001			<0.001

Constituent: pH, Field (S.U.) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 7.16	BRGWA-2S (bg)	BRGWA-5I (bg) 6.53	BRGWA-5S (bg) 6.59	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	7.10	0.2	0.55	0.59	6.49			
					0.49	6 26	4.02	
9/7/2016						6.36	4.92	E 0.4
9/8/2016				0.07	0.50			5.84
11/15/2016	0.00	0.10	C 4	6.67	6.59			
11/16/2016	6.96	6.12	6.4			0.00	4.00	5.04
11/17/2016			0.44	0.05	0.04	6.28	4.82	5.81
2/20/2017	7.45	0.04	6.44	6.65	6.61			
2/21/2017	7.15	6.24				0.4	1.00	5.05
2/22/2017	7.04		0.4	0.04		6.4	4.86	5.85
6/12/2017	7.31		6.4	6.64				
6/13/2017		6.19						
6/14/2017							4.86	5.87
9/26/2017	7.02	6.15	6.31	6.58	6.47			
9/27/2017							4.78	5.74
9/28/2017						6.35		
2/13/2018	7.44	6.18	6.62	6.72	6.54			
2/15/2018						6.35	4.84	5.93
6/26/2018	6.93	6.05	6.29	6.43	6.23			
6/27/2018						6.35	4.73	5.68
12/18/2018	6.76	5.92	6.57	6.7	6.71		4.84	5.97
12/19/2018						6.56		
3/19/2019	6.87	6.18	6.45	6.63	6.18	6.43		
3/20/2019							4.77	5.84
8/27/2019	6.79	6.09	6.37	6.49	6.35		4.78	
8/28/2019						6.25	5.52	5.8
10/15/2019	6.57	6.06	6.77	7.01	6.36			
10/16/2019							4.78	5.85
10/17/2019						6.3		
3/3/2020	6.71	6.1	6.29	6.49	6.59	6.34		
3/5/2020							4.82	5.89
8/18/2020	6.59	6.06	6.29	6.41	6.33			
8/19/2020						6.24	4.78	5.78
9/15/2020	6.64	6.01	6.27	6.25	6.43			
9/16/2020						6.26	4.78	5.81
3/1/2021	6.66				6.7			
3/2/2021		6.2	6.47	6.42				
3/3/2021							4.83	5.88
3/4/2021						6.45		
9/21/2021			6.32	6.36				
9/22/2021	6.78	6.06			6.48	6.22	4.81	5.93
2/1/2022	6.83	5.95	6.38	6.39	6.54	6.39	4.82	5.87
8/23/2022	6.67	5.95	6.24	6.36	6.51		4.67	
8/24/2022						6.62		5.75
1/24/2023	6.7	5.26	6.42	6.47	6.54	6.37	4.79	5.93

Constituent: pH, Field (S.U.) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	6.1	5.59		5.43				
9/23/2016				5.46				
9/26/2016					5.68			
11/17/2016	6.04							
11/18/2016		5.51						
11/21/2016				4.84				
2/22/2017	6.08							
2/23/2017		5.65	5.57	4.73				
9/28/2017	6.03	5.62	5.76	4.37				
2/15/2018	6.02	5.66	5.95	4.3				
6/27/2018	6.01							
6/28/2018		5.57	5.78	4.16				
12/19/2018	6.22	5.76	6.07					
12/20/2018				4.21				
1/15/2019					5.52			
3/19/2019		5.72						
3/20/2019	6.06		5.93	4.34				
8/28/2019	5.95	5.52	5.8					
8/29/2019				4.01				
10/16/2019	6.03		5.81	4.21				
10/17/2019		5.61						
10/22/2019					5.49			
3/5/2020	6.04	5.39	5.53	4.01				
				4.12				
9/16/2020	5.96	5.58	5.84					
9/17/2020				4.17				
		5.86	5.87					
	6.14			4.19				
		5.53						
9/23/2021	6.08		5.85	4.05				
	6.09	5.65		4.06				
2/2/2022								
8/23/2022			5.82	3.97	5.46	7.18		
8/24/2022	6.05	5.59						
1/24/2023	6.08							
1/25/2023		5.64	5.84	4.75		7.1	7.14	
1/26/2023					5.56		7.14	5.6
	9/23/2016 9/26/2016 11/17/2016 11/18/2016 11/18/2016 11/18/2017 2/23/2017 9/28/2017 2/15/2018 6/27/2018 6/28/2018 12/19/2018 12/19/2018 12/19/2018 12/20/2019 3/19/2019 3/20/2019 8/28/2019 10/16/2019 10/17/2019 10/17/2019 10/22/2019 10/17/2020 9/16/2020 9/16/2020 9/17/2020 3/3/2021 3/4/2021 9/22/2021 9/23/2021 2/1/2022 8/23/2022 8/24/2022 1/24/2023 1/25/2023	9/7/2016 6.1 9/23/2016 9/26/2016 11/17/2016 6.04 11/18/2016 11/21/2017 6.08 2/23/2017 9.28/2017 6.03 2/15/2018 6.02 6/27/2018 6.01 6/28/2018 12/19/2018 6.22 12/20/2018 1/15/2019 3/19/2019 3/20/2019 6.06 8/28/2019 5.95 8/29/2019 10/16/2019 6.03 10/17/2019 3/5/2020 6.04 8/19/2020 5.97 9/16/2020 5.96 9/17/2020 3/3/2021 6.14 9/22/2021 9/23/2021 6.08 2/1/2022 8/23/2022 8/23/2022 8/24/2022 8/24/2022 8/24/2023 6.08 1/25/2023	9/7/2016 6.1 5.59 9/23/2016 9/26/2016 11/17/2016 6.04 11/18/2016 5.51 11/21/2016 2/22/2017 6.08 2/23/2017 5.65 9/28/2017 6.03 5.62 2/15/2018 6.02 5.66 6/27/2018 6.01 6/28/2018 5.57 12/19/2018 6.22 5.76 12/20/2018 1/15/2019 5.72 3/20/2019 6.06 8/28/2019 5.95 5.52 8/29/2019 10/16/2019 6.03 10/17/2019 5.61 10/22/2019 3/5/2020 6.04 5.39 8/19/2020 5.96 5.58 9/17/2020 3/3/2021 5.86 9/17/2020 3/3/2021 6.08 2/1/2022 6.09 5.65 2/2/2022 8/23/2022 8/24/2022 6.05 5.59 1/24/2023 6.08 1/25/2023 5.64	9/7/2016       6.1       5.59         9/23/2016       9/23/2016         9/26/2016       11/17/2016       6.04         11/17/2016       6.04       11/18/2016         11/21/2016       5.51       11/21/2016         2/22/2017       6.08       2/23/2017         9/28/2017       6.03       5.62       5.76         9/28/2018       6.02       5.66       5.95         6/27/2018       6.01       6.02       5.66       5.95         6/28/2018       5.57       5.78       5.78       12/19/2018       6.02       5.76       6.07         12/20/2018       6.22       5.76       6.07       6.07       12/20/2018       6.07       12/20/2018       6.07       12/20/2018       5.72       3/20/2019       5.72       3/20/2019       5.93       5.83       8       8/28/2019       5.95       5.52       5.8       8       8/28/2019       5.95       5.52       5.8       8       8/29/2019       10/16/2019       6.03       5.61       5.81       10/17/2019       5.61       10/22/2019       5.61       10/22/2019       5.53       5.66       5.87       9/16/2020       5.96       5.53       5.84       9/17/2020       5.86	97/2016       6.1       5.59       5.43         9/23/2016       5.46       5.46         9/26/2016       5.46       5.46         11/17/2016       6.04       6.04         11/18/2016       5.51       4.84         2/22/2017       6.08       4.84         2/23/2017       6.03       5.62       5.76       4.37         2/25/2018       6.02       5.66       5.95       4.3         6/27/2018       6.01       6.07       4.21         6/28/2018       5.57       5.78       4.16         12/19/2018       6.22       5.76       6.07         12/20/2018       6.02       5.72       5.78       4.16         11/5/2019       5.72       5.72       4.21         3/19/2019       5.57       5.8       4.34         8/28/2019       5.95       5.52       5.8         8/29/2019       6.06       5.95       5.81       4.21         10/16/2019       6.03       6.3       4.01       4.01         10/12/2019       5.61       4.01       4.01       4.01         10/17/2019       5.97       5.53       5.66       4.12 <td< td=""><td>9/7/2016         6.1         5.59         5.43           9/23/2016         5.46         5.68           9/26/2016         5.68         5.68           11/17/2016         6.04         5.51           11/12/12016         4.84         6.02           2/23/2017         6.08         7.73         7.73           2/23/2017         6.03         5.62         5.76         4.73           9/28/2017         6.03         5.62         5.76         4.37           2/15/2018         6.02         5.66         5.95         4.37           2/15/2018         6.02         5.76         6.07         4.16           1/21/9/2018         6.22         5.76         6.07         4.21           1/15/2019         5.72         5.72         4.21           1/15/2019         5.95         5.52         5.8           8/29/2019         6.06         5.93         4.34           8/29/2019         5.95         5.52         5.8           8/29/2019         6.03         5.61         4.21           10/17/2019         6.03         5.61         4.21           10/12/2019         6.03         5.53         4.01</td><td>9/7/2016         6.1         5.99         4.3         4.4         4</td><td>9/72016   6.1   5.59   5.46   5.46   5.68   5.69   5.68   5.69  </td></td<>	9/7/2016         6.1         5.59         5.43           9/23/2016         5.46         5.68           9/26/2016         5.68         5.68           11/17/2016         6.04         5.51           11/12/12016         4.84         6.02           2/23/2017         6.08         7.73         7.73           2/23/2017         6.03         5.62         5.76         4.73           9/28/2017         6.03         5.62         5.76         4.37           2/15/2018         6.02         5.66         5.95         4.37           2/15/2018         6.02         5.76         6.07         4.16           1/21/9/2018         6.22         5.76         6.07         4.21           1/15/2019         5.72         5.72         4.21           1/15/2019         5.95         5.52         5.8           8/29/2019         6.06         5.93         4.34           8/29/2019         5.95         5.52         5.8           8/29/2019         6.03         5.61         4.21           10/17/2019         6.03         5.61         4.21           10/12/2019         6.03         5.53         4.01	9/7/2016         6.1         5.99         4.3         4.4         4	9/72016   6.1   5.59   5.46   5.46   5.68   5.69   5.68   5.69

Constituent: Selenium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

9/21/2016	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016 9/1/2016	<0.005	<0.005	<0.005	<0.005	<0.005			
9/7/2016					<0.005	0.0024 (1)	0.002271	
						0.0024 (J)	0.0032 (J)	<0.00E
9/8/2016				10.005	10.005			<0.005
11/15/2016	-0.005	-0.005	-0.005	<0.005	<0.005			
11/16/2016	<0.005	<0.005	<0.005			0.0000 (1)	0.0000 (1)	0.005
11/17/2016				.0.005	.0.005	0.0028 (J)	0.0028 (J)	<0.005
2/20/2017			<0.005	<0.005	<0.005			
2/21/2017	<0.005	<0.005				0.0040 (1)	0.0040 (1)	0.005
2/22/2017						0.0018 (J)	0.0018 (J)	<0.005
6/12/2017	<0.005		<0.005	<0.005	<0.005			
6/13/2017		<0.005						
6/14/2017							0.004 (J)	<0.005
6/15/2017						0.0024 (J)		
9/26/2017	<0.005	<0.005	<0.005	<0.005	<0.005			
9/27/2017							0.0036 (J)	<0.005
9/28/2017						<0.005		
2/13/2018	<0.005	<0.005	<0.005	<0.005	<0.005			
2/15/2018						<0.005	<0.005	<0.005
6/26/2018	<0.005	<0.005	<0.005	<0.005	<0.005			
6/27/2018						0.002 (J)	0.0017 (J)	<0.005
12/18/2018	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
12/19/2018						0.0014 (J)		
8/27/2019	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	
8/28/2019						0.003 (J)	<0.005	<0.005
10/15/2019	<0.005	<0.005	<0.005	<0.005	<0.005			
10/16/2019							0.0028 (J)	<0.005
12/3/2019						0.0041 (J)		
3/3/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.0019 (J)		
3/5/2020							<0.005	<0.005
8/18/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
8/19/2020						0.003 (J)	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005	<0.005	<0.005			
9/16/2020						<0.005	0.0028 (J)	<0.005
3/1/2021	<0.005				<0.005			
3/2/2021		<0.005	<0.005	<0.005				
3/3/2021							<0.005	<0.005
3/4/2021						<0.005		
9/21/2021			<0.005	<0.005				
9/22/2021	<0.005	<0.005			<0.005	0.0015 (J)	<0.005	<0.005
2/1/2022	<0.005	<0.005	<0.005	<0.005	<0.005	0.0021 (J)	<0.005	<0.005
8/23/2022	<0.005	<0.005	<0.005	<0.005	<0.005		0.0061	
8/24/2022						0.00208 (J)		<0.005
1/24/2023	<0.005	<0.005	<0.005	<0.005	<0.005	0.00178 (J)	0.0049 (J)	<0.005

Constituent: Selenium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.005	0.0079 (J)		0.0311				
11/17/2016	<0.005							
11/18/2016		0.0082 (J)						
11/21/2016				0.0409				
2/22/2017	<0.005							
2/23/2017		0.0061 (J)	<0.005	0.0354				
4/17/2017			<0.005					
5/15/2017			<0.005					
6/15/2017	<0.005	0.0046 (J)	<0.005	0.0511				
9/28/2017	<0.005	0.0042 (J)	<0.005	0.0484				
2/15/2018	<0.005	0.0045 (J)	<0.005	0.0435				
6/27/2018	<0.005							
6/28/2018		0.0033 (J)	<0.005	0.037				
12/19/2018	<0.005	0.0042 (J)	<0.005					
12/20/2018				0.037				
1/15/2019					0.0033 (J)			
8/28/2019	<0.005	0.0041 (J)	<0.005					
8/29/2019				0.036				
10/16/2019	<0.005		<0.005	0.033				
10/22/2019					0.0033 (J)			
12/3/2019		0.0035 (J)						
3/5/2020	<0.005	0.0034 (J)	<0.005	0.032				
8/19/2020	<0.005	0.002 (J)	<0.005	0.041				
9/16/2020	<0.005	0.0031 (J)	<0.005					
9/17/2020				0.029				
3/3/2021		0.0024 (J)	<0.005					
3/4/2021	<0.005			0.039				
9/22/2021		0.0032 (J)						
9/23/2021	<0.005		<0.005	0.031				
2/1/2022	<0.005	0.0025 (J)		0.029				
2/2/2022			<0.005	0.0000	0.00457 (1)	-0.005		
8/23/2022	-0.005	0.00046 (1)	<0.005	0.0296	0.00157 (J)	<0.005		
8/24/2022	<0.005	0.00246 (J)						0.00635
9/1/2022 1/24/2023	<0.005							0.00625
1/24/2023	~U.UU3	0.00237 (J)	<0.005	0.0279		<0.005	<0.005	
		0.00237 (J)	~U.UU3	0.02/3	0.00215 (1)	~0.000	<b>~0.00</b> 5	0.00921
1/26/2023					0.00215 (J)			0.00321

Constituent: Sulfate (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) 7.5	BRGWA-2S (bg) 0.38 (J)	BRGWA-5I (bg) 2.7	BRGWA-5S (bg) 0.81 (J)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	7.5	0.36 (3)	2.7	0.81 (J)	0.6 (1)			
9/7/2016					0.6 (J)	97	260	
9/8/2016						97	200	420
11/15/2016				<1 (J)	0.68 (J)			420
11/16/2016	6.6	<1 (J)	3.4	~1 (3)	0.08 (3)			
11/17/2016	0.0	11 (0)	5.4			120 (D)	235 (D)	445 (D)
2/20/2017			3.9 (B-01)	1 (B-01)	0.98 (J)	120 (D)	200 (D)	445 (D)
2/21/2017	6.1	1.5	3.3 (B-01)	1 (B-01)	0.50 (5)			
2/22/2017	0.1	1.5				120	210	410
6/12/2017	5		3.7	0.94 (J)	0.54 (J)	.20	2.0	
6/13/2017	Ü	0.67 (J)	0.7	0.0 1 (0)	0.0 . (0)			
6/14/2017		0.07 (0)					200	410
6/15/2017						130		
9/26/2017	5.4	0.62 (J)	4.1	0.92 (J)	0.53 (J)			
9/27/2017		(0)		(5)	(-)		200	360
9/28/2017						120		
2/13/2018	4.7 (J)	<1	6.6	<1	<1			
2/15/2018	. ,					109	197	335
6/26/2018	6.2	0.69 (J)	3.5	0.91 (J)	0.54 (J)			
6/27/2018						118	200	296
12/18/2018	5.9	0.72 (J)	4.3	0.68 (J)	0.39 (J)		222	345
12/19/2018						125		
3/19/2019	6 (D)	0.78 (J)	3	0.74 (J)	0.68 (J)	126		
3/20/2019							204	329
10/15/2019	5.2	0.47 (J)	3.8	0.68 (J)	0.48 (J)			
10/16/2019							226	325
12/3/2019						180		
3/3/2020	7.1	0.93 (J)	2.8	0.71 (J)	2.5	95.4		
3/5/2020							173	287
9/15/2020	5.9	<1	1.7	<1	<1			
9/16/2020						151	154	283
3/1/2021	4.7				0.74 (J)			
3/2/2021		<1	2.2	<1				
3/3/2021							133	277
3/4/2021						122		
9/21/2021			2.3	<1				
9/22/2021	5.2	<1			<1	123	94.6	232
2/1/2022	5.4	<1	2	<1	<1	139	99.7	243
8/23/2022	5.66	0.452	2.21	0.521	0.479		385	
8/24/2022						157		268
1/24/2023	3.58	0.465	3.34	0.66	0.484	153	375	267

Constituent: Sulfate (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	260	300		440				
11/17/2016	285 (D)							
11/18/2016		245 (D)						
11/21/2016				490 (D)				
2/22/2017	270							
2/23/2017		330	0.55 (J)	470				
4/17/2017			0.44 (J)					
5/15/2017			0.45 (J)					
6/15/2017	280	310	0.46 (J)	490				
9/28/2017	240	290	0.49 (J)	470				
2/15/2018	266	292	1.9 (o)	432				
6/27/2018	278							
6/28/2018		284	0.24 (J)	453				
12/19/2018	287	319	0.4 (J)					
12/20/2018				463				
1/15/2019					152			
3/19/2019		307						
3/20/2019	268		<1 (X)	405				
10/16/2019	277		0.29 (J)	432				
10/22/2019					93.2			
12/3/2019		256						
3/5/2020	269	262	<1	370				
9/16/2020	270	256	<1					
9/17/2020				356				
3/3/2021		252	<1					
3/4/2021	251			325				
9/22/2021		234						
9/23/2021	258		<1	318				
2/1/2022	256	195		287				
2/2/2022			<1					
8/23/2022			0.307 (J)	389	51	348		
8/24/2022	279	224						
9/1/2022							340	172
1/24/2023	334							
1/25/2023		237	0.325 (J)	291		285		
1/26/2023					75.3		142	147

Constituent: Thallium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

8/31/2016	BRGWA-2I (bg) <0.002	BRGWA-2S (bg) <0.002	BRGWA-5I (bg) <0.002	BRGWA-5S (bg) <0.002	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
9/1/2016	0.002	0.002	0.002	0.002	<0.002			
9/7/2016						<0.002	0.0002 (J)	
9/8/2016							(-)	<0.002
11/15/2016				<0.002	<0.002			
11/16/2016	<0.002	<0.002	<0.002					
11/17/2016						<0.002	0.0002 (J)	<0.002
2/20/2017			<0.002	<0.002	<0.002		. ,	
2/21/2017	<0.002	<0.002						
2/22/2017						<0.002	0.0002 (J)	<0.002
6/12/2017	<0.002		<0.002	<0.002	<0.002			
6/13/2017		<0.002						
6/14/2017							0.0002 (J)	<0.002
6/15/2017						<0.002		
9/26/2017	<0.002	<0.002	<0.002	<0.002	<0.002			
9/27/2017							0.0002 (J)	<0.002
9/28/2017						<0.002		
2/13/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
2/15/2018						<0.002	0.00024 (J)	<0.002
6/26/2018	<0.002	<0.002	<0.002	<0.002	<0.002			
6/27/2018						<0.002	0.00022 (J)	<0.002
12/18/2018	<0.002	<0.002	<0.002	<0.002	<0.002		0.00022 (J)	<0.002
12/19/2018						<0.002		
8/27/2019	<0.002	<0.002	<0.002	<0.002	<0.002		0.00016 (J)	
8/28/2019						<0.002	0.00016 (J)	<0.002
10/15/2019	<0.002	<0.002	<0.002	<0.002	<0.002			
10/16/2019							0.00019 (J)	<0.002
12/3/2019						6.6E-05 (J)		
3/3/2020	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
3/5/2020							0.0002 (J)	<0.002
8/18/2020	<0.002	<0.002	<0.002	<0.002	<0.002			
8/19/2020						<0.002	0.00018 (J)	<0.002
9/15/2020	<0.002	<0.002	<0.002	<0.002	<0.002			
9/16/2020						<0.002	0.00018 (J)	<0.002
3/1/2021	<0.002				<0.002			
3/2/2021		<0.002	<0.002	<0.002				
3/3/2021							0.00018 (J)	<0.002
3/4/2021						<0.002		
9/21/2021			<0.002	<0.002				
9/22/2021	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
2/1/2022	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
8/23/2022	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	
8/24/2022						<0.002		<0.002
1/24/2023	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Constituent: Thallium (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	<0.002	<0.002		<0.002				
11/17/2016	<0.002							
11/18/2016		<0.002						
11/21/2016				0.0004 (J)				
2/22/2017	<0.002							
2/23/2017		<0.002	<0.002	0.0003 (J)				
4/17/2017			<0.002					
5/15/2017			<0.002					
6/15/2017	<0.002	<0.002	<0.002	0.0003 (J)				
9/28/2017	<0.002	<0.002	<0.002	0.0003 (J)				
2/15/2018	<0.002	<0.002	<0.002	0.00026 (J)				
6/27/2018	<0.002							
6/28/2018		<0.002	<0.002	0.00018 (J)				
12/19/2018	<0.002	<0.002	<0.002					
12/20/2018				<0.002 (X)				
1/15/2019					<0.002			
8/28/2019	<0.002	<0.002	<0.002					
8/29/2019				0.00021 (J)				
10/16/2019	<0.002		<0.002	0.0002 (J)				
10/22/2019					<0.002			
12/3/2019		<0.002						
3/5/2020	<0.002	<0.002	<0.002	0.0002 (J)				
8/19/2020	<0.002	<0.002	<0.002	0.00019 (J)				
9/16/2020	<0.002	<0.002	<0.002					
9/17/2020				0.00017 (J)				
3/3/2021		<0.002	<0.002					
3/4/2021	<0.002			<0.002				
9/22/2021		<0.002						
9/23/2021	<0.002		<0.002	0.00022 (J)				
2/1/2022	<0.002	<0.002		<0.002				
2/2/2022			<0.002					
8/23/2022			<0.002	<0.002	<0.002	<0.002		
8/24/2022	<0.002	<0.002						
9/1/2022								<0.002
1/24/2023	<0.002							
1/25/2023		<0.002	<0.002	<0.002		<0.002	<0.002	
1/26/2023					<0.002			<0.002

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

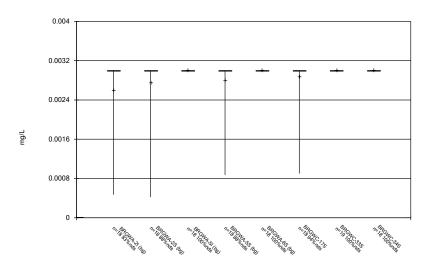
Brank									
91/2016						BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
\$Property of the content of		151	88	138	154				
1						299			
11115/2016							331	382	
11/16/2016   69									663
11/17/2016					123	41			
2/20/2017		69	41	77					
							308	382	651
2/22/2017				170	158	133			
6/12/2017   161		68	<25						
							341	387	706
6/14/2017		161		132	142	61			
6/15/2017			53						
9/26/2017								316	643
9/27/2017							333		
9/28/2017		167	45	108	138	29			
2/13/2018								303	579
2/15/2018							310		
6/26/2018		165	63	141	150	61			
6/27/2018							292	332	612
12/18/2018       145 (X)       78 (X)       138 (X)       147       70 (X)       358       535         12/19/2018       3/19/2019       146.5 (D)       68       130       146       72       303		188	71	133	154	71			
12/19/2018							353 (X)		
3/19/2019		145 (X)	78 (X)	138 (X)	147	70 (X)		358	535
3/20/2019									
10/15/2019		146.5 (D)	68	130	146	72	303		
10/16/2019								338	517
12/3/2019       378         3/3/2020       155       41       <10		140	66	175	144	63			
3/3/2020       155       41       <10								281	473
3/5/2020       116       69       100       116       79         9/15/2020       116       69       100       116       79         9/16/2020       316       88       392         3/1/2021       98       39       39         3/2/2021       43       80       96       422         3/4/2021       42       42         3/4/2021       108       104       104         9/22/2021       129       66       62       323       190       406         2/1/2022       126       72       129       124       61       354       209       449         8/23/2022       117       45       107       101       52       614       52         8/24/2022       452       452       452       452									
9/15/2020       116       69       100       116       79         9/16/2020       316       88       392         3/1/2021       98       39       39         3/2/2021       43       80       96         3/3/2021       100       100       100         9/21/2021       100       100       100         9/21/2021       129       124       61       354       209       449         8/23/2022       117       45       107       101       52       614       614         8/24/2022       120       120       100       100       100       100       452		155	41	<10	130	54	263		
9/16/2020       316       88       392         3/1/2021       98       39       39         3/2/2021       43       80       96       212       422         3/4/2021       108       104       104       104       104       104       104       104       104       104       104       104       105       105       107       101       52       106       104       104       105       105       105       107       101       52       106       104       105       105       105       105       105       107       101       52       107       614       107       101       52       107       101								292	489
3/1/2021       98         3/2/2021       43       80       96         3/3/2021       100       104         9/21/2021       129       124       61       354       209       449         8/23/2022       117       45       107       101       52       614       614         8/24/2022       120       120       101       101       102       101       102       103       104		116	69	100	116	79			
3/2/2021       43       80       96         3/3/2021       212       422         3/4/2021       316         9/21/2021       108       104         9/22/2021       129       66       62       323       190       406         2/1/2022       126       72       129       124       61       354       209       449         8/23/2022       117       45       107       101       52       614       614         8/24/2022       370       452       452       452							316	88	392
3/3/2021       212       422         3/4/2021       108       104         9/21/2021       129       66       62       323       190       406         2/1/2022       126       72       129       124       61       354       209       449         8/23/2022       117       45       107       101       52       614       614         8/24/2022       370       452       452       452		98				39			
3/4/2021     108     104       9/21/2021     129     66     62     323     190     406       2/1/2022     126     72     129     124     61     354     209     449       8/23/2022     117     45     107     101     52     614       8/24/2022     370     452			43	80	96				
9/21/2021     129     66     62     323     190     406       2/1/2022     126     72     129     124     61     354     209     449       8/23/2022     117     45     107     101     52     614       8/24/2022     370     452								212	422
9/22/2021     129     66     62     323     190     406       2/1/2022     126     72     129     124     61     354     209     449       8/23/2022     117     45     107     101     52     614       8/24/2022     370     452							316		
2/1/2022     126     72     129     124     61     354     209     449       8/23/2022     117     45     107     101     52     614       8/24/2022     370     452				108	104				
8/23/2022     117     45     107     101     52     614       8/24/2022     370     452									
8/24/2022 370 452							354		449
		117	45	107	101	52		614	
1/24/2023 93 63 124 104 64 344 615 433									
	1/24/2023	93	63	124	104	64	344	615	433

Constituent: Total Dissolved Solids (mg/L) Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-53D	PZ-52D	PZ-70I
9/7/2016	486	528		750				
11/17/2016	453							
11/18/2016		524						
11/21/2016				795				
2/22/2017	541							
2/23/2017		517	45	733				
4/17/2017			53					
5/15/2017			48					
6/15/2017	548	566	63	812				
9/28/2017	487	475	39	690				
2/15/2018	500	513	54	722				
6/27/2018	347 (X)							
6/28/2018		499	59 (X)	704				
12/19/2018	489	521	68					
12/20/2018				642				
1/15/2019					284			
3/19/2019		498						
3/20/2019	501		68 (X)	615				
10/16/2019	481		49	630				
10/22/2019					203			
12/3/2019		498						
3/5/2020	535	457	39	608				
9/16/2020	474	463	31					
9/17/2020				587				
3/3/2021		442	33					
3/4/2021	480			540				
9/22/2021		457						
9/23/2021	511		49	528				
2/1/2022	521	441		560				
2/2/2022			46					
8/23/2022			40	568	130	543		
8/24/2022	507	418						
9/1/2022							754	321
1/24/2023	507							
1/25/2023		418	28	484		517	443	
1/26/2023					148			272

# FIGURE B.

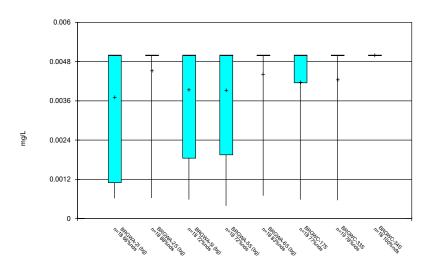
## Box & Whiskers Plot



Constituent: Antimony Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

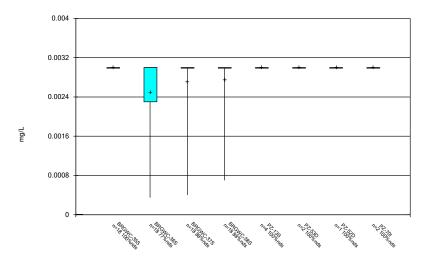
### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Arsenic Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

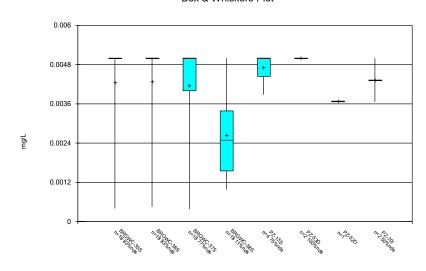
Box & Whiskers Plot



Constituent: Antimony Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

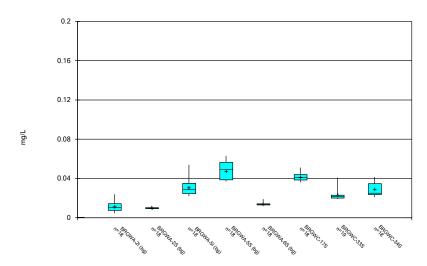
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Arsenic Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

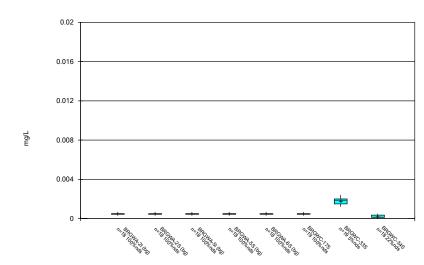
Box & Whiskers Plot



Constituent: Barium Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

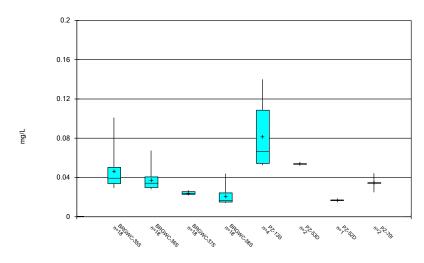
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Beryllium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

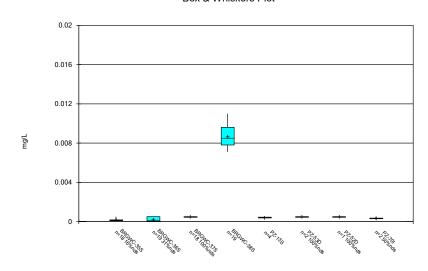
Box & Whiskers Plot



Constituent: Barium Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

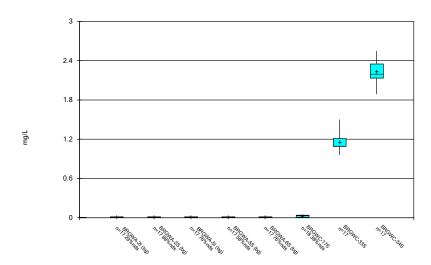
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Beryllium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

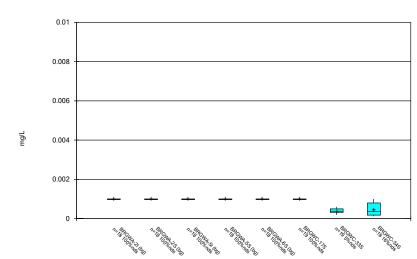
## Box & Whiskers Plot



Constituent: Boron Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

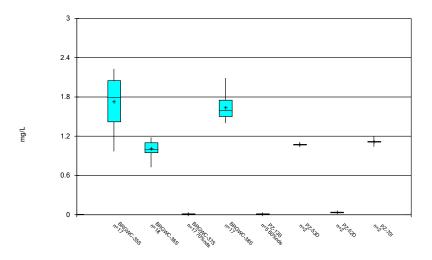
### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

### Box & Whiskers Plot



Constituent: Cadmium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

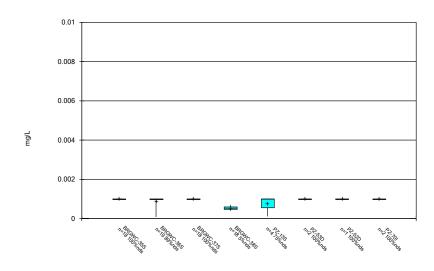
Box & Whiskers Plot



Constituent: Boron Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

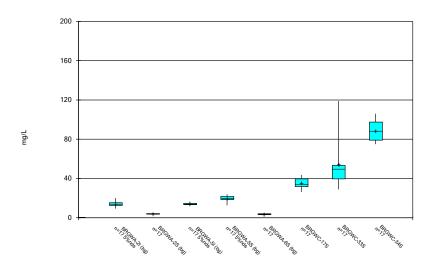
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cadmium Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

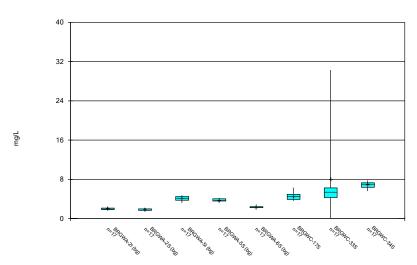
Box & Whiskers Plot



Constituent: Calcium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

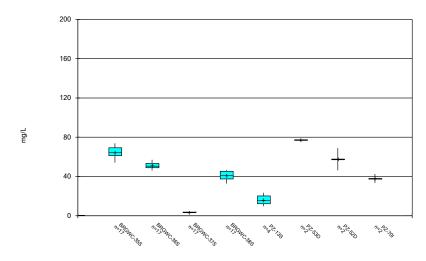
Sanitas<sup>™</sup> v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

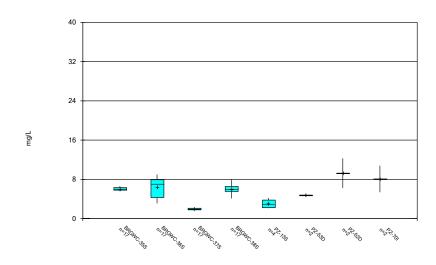
Box & Whiskers Plot



Constituent: Calcium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

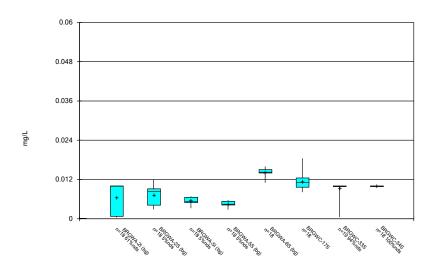
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 3/20/2023 10:52 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

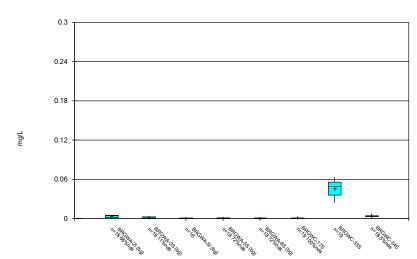




Constituent: Chromium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

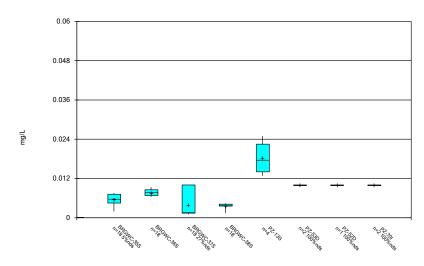
### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

### Box & Whiskers Plot



Constituent: Cobalt Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

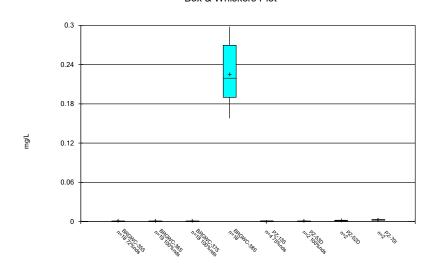
Box & Whiskers Plot



Constituent: Chromium Analysis Run 3/20/2023 10:52 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

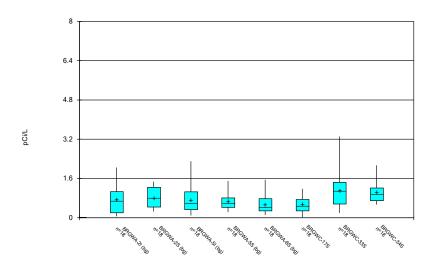
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cobalt Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot

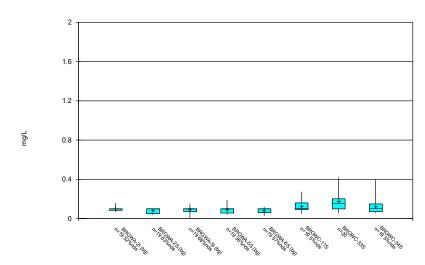


Constituent: Combined Radium 226 + 228 Analysis Run 3/20/2023 10:53 AM View: Pond E

Plant Branch Client: Southern Company Data: Plant Branch AP

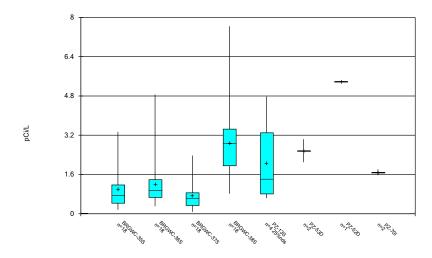
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

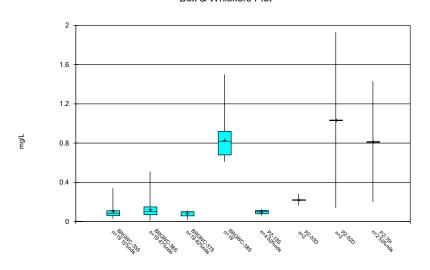
Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

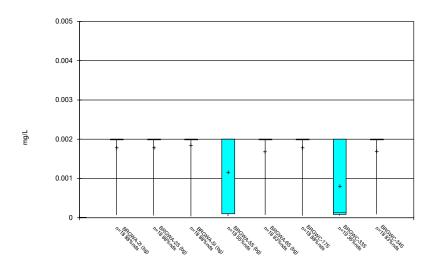
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

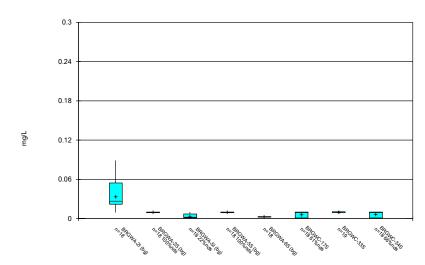
Box & Whiskers Plot



Constituent: Lead Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

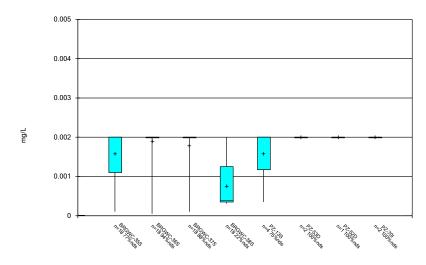
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

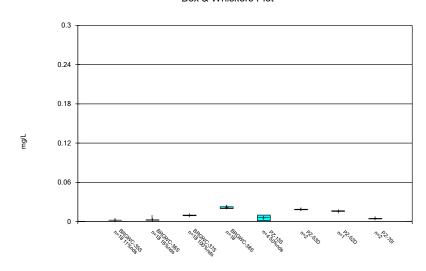
Box & Whiskers Plot



Constituent: Lead Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

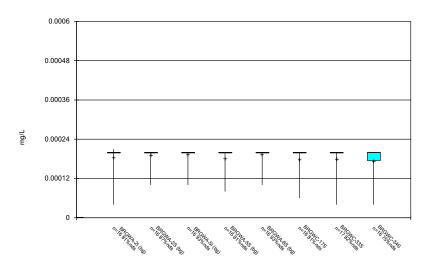
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

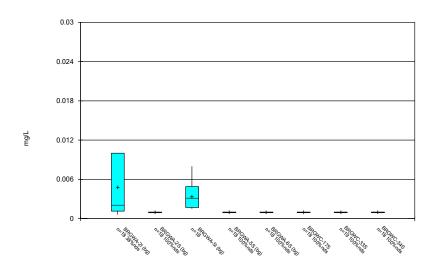
Box & Whiskers Plot



Constituent: Mercury Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

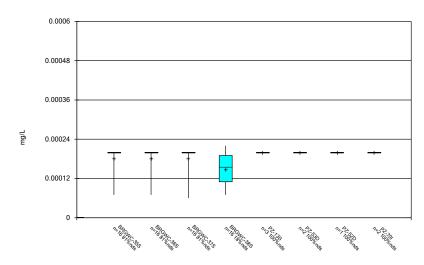
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

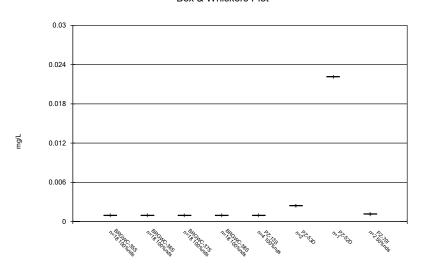
Box & Whiskers Plot



Constituent: Mercury Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

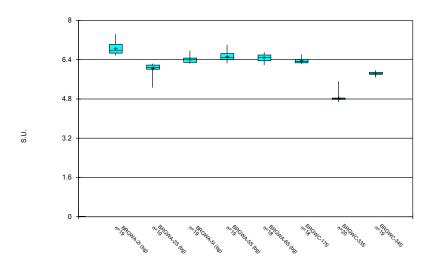
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

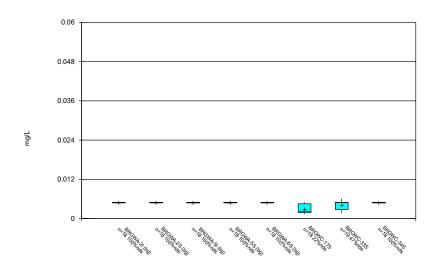
Box & Whiskers Plot



Constituent: pH, Field Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

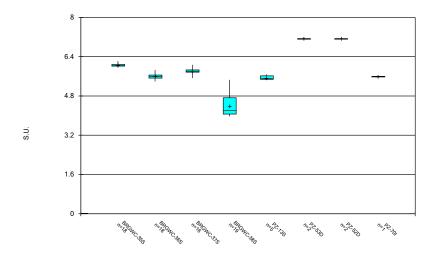
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Selenium Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

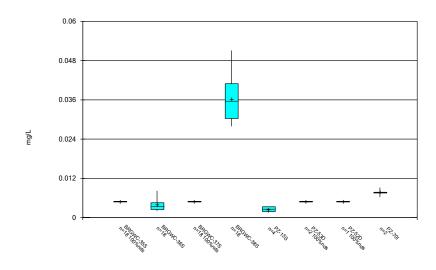
Box & Whiskers Plot



Constituent: pH, Field Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

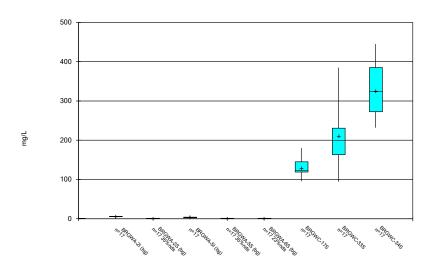
Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Selenium Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

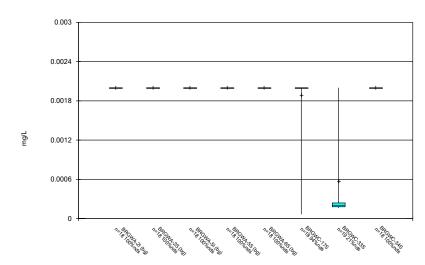
## Box & Whiskers Plot



Constituent: Sulfate Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

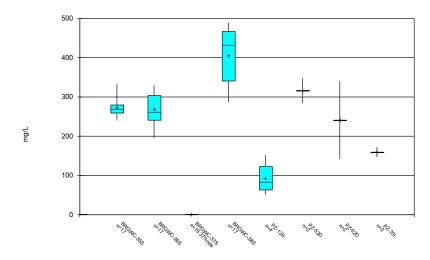
### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

### Box & Whiskers Plot



Constituent: Thallium Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

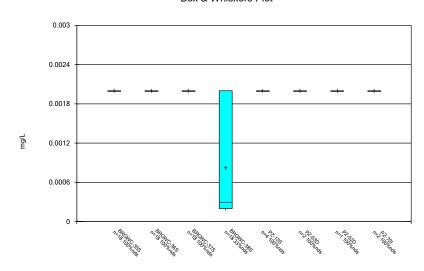
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 3/20/2023 10:53 AM View: Pond E Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

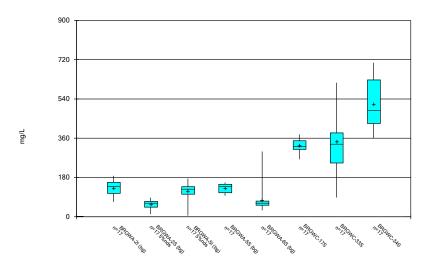
Box & Whiskers Plot



Constituent: Thallium Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

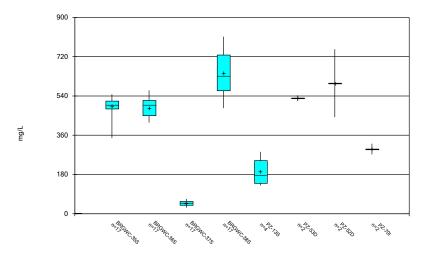
## Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 3/20/2023 10:53 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

# FIGURE C.

## **Outlier Summary**

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 10:56 AM

BRGWA-5I Cobalt (mg/L)
BRGWC-37S Sulfate (mg/L)

11/16/2016 <0.01 (o) 2/13/2018 <0.01 (o)

2/15/2018 1.9 (o)

# FIGURE D.

# Appendix III Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company		Company	Data: Plant	Data: Plant Branch AP Printed 2/27/2023, 2:33 PM									
Constituent	Well	Upper Li	m. Lower Li	m. Date	Observ.	Sig. Bg	N Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BRGWC-17S	0.0187	n/a	1/24/2023	0.0326	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-33S	0.0187	n/a	1/24/2023	1.19	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-34S	0.0187	n/a	1/24/2023	2.21	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-35S	0.0187	n/a	1/24/2023	2.23	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-36S	0.0187	n/a	1/25/2023	1.18	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-38S	0.0187	n/a	1/25/2023	1.63	Yes 85	n/a	n/a	65.88	n/a	n/a	0.0002677	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-17S	24	n/a	1/24/2023	41.3	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-33S	24	n/a	1/24/2023	116	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-34S	24	n/a	1/24/2023	80	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-35S	24	n/a	1/24/2023	67.5	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-36S	24	n/a	1/25/2023	48.2	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-38S	24	n/a	1/25/2023	32.8	Yes 85	n/a	n/a	3.529	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-17S	4.8	n/a	1/24/2023	6.31	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-33S	4.8	n/a	1/24/2023	29	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-34S	4.8	n/a	1/24/2023	7.5	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-35S	4.8	n/a	1/24/2023	6.46	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-36S	4.8	n/a	1/25/2023	7.93	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Chloride (mg/L)	BRGWC-38S	4.8	n/a	1/25/2023	6.53	Yes 85	n/a	n/a	0	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-17S	0.19	n/a	1/24/2023	0.216	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-33S	0.19	n/a	1/24/2023	0.193	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-35S	0.19	n/a	1/24/2023	0.239	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-38S	0.19	n/a	1/25/2023	0.708	Yes 95	n/a	n/a	55.79	n/a	n/a	0.000215	NP Inter (NDs) 1 of 2
pH, Field (S.U.)	BRGWC-33S	7.44	5.26	1/24/2023	4.79	Yes 94	n/a	n/a	0	n/a	n/a	0.0004389	NP Inter (normality) 1 of 2
pH, Field (S.U.)	BRGWC-38S	7.44	5.26	1/25/2023	4.75	Yes 94	n/a	n/a	0	n/a	n/a	0.0004389	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-17S	7.5	n/a	1/24/2023	153	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-33S	7.5	n/a	1/24/2023	375	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-34S	7.5	n/a	1/24/2023	267	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-35S	7.5	n/a	1/24/2023	334	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-36S	7.5	n/a	1/25/2023	237	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Sulfate (mg/L)	BRGWC-38S	7.5	n/a	1/25/2023	291	Yes 85	n/a	n/a	18.82	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-17S	299	n/a	1/24/2023	344	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-33S	299	n/a	1/24/2023	615	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-34S	299	n/a	1/24/2023	433	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-35S	299	n/a	1/24/2023	507	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-36S	299	n/a	1/25/2023	418	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	BRGWC-38S	299	n/a	1/25/2023	484	Yes 85	n/a	n/a	2.353	n/a	n/a	0.0002677	NP Inter (normality) 1 of 2

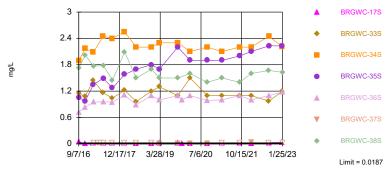
## Appendix III Interwell Prediction Limits - All Results

Data: Plant Branch AP Printed 2/27/2023, 2:33 PM Client: Southern Company Constituent Well Sig. Bg N Bg Mean %NDs ND Adj. Observ. Std. Dev. Method Yes 85 BRGWC-17S 1/24/2023 0.0326 NP Inter (NDs) 1 of 2 Boron (mg/L) 0.0187 n/a n/a 65.88 0.0002677 n/a n/a n/a Boron (mg/L) BRGWC-33S 0.0187 n/a 1/24/2023 1.19 Yes 85 n/a n/a 65.88 n/a n/a 0.0002677 NP Inter (NDs) 1 of 2 BRGWC-34S 1/24/2023 NP Inter (NDs) 1 of 2 Boron (ma/L) 0.0187 2.21 65.88 0.0002677 n/a Yes 85 n/a n/a n/a n/a Boron (mg/L) BRGWC-35S 0.0187 n/a 1/24/2023 2.23 Yes 85 65.88 n/a 0.0002677 NP Inter (NDs) 1 of 2 BRGWC-36S 1/25/2023 NP Inter (NDs) 1 of 2 0.0187 1.18 Yes 85 n/a 0.0002677 Boron (ma/L) n/a n/a 65.88 n/a n/a Boron (mg/L) BRGWC-37S 0.0187 1/25/2023 0.015ND 85 0.0002677 NP Inter (NDs) 1 of 2 n/a No n/a 65.88 n/a n/a Boron (mg/L) BRGWC-38S 0.0187 n/a 1/25/2023 1.63 Yes 85 n/a n/a 65.88 n/a n/a 0.0002677 NP Inter (NDs) 1 of 2 Calcium (mg/L) BRGWC-17S 24 1/24/2023 41.3 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-33S 24 n/a 1/24/2023 116 Yes 85 n/a n/a 3.529 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-34S 24 n/a 1/24/2023 80 Yes 85 n/a n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-35S 24 n/a 1/24/2023 67.5 Yes 85 n/a n/a 3.529 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Calcium (mg/L) BRGWC-36S 24 1/25/2023 Yes 85 0.0002677 NP Inter (normality) 1 of 2 n/a n/a n/a n/a BRGWC-37S 1/25/2023 n/a NP Inter (normality) 1 of 2 Calcium (mg/L) 24 n/a 3.65 No 85 n/a 3.529 n/a n/a 0.0002677 Calcium (mg/L) BRGWC-38S 24 n/a 1/25/2023 32.8 Yes 85 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (mg/L) BRGWC-17S 4.8 n/a 1/24/2023 6.31 Yes 85 n/a n/a 0 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (mg/L) Yes 85 0.0002677 NP Inter (normality) 1 of 2 n/a n/a n/a n/a Chloride (mg/L) BRGWC-34S 4.8 n/a 1/24/2023 7.5 Yes 85 n/a n/a n n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (mg/L) BRGWC-35S 1/24/2023 0 0.0002677 NP Inter (normality) 1 of 2 4.8 n/a 6.46 Yes 85 n/a n/a n/a n/a Chloride (mg/L) BRGWC-36S 4.8 n/a 1/25/2023 7.93 Yes 85 n/a n/a 0 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Chloride (ma/L) BRGWC-37S 4.8 1/25/2023 1 92 No 85 n/a n/a 0 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 n/a Chloride (mg/L) BRGWC-38S n/a 1/25/2023 6.53 0.0002677 NP Inter (normality) 1 of 2 4.8 Yes 85 n/a 0 n/a n/a Fluoride (ma/L) BRGWC-17S 1/24/2023 0.216 55.79 0.000215 NP Inter (NDs) 1 of 2 0.19 n/a Yes 95 n/a n/a n/a n/a NP Inter (NDs) 1 of 2 BRGWC-33S 1/24/2023 0.193 Fluoride (mg/L) 0.19 0.000215 Fluoride (mg/L) BRGWC-34S 0.19 n/a 1/24/2023 0.122 No 95 n/a n/a 55.79 n/a n/a 0.000215 NP Inter (NDs) 1 of 2 Fluoride (mg/L) BRGWC-35S 0.19 n/a 1/24/2023 0.239 Yes 55.79 n/a 0.000215 NP Inter (NDs) 1 of 2 Fluoride (ma/L) BRGWC-36S 0.19 1/25/2023 0.183 NP Inter (NDs) 1 of 2 n/a Nο 95 n/a n/a 55.79 n/a n/a 0.000215 BRGWC-37S 0.19 1/25/2023 0.114 95 0.000215 NP Inter (NDs) 1 of 2 Fluoride (mg/L) n/a No n/a 55.79 n/a BRGWC-38S Fluoride (mg/L) 0.19 n/a 1/25/2023 0.708 Yes 95 n/a n/a 55.79 n/a n/a 0.000215 NP Inter (NDs) 1 of 2 BRGWC-17S 5.26 1/24/2023 pH, Field (S.U.) 7.44 6.37 94 0 n/a 0.0004389 NP Inter (normality) 1 of 2 pH, Field (S.U.) BRGWC-33S 7.44 5.26 1/24/2023 4.79 Yes 94 n/a n/a 0 n/a n/a 0.0004389 NP Inter (normality) 1 of 2 pH. Field (S.U.) BRGWC-34S 7.44 5.26 1/24/2023 5.93 No 94 0 n/a 0.0004389 NP Inter (normality) 1 of 2 BRGWC-35S pH, Field (S.U.) 7 44 5 26 1/24/2023 6.08 Nο 94 n/a n/a n n/a n/a 0.0004389 NP Inter (normality) 1 of 2 pH, Field (S.U.) BRGWC-36S 7.44 5.26 1/25/2023 5.64 No 0.0004389 NP Inter (normality) 1 of 2 n/a n/a n/a n/a BRGWC-37S pH, Field (S.U.) 7.44 5.26 1/25/2023 5.84 Nο 94 n/a n/a 0 n/a n/a 0.0004389 NP Inter (normality) 1 of 2 pH, Field (S.U.) BRGWC-38S 1/25/2023 0.0004389 NP Inter (normality) 1 of 2 7.44 5.26 Yes 94 n/a n/a n/a Sulfate (mg/L) BRGWC-17S 7.5 n/a 1/24/2023 153 Yes 85 n/a n/a 18.82 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Sulfate (mg/L) BRGWC-33S 7.5 n/a 1/24/2023 375 Yes 85 n/a n/a 18.82 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 n/a Sulfate (mg/L) BRGWC-34S 7.5 1/24/2023 267 Yes 85 n/a n/a 18.82 n/a 0.0002677 NP Inter (normality) 1 of 2 n/a BRGWC-35S 7.5 1/24/2023 334 Yes 85 n/a 0.0002677 NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a 18.82 n/a n/a Sulfate (mg/L) BRGWC-36S n/a 1/25/2023 237 0.0002677 NP Inter (normality) 1 of 2 7.5 Yes 85 n/a 18.82 n/a n/a No 85 BRGWC-37S 7.5 1/25/2023 0.325J NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a n/a 18.82 n/a n/a 0.0002677 BRGWC-38S 1/25/2023 0.0002677 Sulfate (mg/L) 7.5 291 85 18.82 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) BRGWC-17S 299 1/24/2023 Yes 85 n/a 0.0002677 NP Inter (normality) 1 of 2 n/a n/a 2.353 n/a n/a Total Dissolved Solids (mg/L) BRGWC-33S 299 n/a 1/24/2023 615 2.353 n/a 0.0002677 NP Inter (normality) 1 of 2 Yes 85 n/a n/a Total Dissolved Solids (mg/L) BRGWC-34S 1/24/2023 299 433 Yes 85 0.0002677 NP Inter (normality) 1 of 2 n/a n/a n/a 2.353 n/a n/a 1/24/2023 Total Dissolved Solids (mg/L) BRGWC-35S 507 85 2.353 0.0002677 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) 1/25/2023 418 BRGWC-36S 299 n/a Yes 85 n/a n/a 2.353 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) BRGWC-37S 1/25/2023 28 0.0002677 299 n/a No 85 n/a n/a 2.353 n/a n/a NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) BRGWC-38S 299 n/a 1/25/2023 484 Yes 85 n/a n/a 2.353 n/a n/a 0.0002677 NP Inter (normality) 1 of 2 Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

#### Prediction Limit

Interwell Non-parametric



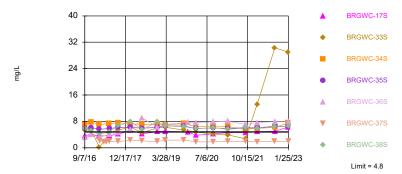
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 85 background values. 65.88% NDs. Annual per-constituent alpha = 0.003742. Individual comparison alpha = 0.0002677 (1 of 2). Comparing 7 points to limit.

Constituent: Boron Analysis Run 2/27/2023 2:27 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

# Prediction Limit Interwell Non-parametric



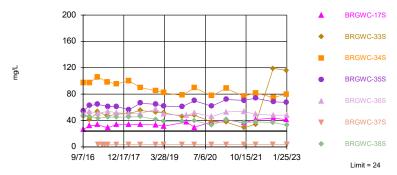
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. Annual per-constituent alpha = 0.003742. Individual comparison alpha = 0.0002677 (1 of 2). Comparing 7 points to limit.

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

#### Prediction Limit

Interwell Non-parametric



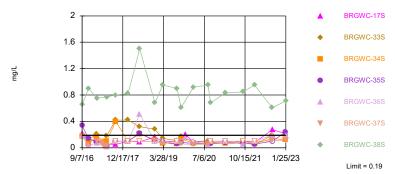
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. 3.529% NDs. Annual perconstituent alpha = 0.003742. Individual comparison alpha = 0.0002677 (1 of 2). Comparing 7 points to limit.

Constituent: Calcium Analysis Run 2/27/2023 2:27 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-35S, BRGWC-38S

Prediction Limit
Interwell Non-parametric

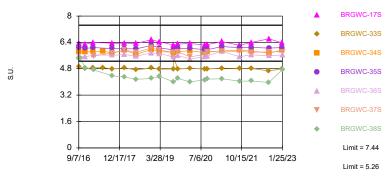


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 95 background values. 55.79% NDs. Annual per-constituent alpha = 0.003006. Individual comparison alpha = 0.000215 (1 of 2). Comparing 7 points to limit.

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

Exceeds Limits: BRGWC-33S, BRGWC-

# Prediction Limit Interwell Non-parametric



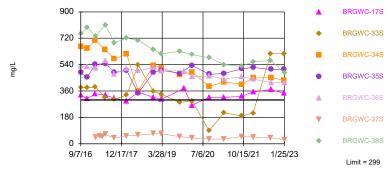
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 94 background values. Annual perconstituent alpha = 0.006135. Individual comparison alpha = 0.0004389 (1 of 2). Comparing 7 points to limit.

Constituent: pH, Field Analysis Run 2/27/2023 2:27 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. 2.353% NDs. Annual perconstituent alpha = 0.003742. Individual comparison alpha = 0.0002677 (1 of 2). Comparing 7 points to limit.

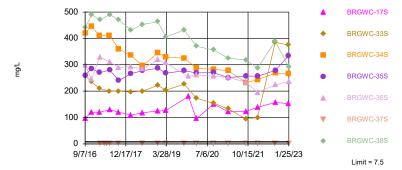
Constituent: Total Dissolved Solids Analysis Run 2/27/2023 2:27 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

#### Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 85 background values. 18.82% NDs. Annual perconstituent alpha = 0.003742. Individual comparison alpha = 0.0002677 (1 of 2). Comparing 7 points to limit.

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-35S	BRGWC-17S	BRGWC-36S
8/31/2016	0.0072 (J)	<0.015	<0.015	<0.015					
9/1/2016					<0.015				
9/7/2016						1.73	1.06	0.0449 (J)	0.725
9/8/2016									
11/15/2016		0.0085 (J)			0.0123 (J)				
11/16/2016	0.0117 (J)		0.0187 (J)	0.0109 (J)					
11/17/2016							0.967	0.0067 (J)	
11/18/2016									0.831
11/21/2016						2.02			
2/20/2017		0.0093 (J)	0.0066 (J)		0.0157 (J)				
2/21/2017	0.0088 (J)			<0.015					
2/22/2017							1.35	<0.015	
2/23/2017						1.77			0.949
4/17/2017									
5/15/2017									
6/12/2017	0.0133 (J)	<0.015	<0.015		<0.015				
6/13/2017				<0.015					
6/14/2017									
6/15/2017						1.78	1.49	<0.015	0.961
9/26/2017	0.0093 (J)	<0.015	<0.015	<0.015	<0.015				
9/27/2017									
9/28/2017						1.45	1.27	<0.015	0.948
2/13/2018	0.0141 (J)	<0.015	<0.015	<0.015	<0.015				
2/15/2018						2.09	1.58	<0.015	1.11
6/26/2018	0.012 (J)	0.0056 (J)	0.0042 (J)	<0.015	0.0041 (J)				
6/27/2018							1.7 (J+X)	0.0088 (J+X)	
6/28/2018						1.5			0.89
12/18/2018	0.0086 (J)	0.0062 (J)	<0.015	<0.015	<0.015				
12/19/2018							1.8	0.0045 (J)	1.1
12/20/2018						1.7			
3/19/2019	0.00565 (JD)	<0.015	<0.015	<0.015	<0.015			<0.015	1
3/20/2019						1.5	1.7		
10/15/2019	0.0067 (J)	0.006 (J)	<0.015	<0.015	0.01 (J)				
10/16/2019						1.5	2.2		
10/17/2019								<0.015	1.1
12/3/2019								0.0063 (J)	1
3/3/2020	0.0082 (J)	<0.015	<0.015	<0.015	<0.015			0.0075 (J)	
3/5/2020						1.6	1.9		1.1
9/15/2020	<0.015	<0.015	<0.015	<0.015	<0.015				
9/16/2020							1.9	0.0066 (J)	0.99
9/17/2020						1.4			
3/1/2021	<0.015				<0.015				
3/2/2021		0.0071 (J)	0.0053 (J)	<0.015					
3/3/2021									1
3/4/2021						1.5	1.9	<0.015	
9/21/2021		<0.015	<0.015						
9/22/2021	<0.015			<0.015	<0.015			0.02 (J)	1.1
9/23/2021						1.4	2		
2/1/2022	<0.015	<0.015	<0.015	<0.015	<0.015	1.6	2.1	0.013 (J)	1
2/2/2022									
8/23/2022	0.00592 (J)	0.00538 (J)	<0.015	0.00532 (J)	<0.015	1.67			
8/24/2022							2.23	0.0273	1.1

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-35S	BRGWC-17S	BRGWC-36S
1/24/2023	<0.015	<0.015	<0.015	<0.015	<0.015		2.23	0.0326	
1/25/2023						1.63			1.18

			Plant Branch	Client: Southern Company	Data: Plant Branch AP	
	BRGWC-33S	BRGWC-34S	BRGWC-37S			
8/31/2016						
9/1/2016						
9/7/2016	1.15					
9/8/2016		1.89				
11/15/2016						
11/16/2016						
11/17/2016	1.08	2.17				
11/18/2016	1.00	2.17				
11/21/2016						
2/20/2017						
2/21/2017		0.00				
2/22/2017	1.44	2.09	0.045			
2/23/2017			<0.015			
4/17/2017			<0.015			
5/15/2017			<0.015			
6/12/2017						
6/13/2017						
6/14/2017	1.16	2.45				
6/15/2017			<0.015			
9/26/2017						
9/27/2017	1.04	2.4				
9/28/2017			<0.015			
2/13/2018						
2/15/2018	1.22	2.55	<0.015			
6/26/2018						
6/27/2018	0.96 (J+X)	2.2 (J+X)				
6/28/2018			<0.015 (X)			
12/18/2018	1.2	2.2				
12/19/2018			<0.015			
12/20/2018						
3/19/2019						
3/20/2019	1.3	2.3	0.004 (J)			
10/15/2019						
10/16/2019	1.1	2.3	0.0055 (J)			
10/17/2019						
12/3/2019						
3/3/2020						
3/5/2020	1.5	2.1	0.0076 (J)			
9/15/2020						
9/16/2020	1.1	2.2	0.0062 (J)			
9/17/2020						
3/1/2021						
3/2/2021						
3/3/2021	1.1	2.1	<0.015			
3/4/2021						
9/21/2021						
9/22/2021	1.1	2.2				
9/23/2021			<0.015			
2/1/2022	1.1	2.2				
2/2/2022			0.032 (J)			
8/23/2022	0.975		<0.015			
8/24/2022		2.45				

	BRGWC-33S	BRGWC-34S	BRGWC-37S	
1/24/2023	1.19	2.21		
1/25/2023			<0.015	

	BRGWA-2I	(bg) BRGWA-5S (bg	) BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-35S	BRGWC-17S	BRGWC-36S
8/31/2016	12.6	19.6	13.5	4.09					
9/1/2016					3.3				
9/7/2016						45.9	54.1	26.3	50.6
9/8/2016									
11/15/201	16	21.7			3.44				
11/16/201	16 12.1		14.9	4.25					
11/17/201	16						62.6	31.8	
11/18/201	16								53.9
11/21/201	16					46.4			
2/20/2017	7	21.1	13.9		3.52				
2/21/2017	7 11.4			4.02					
2/22/2017	7						64.6	33.5	
2/23/2017	7					43.5			51
4/17/2017	7								
5/15/2017	7								
6/12/2017	9.34	21.5	13.7		3.11				
6/13/2017	7			3.84					
6/14/2017	7								
6/15/2017	7					45.3	61.3	29	53.8
9/26/2017	7 14.3	24	14.4	3.31	3.15				
9/27/2017	7								
9/28/2017	7					45.1	60.8	34.1	51.8
2/13/2018	3 <25	<25	<25	3.94	3.65				
2/15/2018	3					45.3	56.6	33.8	50.1
6/26/2018	3 16 (J)	23.5 (J)	13.5 (J)	3.6	3.3				
6/27/2018	3						66.2	34.1	
6/28/2018	3					45.9			51
12/18/201	18 14.5 (J)	19.8 (J)	16.4 (J)	3.8	3.5				
12/19/201	18						64.4	33.1	57.1
12/20/201	18					41.8			
3/19/2019	9 14.3 (JD)	21.4 (J)	12.3 (J)	3.9	3.6			31.6	49.5
3/20/2019	9					38.2	61.8		
10/15/201	19 15.1	20	14.4	3.7	3.5				
10/16/201	19					38.4	61.2		
12/3/2019	)							37.7	47.8
3/3/2020	20	23.2	14.9	4	5			29.7	
3/5/2020						39.8	69.9		51.7
9/15/2020	14.1	16.8	12.7	3.9	3.7				
9/16/2020	)						61.8	37.9	45.9
9/17/2020	)					33.1			
3/1/2021	15.4				4.2				
3/2/2021		16.8	13.2	4					
3/3/2021									53
3/4/2021						41	71.8	41.2	
9/21/2021	I	19.1	14.1						
9/22/2021	I 15.9			4.3	4.1			36.4	53.7
9/23/2021	ı					36.8	70.5		
2/1/2022	14.4	19.1	14.5	4.4	4.2	37.8	73.8	41.5	49.7
2/2/2022									
8/23/2022		18.2	14.3	4.65	3.97	37.1			
8/24/2022							68.5	43.6	48.1
1/24/2023	3 14.2	19.4	15.8	4.86	3.9		67.5	41.3	

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#### **Prediction Limit**

Constituent: Calcium (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWA-2I (bg) BRGWA-5S (bg) BRGWA-5I (bg) BRGWA-5I (bg) BRGWA-2S (bg) BRGWA-6S (bg) BRGWC-3SS BRGWC-3SS BRGWC-3SS BRGWC-17S BRGWC-36S 32.8 48.2

			Frant Grand Client. Southern Company Data. Frant Grand Ar
	BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/2016			
9/1/2016			
9/7/2016	53.4		
9/8/2016		97.3	
11/15/2016			
11/16/2016			
11/17/2016	41.3	97.6	
11/18/2016			
11/21/2016			
2/20/2017			
2/21/2017			
2/22/2017	53.1	106	
2/23/2017	33.1		3.26
4/17/2017			3.23
5/15/2017			2.97 (B-01)
6/12/2017			
6/13/2017	47.4	00	
6/14/2017	47.1	98	
6/15/2017			3.15
9/26/2017			
9/27/2017	49.5	95.8	
9/28/2017			3.26
2/13/2018			
2/15/2018	50.9	100	3.39
6/26/2018			
6/27/2018	55.1	90.1	
6/28/2018			3.1
12/18/2018	52.7	85.1	
12/19/2018			3.6
12/20/2018			
3/19/2019			
3/20/2019	51.4	82	3.3
10/15/2019			
10/16/2019	46.5	78.2	3.4
12/3/2019			
3/3/2020			
3/5/2020	48.1	89.6	3.7
9/15/2020			
9/16/2020	37.9	77.7	3.2
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021	37.5	88.6	3.6
3/4/2021			
9/21/2021			
9/22/2021	28.9	76.9	
9/23/2021			3.7
2/1/2022	34.3	81.7	
2/2/2022			3.7
8/23/2022	119		3.7
8/24/2022		75	
1/24/2023	116	80	

Constituent: Calcium (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWC-33S BRGWC-34S BRGWC-37S

1/25/2023 3.65

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-35S	BRGWC-17S	BRGWC-36S
8/31/2016	2.3	3.6	4.4	2					
9/1/2016					2.5				
9/7/2016						5.8	5.8	3.7	3.1
9/8/2016									
11/15/2016		4			2.3				
11/16/2016	2		4.4	1.8					
11/17/2016							6.1 (D)	4.05 (D)	
11/18/2016									3.95 (D)
11/21/2016						5.05 (D)			
2/20/2017		3.9	4.8		2.4				
2/21/2017	2			1.8					
2/22/2017							5.6	3.6	
2/23/2017						4.1			3.2
4/17/2017									
5/15/2017									
6/12/2017	2.1	3.8	4.2		2.2				
6/13/2017				1.7					
6/14/2017									
6/15/2017						4.8	5.8	3.7	4
9/26/2017	2	4.1	4.4	1.8	2.3				
9/27/2017									
9/28/2017						6.7	6.2	4.1	4.6
2/13/2018	2.1	4.1	4.7	1.7	2.3				
2/15/2018					2.0	8	6.2	5.3	5.4
6/26/2018	2.4	4.1	4.5	2.2	2.6	-			
6/27/2018							5.9	4.2	
6/28/2018						5.5 (J-X)	0.0		9 (J-X)
12/18/2018	1.8	3.8	4.5	1.9	2.3	0.0 (0.1.4)			- ( )
12/19/2018							6.2 (J-X)	4.9 (J-X)	6.2 (J-X)
12/20/2018						8 (J-X)	( )	(- : -)	(
3/19/2019	2.45 (D)	4.2	4.5	2	2.6	- (- : -)		5	7.1
3/20/2019						6.6	6.6		
10/15/2019	2.2	3.7	4.2	1.9	2.4				
10/16/2019						6.4	6.6		
12/3/2019						0	0.0	4.8	7.7
3/3/2020	1.9	3.6	3.9	1.9	2.9			3.8	
3/5/2020						5.8	5.8		7.6
9/15/2020	1.9	3.7	3.7	1.7	2.3				
9/16/2020							6	4.2	7.9
9/17/2020						6.1			
3/1/2021	1.8				2.1				
3/2/2021		3.7	3.8	1.7					
3/3/2021									8.1
3/4/2021						5.6	5.8	4.6	
9/21/2021		3.2	3.2			0.0	0.0	4.0	
9/22/2021	1.7	0.2	0.2	1.5	2.1			4.6	7.1
9/23/2021						6	6.1		
2/1/2022	1.8	3.4	3.5	1.6	2.1	5.8	6	4.9	7.6
2/2/2022			=:0		<del></del> •		-		: :=
8/23/2022	2.02	3.59	3.64	2.18	2.39	6.42			
8/24/2022				·· <del>·</del>		<del>-</del>	6.53	5	7.96
1/24/2023	2.09	3.56	3.93	2.16	2.3		6.46	6.31	
0	**			· <del>-</del>	-		- · · -	- <del>-</del> -	

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#### **Prediction Limit**

Constituent: Chloride (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWA-2I (bg) BRGWA-5S (bg) BRGWA-5I (bg) BRGWA-5I (bg) BRGWA-2S (bg) BRGWA-6S (bg) BRGWC-3SS BRGWC-3SS BRGWC-3SS BRGWC-17S BRGWC-36S 7.93

	BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/2016			
9/1/2016			
9/7/2016	5.3		
9/8/2016		7.2	
11/15/2016			
11/16/2016			
11/17/2016	5.45 (D)	7.8 (D)	
11/18/2016			
11/21/2016			
2/20/2017			
2/21/2017			
2/22/2017	0.12 (J)	7.1	
2/23/2017			2.1
4/17/2017			1.8
5/15/2017			1.8
6/12/2017			
6/13/2017			
6/14/2017	4.5	7.3	
6/15/2017			1.9
9/26/2017			
9/27/2017	5.4	7.6	
9/28/2017			1.9
2/13/2018			
2/15/2018	6.3	7.2	2.3
6/26/2018			
6/27/2018	4.5	7.1	
6/28/2018			2.1 (J-X)
12/18/2018	6.1	7.1	
12/19/2018			1.9 (J-X)
12/20/2018			
3/19/2019			
3/20/2019	6.2	6.9	2.3
10/15/2019			
10/16/2019	5.4	7.3	2.3
12/3/2019			
3/3/2020			
3/5/2020	4.8	6.4	1.8
9/15/2020			
9/16/2020	4.1	6.6	1.8
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021	3.9	6.4	1.9
3/4/2021			
9/21/2021			
9/22/2021	2.7	5.6	
9/23/2021			1.9
2/1/2022	13.1	5.9	
2/2/2022			1.8
8/23/2022	30.3		1.97
8/24/2022		6.17	
1/24/2023	29	7.5	

Constituent: Chloride (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWC-33S BRGWC-34S BRGWC-37S

1/25/2023 1.92

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-36S	BRGWC-35S	BRGWC-17S
8/31/2016	0.11 (J)	0.19 (J)	0.07 (J)	0.05 (J)					
9/1/2016					0.06 (J)				
9/7/2016						0.66	0.18 (J)	0.34	0.22 (J)
9/8/2016									
11/15/2016		0.13 (J)			0.06 (J)				
11/16/2016	0.08 (J)		0.07 (J)	0.07 (J)					
11/17/2016								0.14 (J)	0.12 (J)
11/18/2016							0.03 (J)		
11/21/2016						0.9 (D)			
2/20/2017		0.08 (J)	0.06 (J)		0.04 (J)				
2/21/2017	0.14 (J)			0.05 (J)					
2/22/2017								0.09 (J)	0.11 (J)
2/23/2017						0.75	0.07 (J)		
4/17/2017									
5/15/2017									
6/12/2017	0.16 (J)	0.07 (J)	0.008 (J)		0.06 (J)				
6/13/2017				0.04 (J)					
6/14/2017									
6/15/2017						0.77	0.01 (J)	0.03 (J)	0.05 (J)
9/26/2017	0.14 (J)	0.04 (J)	<0.1	<0.1	<0.1		(-)	(-)	(2)
9/27/2017	. ,	.,							
9/28/2017						0.8	<0.1	<0.1	0.05 (J)
2/13/2018	<0.1	<0.1	<0.1	<0.1	<0.1	0.0	· · ·		0.00 (0)
2/15/2018	-0.1	-0.1	-0.1	-0.1	-0.1	0.82	<0.1	<0.1	<0.1
6/26/2018	0.085 (J)	0.072 (J)	0.045 (J)	0.048 (J)	0.041 (J)	0.02	-0.1	-0.1	-0.1
6/27/2018	0.000 (0)	0.072 (0)	0.040 (0)	0.040 (0)	0.041 (0)			0.22 (J)	0.093 (J)
6/28/2018						1.5 (J+X)	0.51 (J+X)	0.22 (3)	0.093 (0)
12/18/2018	0.085 (J)	<0.1	<0.1	<0.1	<0.1	1.5 (5 77)	0.51 (51)		
12/19/2018	0.083 (3)	<b>~0.1</b>	<b>~0.1</b>	<b>~0.1</b>	<b>~</b> 0.1		<0.1	0.11 (J)	0.16 (J)
						0.69	<0.1	0.11(3)	0.10 (3)
12/20/2018 3/19/2019	0.0655 (JD)	0.06 (J)	<0.1	0.037 (J)	0.03 (J)	0.68	<0.1		0.1 (J)
3/20/2019	0.0033 (3D)	0.00 (3)	<b>~0.1</b>	0.037 (3)	0.03 (3)	0.95	<b>~0.1</b>	0.088 (J)	0.1 (3)
	-0.1	-0.1	-0.1	-0.1	-0.1	0.95		0.066 (3)	
8/27/2019	<0.1	<0.1	<0.1	<0.1	<0.1		-0.1	0.056 (1)	0.085 (J)
8/28/2019 8/29/2019						0.0	<0.1	0.056 (J)	0.065 (3)
	-0.1	0.045 (1)	-0.4	-0.1	-0.1	0.9			
10/15/2019	<0.1	0.045 (J)	<0.1	<0.1	<0.1	0.01		0.00 (1)	
10/16/2019						0.61	0.15 (1)	0.08 (J)	0.271)
12/3/2019	0.000 (1)	0.057 (1)	-0.4	0.05 (1)	0.00 (1)		0.15 (J)		0.2 (J)
3/3/2020	0.066 (J)	0.057 (J)	<0.1	0.05 (J)	0.09 (J)				0.093 (J)
3/5/2020						0.92	<0.1	0.067 (J)	
8/18/2020	<0.1	<0.1	<0.1	<0.1	<0.1				
8/19/2020						0.95	0.051 (J)	0.06 (J)	0.1
9/15/2020	<0.1	0.051 (J)	<0.1	<0.1	<0.1				
9/16/2020							<0.1	0.062 (J)	0.1
9/17/2020						0.68			
3/1/2021	<0.1				<0.1				
3/2/2021		<0.1	<0.1	<0.1					
3/3/2021							<0.1		
3/4/2021						0.83		0.076 (J)	0.096 (J)
9/21/2021		0.056 (J)	<0.1						
9/22/2021	<0.1			<0.1	<0.1		0.054 (J)		0.1
9/23/2021						0.85		0.073 (J)	

		BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-36S	BRGWC-35S	BRGWC-17S
2/	1/2022	<0.1	<0.1	<0.1	<0.1	<0.1	0.95	<0.1	0.055 (J)	0.079 (J)
2/2	2/2022									
8/2	23/2022	<0.1	<0.1	<0.1	<0.1	<0.1	0.609			
8/2	24/2022							0.194	<0.1	0.274
1/2	24/2023	<0.1	0.158	0.149	<0.1	0.12			0.239	0.216
1/2	25/2023						0.708	0.183		

	BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/2016			
9/1/2016			
9/7/2016	0.19 (J)		
9/8/2016		0.17 (J)	
11/15/2016		. ,	
11/16/2016			
11/17/2016	0.12 (J)	0.06 (J)	
11/18/2016	(-)		
11/21/2016			
2/20/2017			
2/21/2017			
2/22/2017	0.21 (J)	0.17 (J)	
2/23/2017	0.21 (0)	0.17 (3)	0.1 (J)
4/17/2017			0.08 (J)
5/15/2017			0.02 (J)
6/12/2017			
6/13/2017	0.19 ( !\	0.171)	
6/14/2017	0.18 (J)	0.1 (J)	0.007()
6/15/2017			0.03 (J)
9/26/2017			
9/27/2017	0.42	0.4	
9/28/2017			<0.1
2/13/2018			
2/15/2018	0.42	<0.1	<0.1
6/26/2018			
6/27/2018	0.32	0.21 (J)	
6/28/2018			<0.1
12/18/2018	0.28 (J)	0.12 (J)	
12/19/2018			0.094 (J)
12/20/2018			
3/19/2019			
3/20/2019	0.14 (J)	0.074 (J)	0.062 (J)
8/27/2019	0.11 (J)		
8/28/2019	0.11 (J)	0.057 (J)	<0.1
8/29/2019			
10/15/2019			
10/16/2019	0.17 (J)	0.13 (J)	0.059 (J)
12/3/2019			
3/3/2020			
3/5/2020	0.088 (J)	0.072 (J)	0.05 (J)
8/18/2020			
8/19/2020	0.11	0.074 (J)	0.055 (J)
9/15/2020			
9/16/2020	0.085 (J)	0.077 (J)	<0.1
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021	0.069 (J)	0.071 (J)	<0.1
3/4/2021	• •	.,	
9/21/2021			
9/22/2021	0.068 (J)	0.1	
9/23/2021	(-)	-	<0.1

	BRGWC-33S	BRGWC-34S	BRGWC-37S
2/1/2022	0.053 (J)	0.06 (J)	
2/2/2022			<0.1
8/23/2022	0.187		0.105
8/24/2022		0.14	
1/24/2023	0.193	0.122	
1/25/2023			0.114

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-6S (bg)	BRGWC-36S	BRGWC-38S	BRGWC-17S	BRGWC-33S
8/31/2016	7.16	6.2	6.59	6.53					
9/1/2016					6.49				
9/7/2016						5.59	5.43	6.36	4.92
9/8/2016									
9/23/2016							5.46		
11/15/2016			6.67		6.59				
11/16/2016	6.96	6.12		6.4					
11/17/2016								6.28	4.82
11/18/2016						5.51			
11/21/2016							4.84		
2/20/2017			6.65	6.44	6.61				
2/21/2017	7.15	6.24							
2/22/2017								6.4	4.86
2/23/2017						5.65	4.73		
6/12/2017	7.31		6.64	6.4					
6/13/2017		6.19							
6/14/2017									4.86
9/26/2017	7.02	6.15	6.58	6.31	6.47				
9/27/2017									4.78
9/28/2017						5.62	4.37	6.35	
2/13/2018	7.44	6.18	6.72	6.62	6.54				
2/15/2018						5.66	4.3	6.35	4.84
6/26/2018	6.93	6.05	6.43	6.29	6.23				
6/27/2018								6.35	4.73
6/28/2018						5.57	4.16		
12/18/2018	6.76	5.92	6.7	6.57	6.71				4.84
12/19/2018						5.76		6.56	
12/20/2018							4.21		
3/19/2019	6.87	6.18	6.63	6.45	6.18	5.72		6.43	
3/20/2019							4.34		4.77
8/27/2019	6.79	6.09	6.49	6.37	6.35				4.78
8/28/2019						5.52		6.25	5.52
8/29/2019							4.01		
10/15/2019	6.57	6.06	7.01	6.77	6.36				
10/16/2019							4.21		4.78
10/17/2019						5.61		6.3	
3/3/2020	6.71	6.1	6.49	6.29	6.59			6.34	
3/5/2020						5.39	4.01		4.82
8/18/2020	6.59	6.06	6.41	6.29	6.33				
8/19/2020						5.53	4.12	6.24	4.78
9/15/2020	6.64	6.01	6.25	6.27	6.43				
9/16/2020						5.58		6.26	4.78
9/17/2020							4.17		
3/1/2021	6.66				6.7				
3/2/2021		6.2	6.42	6.47					
3/3/2021						5.86			4.83
3/4/2021							4.19	6.45	
9/21/2021			6.36	6.32					
9/22/2021	6.78	6.06			6.48	5.53		6.22	4.81
9/23/2021							4.05		
2/1/2022	6.83	5.95	6.39	6.38	6.54	5.65	4.06	6.39	4.82
2/2/2022									

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### **Prediction Limit**

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-6S (bg)	BRGWC-36S	BRGWC-38S	BRGWC-17S	BRGWC-33S
8/23/2022	6.67	5.95	6.36	6.24	6.51		3.97		4.67
8/24/2022						5.59		6.62	
1/24/2023	6.7	5.26	6.47	6.42	6.54			6.37	4.79
1/25/2023						5.64	4.75		

			Flant Branch Client. Southern Company Data. Flant Branch AF	
	BRGWC-35S	BRGWC-34S	RGWC-37S	
8/31/2016				
9/1/2016				
9/7/2016	6.1			
9/8/2016		5.84		
9/23/2016				
11/15/2016				
11/16/2016				
11/17/2016	6.04	5.81		
11/18/2016				
11/21/2016				
2/20/2017				
2/21/2017				
2/22/2017	6.08	5.85		
2/23/2017			57	
6/12/2017				
6/13/2017				
6/14/2017		5.87		
9/26/2017		0.07		
9/27/2017		5.74		
9/28/2017	6.03		.76	
2/13/2018	0.03		.,,,	
2/15/2018	6.02	5.93	95	
6/26/2018	0.02	3.93	33	
6/27/2018	6.01	5.68		
6/28/2018	0.01		.78	
12/18/2018		5.97	.70	
12/19/2018	6.22		07	
12/20/2018	0.22		.07	
3/19/2019	0.00	F 0.4	02	
3/20/2019 8/27/2019	6.06	5.84	93	
	E 0E	E 0	0	
8/28/2019	5.95	5.8	8	
8/29/2019				
10/15/2019	6.02	E 0E	01	
10/16/2019	6.03	5.85	81	
10/17/2019				
3/3/2020	6.04	E 90	E2	
3/5/2020 8/18/2020	6.04	5.89	53	
	F 07	5.78	ec.	
8/19/2020	5.97	5.76	66	
9/15/2020 9/16/2020	F 06	E 01	04	
	5.96	5.81	84	
9/17/2020				
3/1/2021				
3/2/2021		5.88	97	
3/3/2021	6.14	5.88	87	
3/4/2021	6.14			
9/21/2021		F 02		
9/22/2021	0.00	5.93	05	
9/23/2021	6.08		85	
2/1/2022	6.09	5.87	0	
2/2/2022			8	

	BRGWC-35S	BRGWC-34S	BRGWC-37S
8/23/2022			5.82
8/24/2022	6.05	5.75	
1/24/2023	6.08	5.93	
1/25/2023			5.84

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-35S	BRGWC-17S	BRGWC-36S
8/31/2016	7.5	0.81 (J)	2.7	0.38 (J)					
9/1/2016					0.6 (J)				
9/7/2016						440	260	97	300
9/8/2016									
11/15/2016		<1 (J)			0.68 (J)				
11/16/2016	6.6		3.4	<1 (J)					
11/17/2016							285 (D)	120 (D)	
11/18/2016									245 (D)
11/21/2016						490 (D)			
2/20/2017		1 (B-01)	3.9 (B-01)		0.98 (J)				
2/21/2017	6.1			1.5					
2/22/2017							270	120	
2/23/2017						470			330
4/17/2017									
5/15/2017									
6/12/2017	5	0.94 (J)	3.7		0.54 (J)				
6/13/2017		.,		0.67 (J)	, ,				
6/14/2017				( )					
6/15/2017						490	280	130	310
9/26/2017	5.4	0.92 (J)	4.1	0.62 (J)	0.53 (J)				
9/27/2017		(-)		(-)	(-)				
9/28/2017						470	240	120	290
2/13/2018	4.7 (J)	<1	6.6	<1	<1				
2/15/2018	(0)	•	0.0			432	266	109	292
6/26/2018	6.2	0.91 (J)	3.5	0.69 (J)	0.54 (J)	.02	200		202
6/27/2018	0.2	0.51 (0)	5.5	0.03 (0)	0.54 (0)		278	118	
6/28/2018						453	270	110	284
12/18/2018	5.9	0.68 (J)	4.3	0.72 (J)	0.39 (J)	455			204
12/19/2018	5.9	0.08 (3)	4.3	0.72 (3)	0.39 (3)		287	125	319
12/19/2018						463	207	125	319
3/19/2019	6 (D)	0.74 (1)	2	0.78 (J)	0.68 (J)	403		126	307
	6 (D)	0.74 (J)	3	0.78 (3)	0.08 (3)	405	269	120	307
3/20/2019	F 0	0.00 (1)	2.0	0.47 (1)	0.40 (1)	405	268		
10/15/2019	5.2	0.68 (J)	3.8	0.47 (J)	0.48 (J)	400	077		
10/16/2019						432	277	100	050
12/3/2019	7.4	0.74 (1)	0.0	0.00 (1)	0.5			180	256
3/3/2020	7.1	0.71 (J)	2.8	0.93 (J)	2.5	070	000	95.4	000
3/5/2020	5.0		4.7			370	269		262
9/15/2020	5.9	<1	1.7	<1	<1				
9/16/2020							270	151	256
9/17/2020						356			
3/1/2021	4.7				0.74 (J)				
3/2/2021		<1	2.2	<1					
3/3/2021									252
3/4/2021						325	251	122	
9/21/2021		<1	2.3						
9/22/2021	5.2			<1	<1			123	234
9/23/2021						318	258		
2/1/2022	5.4	<1	2	<1	<1	287	256	139	195
2/2/2022									
8/23/2022	5.66	0.521	2.21	0.452	0.479	389			
8/24/2022							279	157	224
1/24/2023	3.58	0.66	3.34	0.465	0.484		334	153	

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#### **Prediction Limit**

Constituent: Sulfate (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWA-2I (bg) BRGWA-5S (bg) BRGWA-5I (bg) BRGWA-5I (bg) BRGWA-2S (bg) BRGWA-6S (bg) BRGWC-3SS BRGWC-3SS BRGWC-3SS BRGWC-3FS BR

			· · · · · · · · · · · · · · · · · · ·
	BRGWC-33S	BRGWC-34S	BRGWC-37S
8/31/2016			
9/1/2016			
9/7/2016	260		
9/8/2016		420	
11/15/2016			
11/16/2016			
11/17/2016	235 (D)	445 (D)	
11/18/2016			
11/21/2016			
2/20/2017			
2/21/2017			
2/22/2017	210	410	
2/23/2017			0.55 (J)
4/17/2017			0.44 (J)
5/15/2017			0.45 (J)
6/12/2017			
6/13/2017			
6/14/2017	200	410	
6/15/2017			0.46 (J)
9/26/2017			
9/27/2017	200	360	
9/28/2017			0.49 (J)
2/13/2018			
2/15/2018	197	335	1.9 (o)
6/26/2018			
6/27/2018	200	296	
6/28/2018			0.24 (J)
12/18/2018	222	345	
12/19/2018			0.4 (J)
12/20/2018			
3/19/2019			
3/20/2019	204	329	<1 (X)
10/15/2019			
10/16/2019	226	325	0.29 (J)
12/3/2019			
3/3/2020			
3/5/2020	173	287	<1
9/15/2020			
9/16/2020	154	283	<1
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021	133	277	<1
3/4/2021			
9/21/2021			
9/22/2021	94.6	232	
9/23/2021			<1
2/1/2022	99.7	243	
2/2/2022			<1
8/23/2022	385		0.307 (J)
8/24/2022		268	
1/24/2023	375	267	

Constituent: Sulfate (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWC-33S BRGWC-34S BRGWC-37S

1/25/2023 0.325 (J)

	BRGWA-2I (bg)	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-6S (bg)	BRGWC-38S	BRGWC-35S	BRGWC-17S	BRGWC-36S
8/31/2016	151	154	138	88					
9/1/2016					299				
9/7/2016						750	486	331	528
9/8/2016									
11/15/2016		123			41				
11/16/2016	69		77	41					
11/17/2016							453	308	
11/18/2016									524
11/21/2016						795			
2/20/2017		158	170		133				
2/21/2017	68			<10					
2/22/2017							541	341	
2/23/2017						733			517
4/17/2017									
5/15/2017									
6/12/2017	161	142	132		61				
6/13/2017				53					
6/14/2017									
6/15/2017						812	548	333	566
9/26/2017	167	138	108	45	29				
9/27/2017									
9/28/2017						690	487	310	475
2/13/2018	165	150	141	63	61				
2/15/2018						722	500	292	513
6/26/2018	188	154	133	71	71				
6/27/2018							347 (X)	353 (X)	
6/28/2018			400.00			704			499
12/18/2018	145 (X)	147	138 (X)	78 (X)	70 (X)		400	0.17	504
12/19/2018						0.40	489	317	521
12/20/2018	146.5 (D)	146	120	60	70	642		202	498
3/19/2019	146.5 (D)	146	130	68	72	645	F04	303	490
3/20/2019	140	444	175	00	62	615	501		
10/15/2019	140	144	175	66	63	000	404		
10/16/2019 12/3/2019						630	481	270	409
	455	100	-10	44	54			378	498
3/3/2020	155	130	<10	41	54	000	505	263	457
3/5/2020	116	116	100	60	70	608	535		457
9/15/2020 9/16/2020	116	116	100	69	79		474	316	463
9/17/2020						587	474	310	403
3/1/2021	98				39	307			
3/2/2021	90	96	80	43	33				
3/3/2021		30	00	45					442
3/4/2021						540	480	316	772
9/21/2021		104	108			340	400	310	
9/22/2021	129	104	100	66	62			323	457
9/23/2021	123			00	02	528	511	020	407
2/1/2022	126	124	129	72	61	560	521	354	441
2/2/2022	==	= -		<del>-</del>					÷ ÷
8/23/2022	117	101	107	45	52	568			
8/24/2022							507	370	418
1/24/2023	93	104	124	63	64		507	344	

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#### **Prediction Limit**

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWA-2I (bg) BRGWA-5S (bg) BRGWA-5I (bg) BRGWA-2S (bg) BRGWA-6S (bg) BRGWC-3SS BRGWC-3SS BRGWC-3SS BRGWC-17S BRGWC-36S 418

				Plant Branch	Client: Southern Company	Data: Plant Branch AP		
		BRGWC-33S	BRGWC-34S	BRGWC-37S				
8	/31/2016							
	/1/2016							
	/7/2016	382						
	/8/2016		663					
	1/15/2016							
	1/16/2016							
	1/17/2016	382	651					
	1/18/2016	552						
	1/21/2016							
	/20/2017							
	/21/2017							
	/21/2017	387	706					
		307		45				
	/23/2017			45				
	/17/2017			53				
	/15/2017			48				
	/12/2017							
	/13/2017							
		316	643					
	/15/2017			63				
	/26/2017							
	/27/2017	303	579					
	/28/2017			39				
	/13/2018							
	/15/2018	332	612	54				
	/26/2018							
	/27/2018	538 (X)	359 (X)					
	/28/2018			59 (X)				
	2/18/2018	358	535					
	2/19/2018			68				
	2/20/2018							
	/19/2019							
	/20/2019	338	517	68 (X)				
	0/15/2019							
	0/16/2019	281	473	49				
	2/3/2019							
	/3/2020							
	/5/2020	292	489	39				
	/15/2020							
	/16/2020	88	392	31				
	/17/2020							
	/1/2021							
3	/2/2021							
3	/3/2021	212	422	33				
3	/4/2021							
	/21/2021							
9	/22/2021	190	406					
9	/23/2021			49				
2	/1/2022	209	449					
2	/2/2022			46				
8	/23/2022	614		40				
8	/24/2022		452					
1	/24/2023	615	433					

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/27/2023 2:33 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

BRGWC-33S BRGWC-34S BRGWC-37S

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# FIGURE E.

# Appendix III Trend Tests - Prediction Limits Exceedances - Significant Results

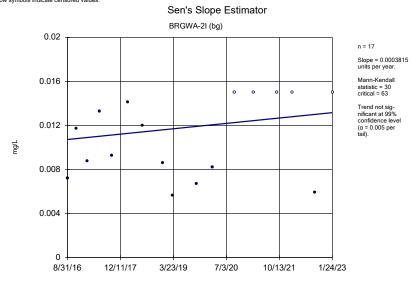
	Plant Branch Client: Southern Compar	ny Data: Plar	it Branch A	Printe	d 2/27	/2023, 2	2:45 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWC-35S	0.1697	113	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-36S	0.03668	75	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.14	75	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-17S	1.91	83	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-34S	-4.023	-90	-63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-38S	-1.805	-92	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.16	-71	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-17S	0.2181	69	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-34S	-0.23	-68	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-36S	0.7848	90	63	Yes	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-33S	-0.02655	-84	-81	Yes	20	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.08596	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.04386	-89	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05239	-85	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-38S	-0.1079	-93	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-30.64	-115	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-36S	-13.29	-79	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-38S	-32.45	-99	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.706	-76	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-34S	-44.75	-84	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.84	-107	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.71	-112	-63	Yes	17	0	n/a	n/a	0.01	NP

# Appendix III Trend Tests - Prediction Limits Exceedances - All Results

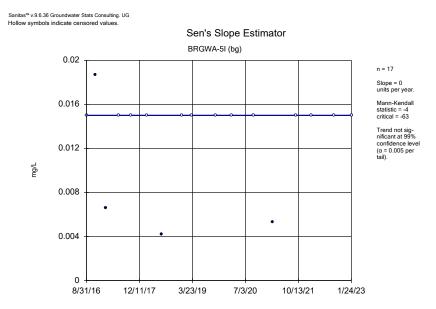
Appendix III 1							A1 10		, vii i v	OGG	
	Plant Branch Client: Southern Compar	ny Data: Plar	nt Branch A	AP Printe	d 2/27	/2023, 2	2:45 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	BRGWA-2I (bg)	0.0003815	30	63	No	17	29.41	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	-1	-63	No	17	88.24	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	-4	-63	No	17	76.47	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-1	-63	No	17	58.82	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	4	63	No	17	76.47	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-17S	-0.0009889	-28	-68	No	18	38.89	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-33S	-0.004253	-12	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-34S	0.00246	17	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-35S	0.1697	113	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-36S	0.03668	75	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-38S	-0.03581	-38	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.4268	41	63	No	17		n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	0.111	46	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	0.1199	19	63	No	17	5.882		n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.4249	-40	-63	No	17	5.882		n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.14	75	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-17S	1.91	83	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-33S	-1.413	-24	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-34S	-4.023 1.017	-90	-63	Yes	<b>17</b> 17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-35S BRGWC-36S	1.917 -0.4778	63 -39	63 -63	No No	17	0	n/a n/a	n/a n/a	0.01	NP NP
Calcium (mg/L)  Calcium (mg/L)	BRGWC-38S	-1.805	-92	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2I (bg)	-0.03727	-34	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2S (bg)	0	-9	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5I (bg)	-0.16	-71	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-5S (bg)	-0.07107	-60	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-6S (bg)	-0.01018	-24	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-17S	0.2181	69	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-33S	0.4692	22	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-34S	-0.23	-68	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-35S	0.06042	36	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-36S	0.7848	90	63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-38S	0.1365	24	63	No	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	0	-16	-74	No	19	52.63	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	56	74	No	19	63.16	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	72	74	No	19	68.42	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	0	-4	-74	No	19	36.84	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0.006099	73	74	No	19	57.89	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-17S	0	7	74	No	19	5.263	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-33S	-0.02655	-84	-81	Yes	20	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-35S	-0.007584	-42	-74	No	19	15.79	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-38S	0.004963	8	74	No	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2I (bg)	-0.08596	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-2S (bg)	-0.04386	-89	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5I (bg)	-0.02414	-43	-74	No	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-5S (bg)	-0.05239	-85	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWA-6S (bg)	0.002505	5	68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-33S	-0.01054	-49	-81	No	20	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-38S	-0.1079	-93	-74	Yes	19	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2I (bg)	-0.2241	-48	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-2S (bg)	0	5	63	No	17	35.29		n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5I (bg)	-0.2579	-48	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWA-5S (bg)	-0.009734	-26	-63	No	17	35.29		n/a	0.01	NP
Sulfate (mg/L)	BRGWA-6S (bg)	0	4	63	No	17	23.53		n/a	0.01	NP
Sulfate (mg/L)	BRGWC-17S	5.176	59	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-33S	-16.3	-37	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BRGWC-34S	-30.64	-115 -1	- <b>63</b>	Yes	17 17	0	n/a	n/a	0.01	NP ND
Sulfate (mg/L)	BRGWC-35S BRGWC-36S	-0.09626 - <b>13.29</b>	-1 <b>70</b>	-63	No	17	0	n/a	n/a	0.01 <b>0.01</b>	NP <b>NP</b>
Sulfate (mg/L)	BRGWC-38S		-79 -99	-63 -63	Yes Yes	17 17	0	n/a n/a	n/a n/a	0.01	NP NP
Sulfate (mg/L)	DI// 340-303	-32.45	-99	-03	162	17	U	n/a	n/a	0.01	INF

# Appendix III Trend Tests - Prediction Limits Exceedances - All Results $^{\circ}$

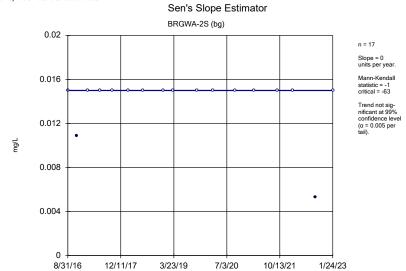
	Plant Branch Client: Southern Compar	ny Data: Plar	nt Branch /	AP Printe	d 2/27	/2023, 2	2:45 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Total Dissolved Solids (mg/L)	BRGWA-2I (bg)	-7.505	-40	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-2S (bg)	0.6809	10	63	No	17	5.882	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5I (bg)	-3.081	-32	-63	No	17	5.882	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-5S (bg)	-7.706	-76	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWA-6S (bg)	-2.032	-19	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-17S	3.177	27	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-33S	-26.14	-31	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-34S	-44.75	-84	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-35S	2.399	17	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-36S	-17.84	-107	-63	Yes	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BRGWC-38S	-43.71	-112	-63	Yes	17	0	n/a	n/a	0.01	NP



Constituent: Boron Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

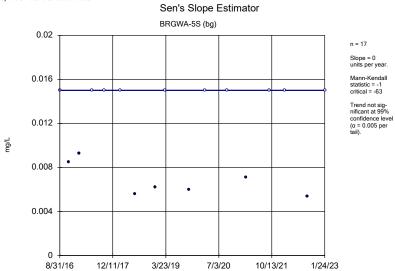


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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Boron Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
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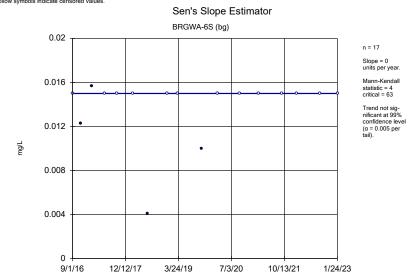




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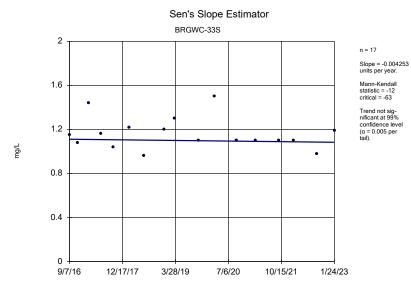
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Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



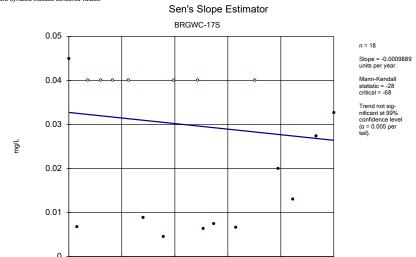
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG



Constituent: Boron Analysis Run 2/27/2023 2:36 PM View: Pond E - 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.



Constituent: Boron Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

7/6/20

3/28/19

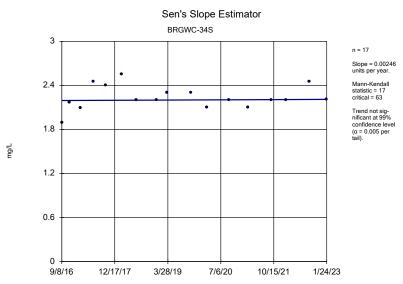
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10/15/21

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

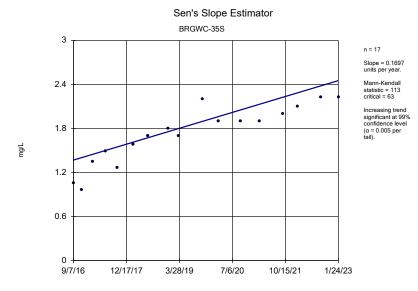
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12/17/17

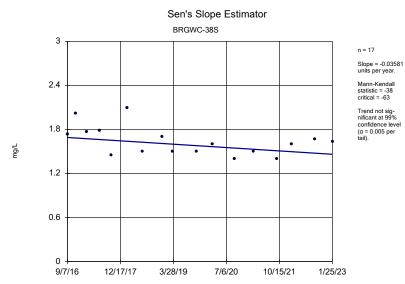


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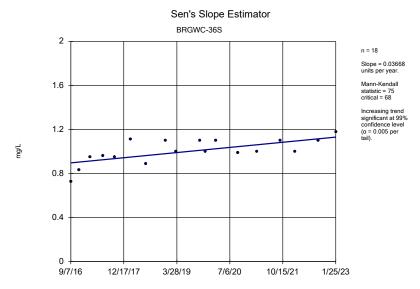
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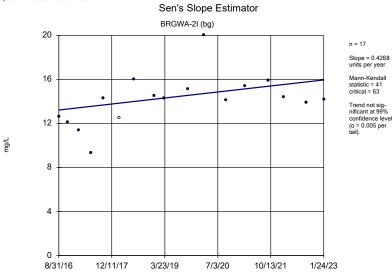


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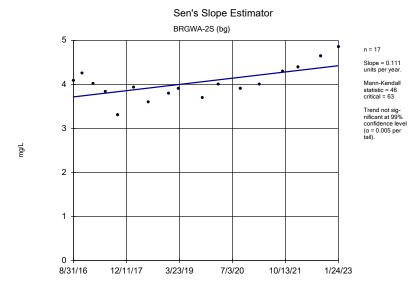


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Plant Branch Client: Southern Company Data: Plant Branch AP

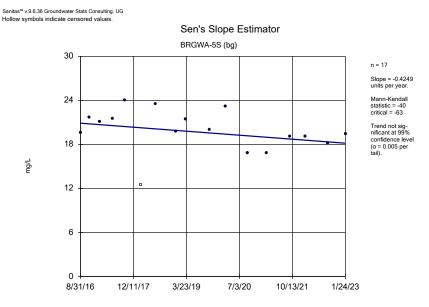
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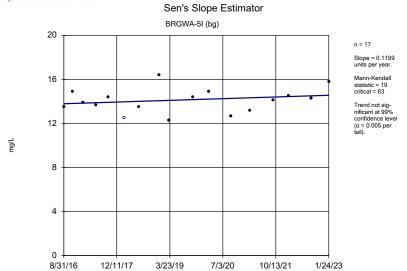
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Plant Branch Client: Southern Company Data: Plant Branch AP



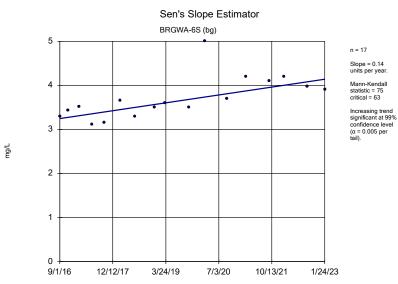
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Plant Branch Client: Southern Company Data: Plant Branch AP



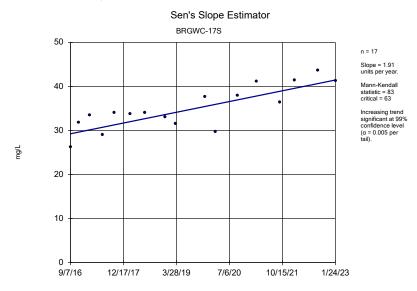
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Plant Branch Client: Southern Company Data: Plant Branch AP



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Plant Branch Client: Southern Company Data: Plant Branch AP

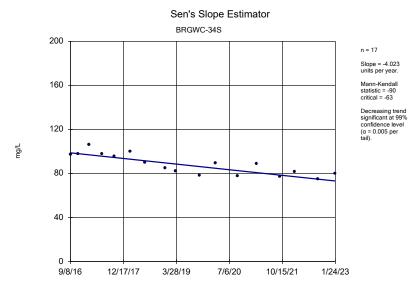


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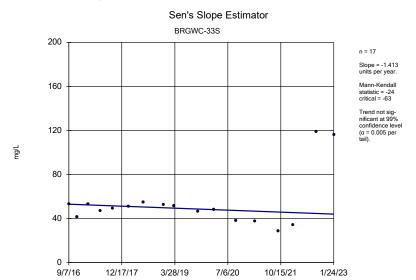


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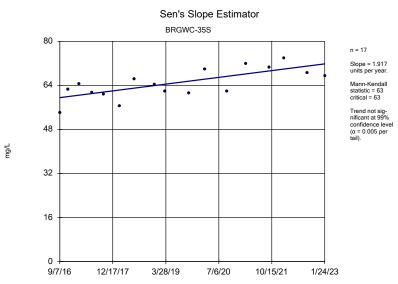




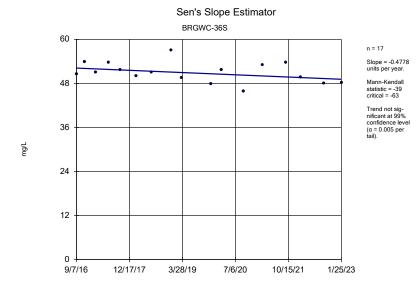
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Plant Branch Client: Southern Company Data: Plant Branch AP



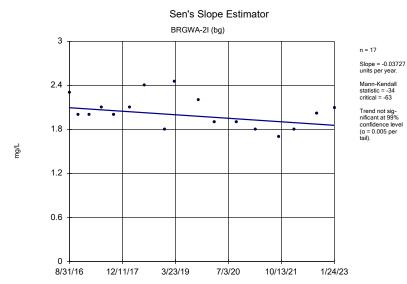
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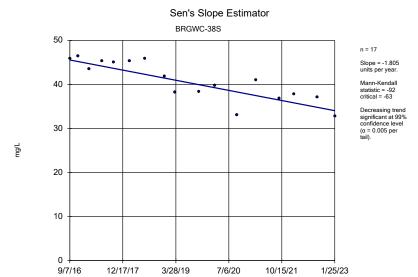
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Plant Branch Client: Southern Company Data: Plant Branch AP



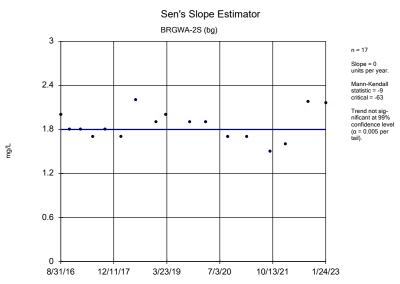
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Plant Branch Client: Southern Company Data: Plant Branch AP



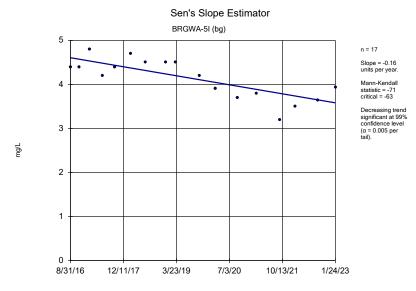
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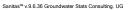
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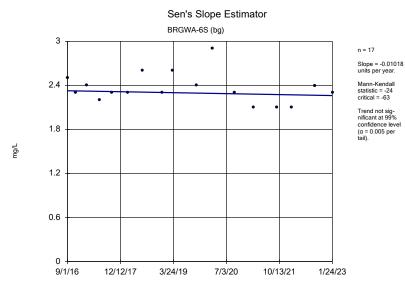


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Plant Branch Client: Southern Company Data: Plant Branch AP

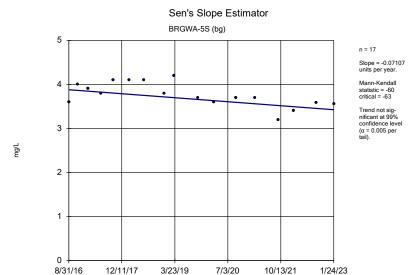


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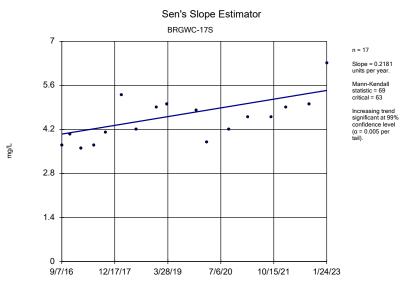




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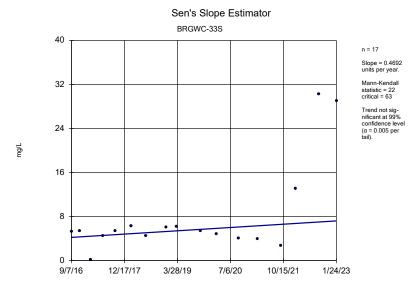


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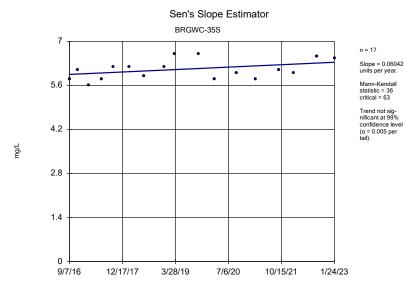


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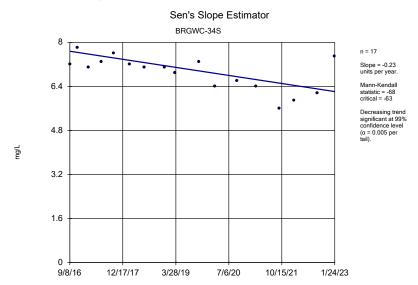
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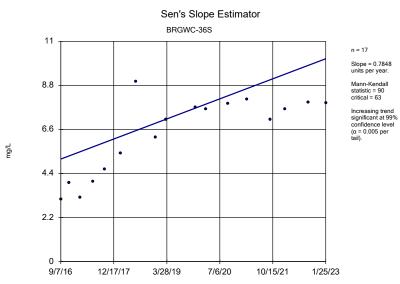
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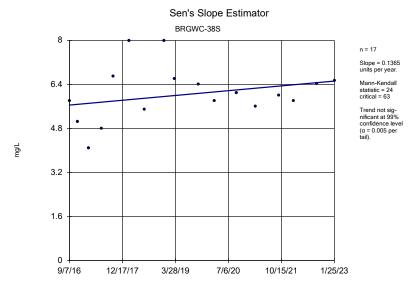
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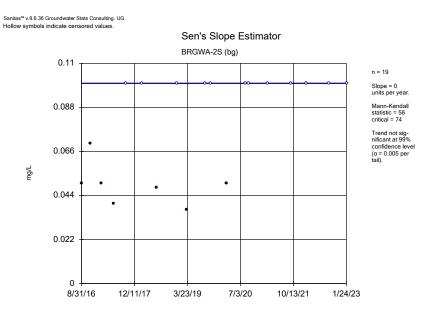
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Plant Branch Client: Southern Company Data: Plant Branch AP

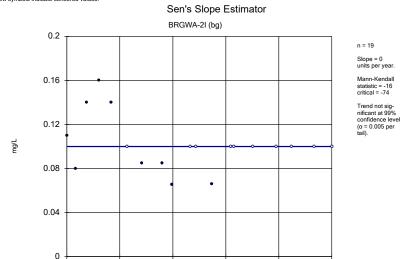


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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Fluoride Analysis Run 2/27/2023 2:36 PM View: Pond E - 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.



Constituent: Fluoride Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

7/3/20

1/24/23

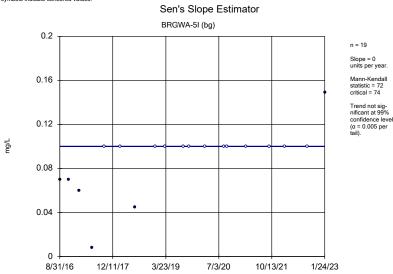
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3/23/19

# Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

8/31/16

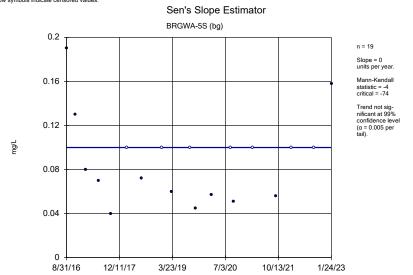
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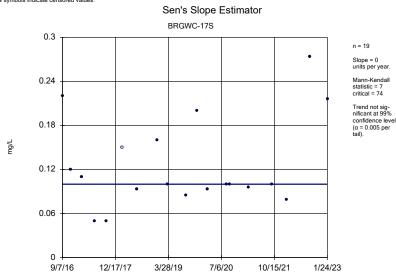
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



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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.



Constituent: Fluoride Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
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Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



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Plant Branch Client: Southern Company Data: Plant Branch AP

7/3/20

3/24/19

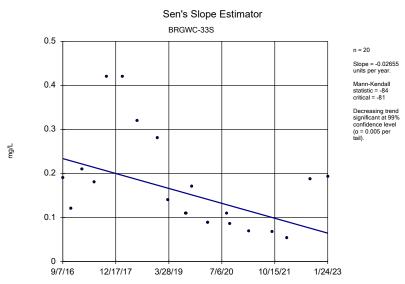
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10/13/21

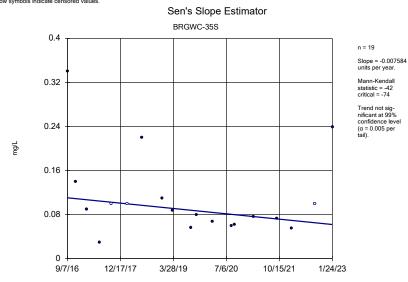
Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

9/1/16

12/12/17

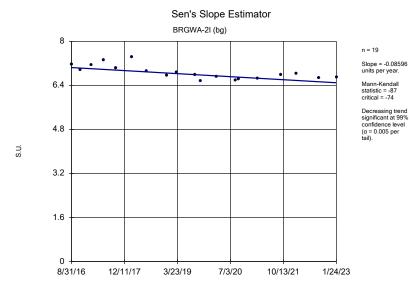


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Plant Branch Client: Southern Company Data: Plant Branch AP

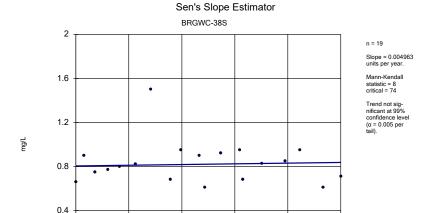


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Plant Branch Client: Southern Company Data: Plant Branch AP





Constituent: pH, Field Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Fluoride Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

7/6/20

1/25/23

10/15/21

3/28/19

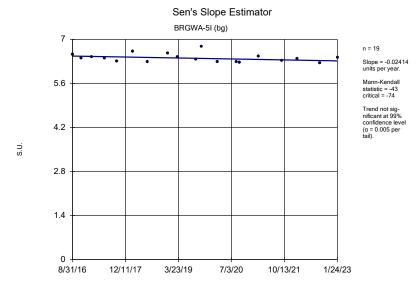
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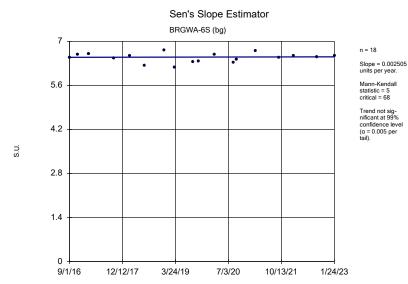
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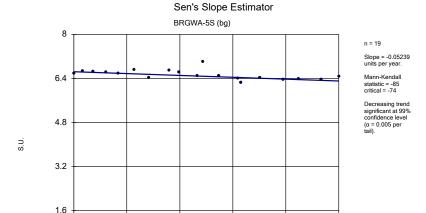
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: pH, Field Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: pH, Field Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: pH, Field Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
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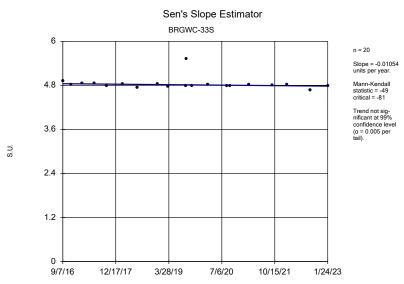
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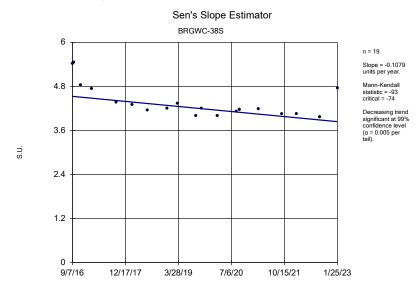
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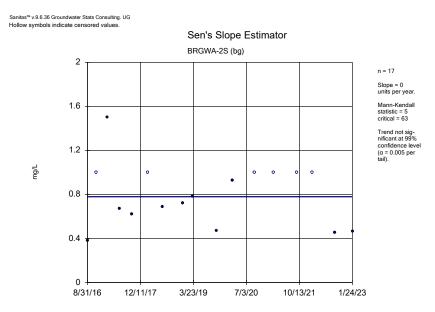


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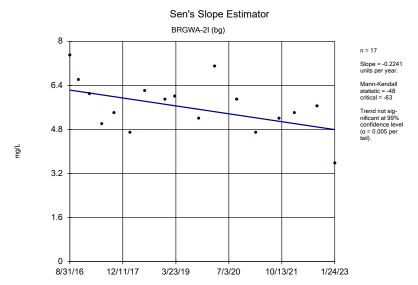
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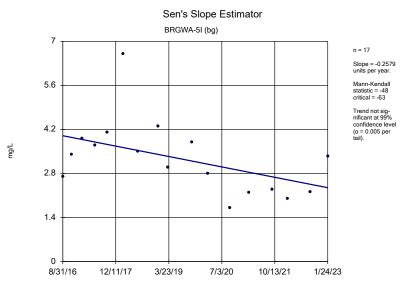
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Constituent: Sulfate Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

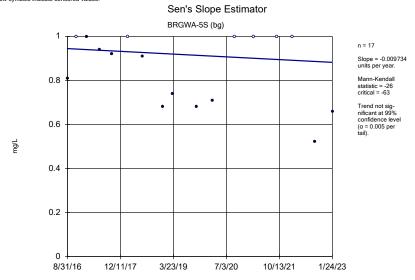


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Plant Branch Client: Southern Company Data: Plant Branch AP



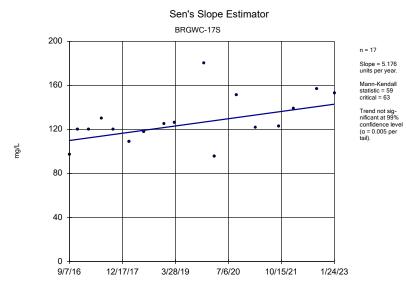
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



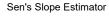
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Plant Branch Client: Southern Company Data: Plant Branch AP

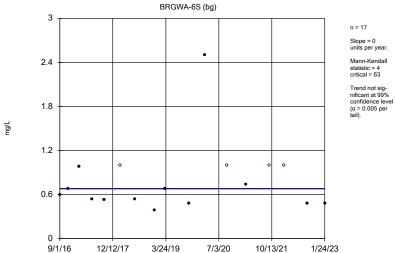
Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG



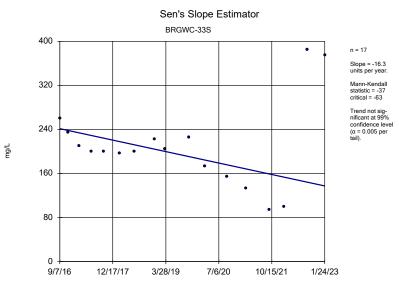
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

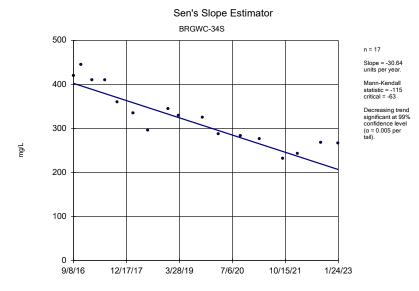




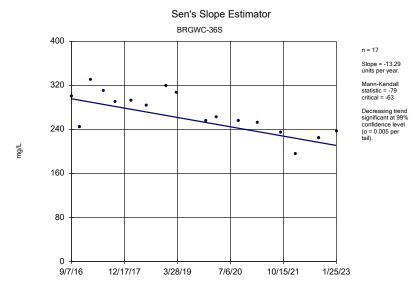
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Plant Branch Client: Southern Company Data: Plant Branch AP



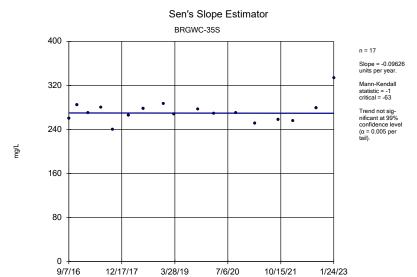
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Plant Branch Client: Southern Company Data: Plant Branch AP



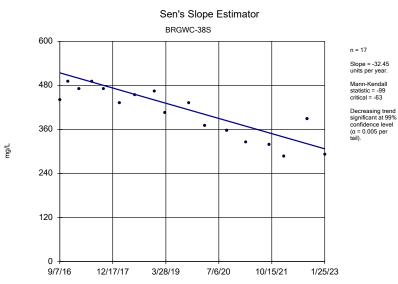
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Sulfate Analysis Run 2/27/2023 2:36 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

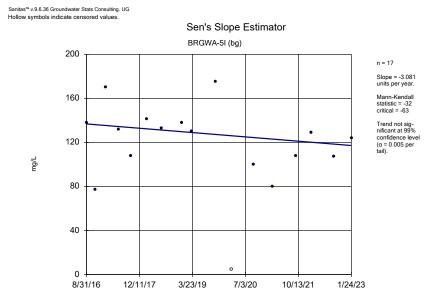


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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Sulfate Analysis Run 2/27/2023 2:37 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Constituent: Total Dissolved Solids Analysis Run 2/27/2023 2:37 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Total Dissolved Solids Analysis Run 2/27/2023 2:37 PM View: Pond E - 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.

90

72

54

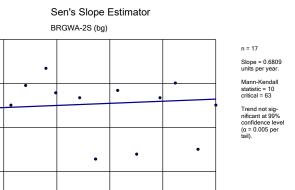
36

18

8/31/16

12/11/17

mg/L



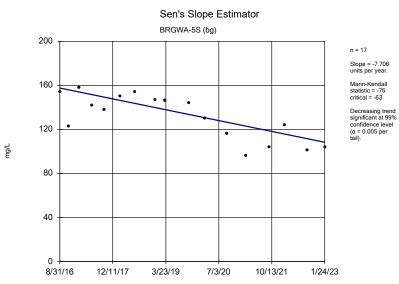
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1/24/23

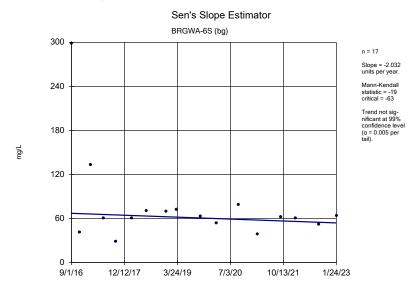
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Plant Branch Client: Southern Company Data: Plant Branch AP

7/3/20

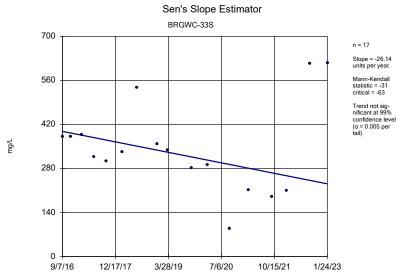
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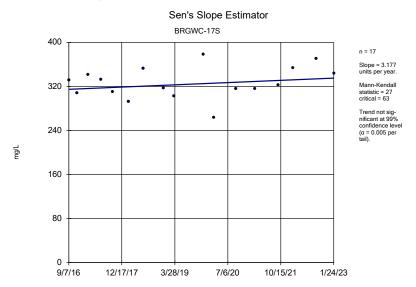
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Plant Branch Client: Southern Company Data: Plant Branch AP



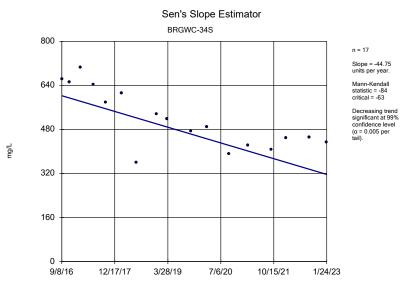
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Total Dissolved Solids Analysis Run 2/27/2023 2:37 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

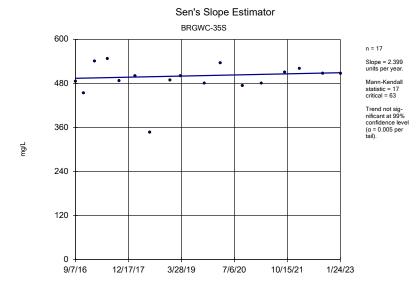


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Plant Branch Client: Southern Company Data: Plant Branch AP

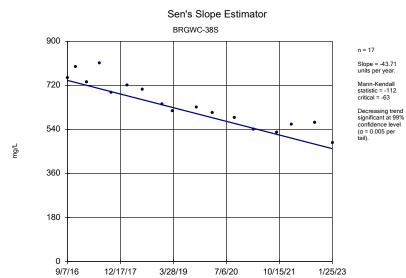


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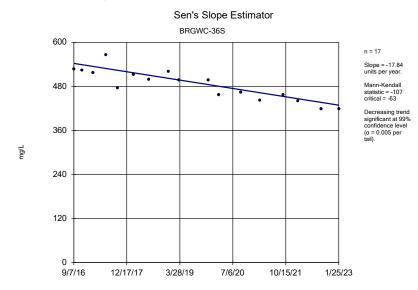
Plant Branch Client: Southern Company Data: Plant Branch AP



Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG



Constituent: Total Dissolved Solids Analysis Run 2/27/2023 2:37 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Total Dissolved Solids Analysis Run 2/27/2023 2:37 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

# FIGURE F.

# **Upper Tolerance Limits Summary Table**

Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:00 AM %NDs ND Adj. Constituent <u>Well</u> Upper Lim. Lower Lim. <u>Date</u> Observ. Sig.Bg N Bg Mean Std. Dev. Transform Alpha Method 0.003 n/a 90 92.22 n/a 0.009888 NP Inter(NDs) Antimony (mg/L) n/a n/a n/a n/a n/a n/a n/a 0.005 76.67 n/a 0.009888 NP Inter(NDs) Arsenic (mg/L) n/a n/a n/a n/a n/a 90 n/a n/a n/a Barium (mg/L) 0.063 n/a 90 0 0.009888 NP Inter(normality) n/a n/a n/a n/a n/a n/a n/a n/a 0.009888 NP Inter(NDs) Beryllium (mg/L) n/a 0.0005 n/a n/a 90 100 n/a n/a 0.009888 NP Inter(NDs) Cadmium (mg/L) n/a 0.001 n/a n/a n/a n/a 90 n/a n/a 100 n/a n/a 0.009888 NP Inter(normality) Chromium (mg/L) n/a 0.016 n/a n/a n/a 90 15.56 n/a n/a 0.0034 0.01096 NP Inter(normality) Cobalt (mg/L) n/a n/a n/a n/a 88 n/a 45.45 n/a n/a n/a n/a Combined Radium 226 + 228 (pCi/L) n/a 1.736 n/a n/a 90 0.7922 0.2703 0 None 0.05 Fluoride (mg/L) 0.19 n/a 95 55.79 n/a n/a 0.007651 NP Inter(NDs) n/a n/a n/a n/a n/a n/a Lead (mg/L) n/a 0.002 n/a 90 0.009888 NP Inter(NDs) 0.089 0.009888 NP Inter(normality) Lithium (mg/L) n/a 90 44.44 n/a n/a n/a n/a n/a n/a n/a n/a Mercury (mg/L) n/a 0.00021 n/a 80 87.5 0.01652 NP Inter(NDs) 0.009888 NP Inter(NDs) 0.008 Molybdenum (mg/L) n/a n/a n/a n/a n/a 90 n/a n/a 67.78 n/a n/a Selenium (mg/L) n/a 0.005 n/a 90 100 0.009888 NP Inter(NDs) Thallium (mg/L) 0.002 100 n/a 0.009888 NP Inter(NDs) n/a n/a n/a n/a n/a 90 n/a n/a n/a

# FIGURE G.

PLANT BRANCH POND E GWPS							
		CCR-Rule					
Constituent Name	MCL	Specified	Background Limit	GWPS			
Antimony, Total (mg/L)	0.006		0.003	0.006			
Arsenic, Total (mg/L)	0.01		0.005	0.01			
Barium, Total (mg/L)	2		0.063	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	0.0034	0.006			
Combined Radium, Total (pCi/L)	5		1.74	5			
Fluoride, Total (mg/L)	4		0.19	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		0.005	0.05			
Thallium, Total (mg/L)	0.002		0.002	0.002			

<sup>\*</sup>Highlighted cells indicate Background is higher than MCLs

<sup>\*</sup>MCL = Maximum Contaminant Level

<sup>\*</sup>CCR = Coal Combustion Residuals

<sup>\*</sup>GWPS = Groundwater Protection Standard

# FIGURE H.

# Confidence Intervals - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:11 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	<u>Mean</u>	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	0.009297	0.00797	0.004	Yes	19	0.008634	0.001134	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-33S	0.05312	0.03893	0.006	Yes	19	0.04602	0.01212	0	None	No	0.01	Param.
Cobalt (mg/L)	BRGWC-38S	0.2505	0.1997	0.006	Yes	18	0.2251	0.04201	0	None	No	0.01	Param.

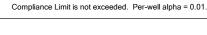
# Confidence Intervals - All Results

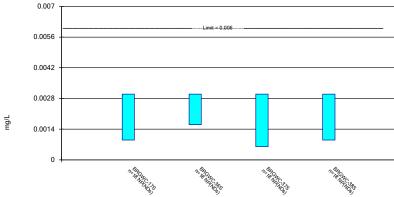
Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:11 AM Constituent Wel Sig. Std. Dev. %NDs ND Adj. <u>Alpha</u> Method Upper Lim. Lower Lim. N BRGWC-17S 0.000495 Antimony (mg/L) 0.003 0.0009 0.002883 94.44 None No NP (NDs) 0.003 0.0016 0.0009876 NP (NDs) Antimony (mg/L) BRGWC-36S 0.006 No 0.002502 77.78 None 0.01 18 No Antimony (mg/L) BRGWC-37S 0.003 0.0006 0.006 No 18 0.002722 0.0008092 88.89 None Nο 0.01 NP (NDs) BRGWC-38S 0.003 0.0009 0.002756 0.0007123 88.89 None NP (NDs) Antimony (mg/L) 0.006 No 18 No 0.01 Arsenic (mg/L) BRGWC-17S 0.005 0.0033 0.01 No 18 0.004178 0.001678 77.78 None No 0.01 NP (NDs) BRGWC-33S 0.005 0.00262 0.004252 0.001547 NP (NDs) Arsenic (ma/L) 0.01 No 19 78.95 None No 0.01 0.01 Arsenic (mg/L) BRGWC-35S 0.005 0.0006 No 0.004247 0.001734 83.33 None No 0.01 NP (NDs) Arsenic (ma/L) BRGWC-36S 0.004286 0.001645 83.33 None No NP (NDs) BRGWC-37S 0.004144 0.001728 NP (NDs) 0.005 0.003 0.01 No 77.78 None 0.01 Arsenic (ma/L) No BRGWC-38S 0.003395 0.001906 0.002651 Arsenic (mg/L) 0.01 Nο 18 0.001231 11 11 None Nο 0.01 Param 0.0625 NP (NDs) Arsenic (mg/L) PZ-13S 0.005 0.00388 0.01 No 0.00472 0.00056 75 None No BRGWC-17S 0.04387 0.0392 2 0.04153 0 Barium (mg/L) No 18 0.003865 None No 0.01 Param Barium (mg/L) BRGWC-33S 0.0243 0.02 0.02321 0.005815 2 No 19 0 None Nο 0.01 NP (normality) 0.006961 Barium (mg/L) BRGWC-34S 0.0347 0.0232 2 No 18 0.02892 0 No NP (normality) None 0.01 BRGWC-35S 0.0518 0.0339 No 0.04662 0.01897 0 0.01 NP (normality) Barium (mg/L) No None BRGWC-36S 0.0415 0.0296 2 Barium (mg/L) No 0.03725 0.01041 0 0.01 NP (normality) 18 None No Barium (mg/L) BRGWC-37S 0.02518 0.0233 2 Nο 18 0.02424 0.001557 0 None No 0.01 Param. BRGWC-38S 0.0247 0.015 2 0.009558 Barium (mg/L) No 0.02104 0 None No 0.01 NP (normality) PZ-13S 0.1734 -0.01055 2 0.08143 0.04051 0 Barium (mg/L) No None No 0.01 Param. Beryllium (mg/L) BRGWC-33S 0.002005 0.001591 0.004 No 0.001798 0.0003539 5.263 None Nο 0.01 Param 0.0002 0.000157 0.00012 0.0002178 Beryllium (mg/L) BRGWC-34S 0.004 No 22.22 None No 0.01 NP (normality) Beryllium (mg/L) BRGWC-35S 0.0001 0.004 No 0.0001961 0.000143 16.67 None No 0.01 NP (normality) BRGWC-36S 0.0005 0.0002216 0.0001945 NP (normality) Beryllium (mg/L) 0.000084 0.004 Nο 19 31 58 None Nο 0.01 Beryllium (mg/L) BRGWC-38S 0.009297 0.00797 0.004 Yes 0.008634 0.001134 0 None No 0.01 Param. Beryllium (mg/L) PZ-13S 0.0005713 0.0002552 0.004 0.0004133 0.00006962 0 None No BRGWC-33S Cadmium (mg/L) 0.0004548 0.0003232 0.005 19 0.000389 0.0001124 5.263 None No 0.01 Param. No Cadmium (mg/L) BRGWC-34S 0.0003893 0.0001816 0.005 No 18 0.0004554 0.0003243 16.67 Kaplan-Meier In(x) 0.01 Cadmium (mg/L) 0.001 0.0001 0.005 No 0.0009042 0.0002869 NP (NDs) Cadmium (mg/L) BRGWC-38S 0.0005984 0.000487 0.005 No 18 0.0005427 0.00009208 5.556 None No 0.01 Param. Cadmium (mg/L) PZ-13S 0.001 0.00011 0.005 No 0.0007775 0.000445 75 None Nο 0.0625 NP (NDs) Chromium (mg/L) BRGWC-17S 0.01259 0.009933 0.1 No 0.01133 0.002321 0 None sqrt(x) 0.01 Param. Chromium (mg/L) BRGWC-33S 0.01 0.00049 0.1 No 0.009499 0.002182 94.74 None No 0.01 NP (NDs) Chromium (ma/L) BRGWC-35S 0.006574 0.004499 0.1 18 0.005537 0.001715 5.556 None 0.01 Param. No No Chromium (mg/L) BRGWC-36S 0.008226 0.007146 0.1 No 18 0.007686 0.000893 0 None No 0.01 Param. Chromium (mg/L) BRGWC-37S 0.0014 0.1 No 0.003867 0.003919 27.78 None No 0.01 NP (normality) BRGWC-38S 0.00411 0.003717 Param. Chromium (mg/L) 0.003499 0.1 No 18 0.0007207 0 None x^3 0.01 Chromium (mg/L) PZ-13S 0.0305 0.006047 0.1 No 0.01828 0.005386 0 None Nο 0.01 Param. Cobalt (mg/L) BRGWC-33S 0.05312 0.03893 0.006 0.04602 0.01212 0 None No 0.01 Cobalt (mg/L) BRGWC-34S 0.004512 0.003371 0.006 No 18 0.004016 0.001087 5.556 None In(x) 0.01 Param Cobalt (mg/L) BRGWC-35S 0.0012 0.0008 18 0 001 0.0003926 72 22 None NP (NDs) 0.006 Nο Nο 0.01 Cobalt (mg/L) BRGWC-38S 0.2505 0.1997 0.006 0.2251 0.04201 0 No 0.01 Param None Cobalt (mg/L) 0.00037 No 0.0008425 0.000315 75 None No 0.0625 NP (NDs) Combined Radium 226 + 228 (pCi/L) 0.7614 0.3561 5 No 0.5587 0 0.01 Param BRGWC-17S 18 0.335 None Nο Combined Radium 226 + 228 (pCi/L) BRGWC-33S 1.433 0.6495 5 No 18 1.102 0.7251 0 None 0.01 Param. sqrt(x) Combined Radium 226 + 228 (pCi/L) BRGWC-34S 1.244 0.7613 5 No 1.026 0.4342 0 None sqrt(x) 0.01 Param. Combined Radium 226 + 228 (pCi/L) 0.4806 5 0.8935 BRGWC-35S 1.363 No 18 1.011 0 None 0.01 Param. sqrt(x) Combined Radium 226 + 228 (pCi/L) BRGWC-36S 1.43 0.6703 5 Nο 18 1 206 1.008 0 None In(x) 0.01 Param Combined Radium 226 + 228 (pCi/L) BRGWC-37S 0.3975 5 0.7428 0.9846 No 18 0.5511 0 None sqrt(x) 0.01 Combined Radium 226 + 228 (pCi/L) BRGWC-38S 3.583 2.021 5 2.89 0 No 1.44 None 0.01 Param. sqrt(x) Combined Radium 226 + 228 (pCi/L) 5 PZ-13S 5.806 -1.875 2.053 25 No 1.88 Kaplan-Meier No 0.01 Param. Fluoride (mg/L) BRGWC-17S 0.1553 0.08879 4 No 19 0.1261 0.06127 5.263 None 0.01 Param. sqrt(x) Fluoride (mg/L) BRGWC-33S 0.2225 0.1111 No 20 0.1762 0.1086 0 None 0.01 Param. sqrt(x) Fluoride (mg/L) 0.08016 19 0.1241 5.263 None BRGWC-34S 0.1454 4 No 0.08005 In(x) 0.01 Param. Fluoride (mg/L) BRGWC-35S 0.125 0.06256 4 No 19 0.1098 0.07679 15.79 Kaplan-Meier In(x) 0.01 Param. Fluoride (mg/L) BRGWC-36S 0.18 0.054 4 No 0.1227 0.1058 47.37 None No NP (normality) BRGWC-37S 0.1 0.055 4 No 0.08258 0.02773 42 11 None 0.01 NP (normality) Fluoride (ma/L) 19 No BRGWC-38S 0 7211 4 Fluoride (mg/L) 0.9214 Nο 19 0.8335 0.1982 n None In(x) 0.01 Param Fluoride (mg/L) PZ-13S 0.1439 0.01015 No 0.097 0.02798 0.01 Param. 4 50 Kaplan-Meier

# Confidence Intervals - All Results

Client: Southern Company Data: Plant Branch AP Printed 3/20/2023, 11:11 AM Constituent Well Upper Lim. Lower Lim. Compliance Sig. <u>N</u> Mean Std. Dev. %NDs ND Adj. <u>Transform</u> Alpha Method BRGWC-17S 0.002 0.0001 0.015 0.001786 0.0006219 88.89 None No NP (NDs) Lead (mg/L) 18 BRGWC-33S 0.002 0.00007 0.0009393 0.015 19 0.000804 0.01 NP (normality) Lead (mg/L) No 36.84 None No 0.002 Lead (mg/L) BRGWC-34S 0.0003 0.015 No 18 0.001694 0.0007055 83.33 None Nο 0.01 NP (NDs) Lead (mg/L) BRGWC-35S 0.002 0.0002 0.015 No 18 0.001584 0.0008002 77.78 None No 0.01 NP (NDs) Lead (mg/L) BRGWC-36S 0.002 0.000047 0.015 No 18 0.001892 0.0004603 94.44 None No 0.01 NP (NDs) Lead (mg/L) BRGWC-37S 0.002 0.0001 0.015 18 0.001789 0.0006144 88.89 None 0.01 NP (NDs) No No Lead (mg/L) BRGWC-38S 0.0005 0.00035 0.015 No 18 0.00075 0.0006896 22.22 None No 0.01 NP (normality) Lead (mg/L) PZ-13S 0.002 0.00035 0.015 0.001588 0.000825 0.0625 NP (NDs) BRGWC-17S 0.01 0.00097 0.006492 0.004526 0.01 NP (NDs) Lithium (ma/L) 0.089 No 61.11 None No 0.0104 BRGWC-33S 0.009245 19 0.009821 0.000983 0.01 Param Lithium (mg/L) 0.089 Nο None Nο BRGWC-34S 0.01 0.00089 0.089 18 0.006956 0.00443 66.67 None NP (NDs) Lithium (mg/L) No Lithium (mg/L) BRGWC-35S 0.0023 0.0021 0.089 18 0.002456 0.0009288 11.11 None 0.01 NP (normality) No No 0.0023 Lithium (mg/L) BRGWC-36S 0.0026 0.089 18 0.003711 0.002897 16.67 None 0.01 NP (normality) No Nο Lithium (mg/L) BRGWC-38S 0.0227 0.02048 0.089 No 18 0.02159 0.001839 0 None No 0.01 Param. 0.002281 Lithium (mg/L) 0.0006748 0.089 No 0.005675 0.005002 50 Kaplan-Meier x^(1/3) 0.01 0.0002 BRGWC-17S 0.0001 0.0000484 NP (NDs) Mercury (mg/L) 0.002 No 16 0.0001777 81.25 None 0.01 No 0.0002 Mercury (mg/L) BRGWC-33S 0.00012 0.002 No 17 0.0001782 0.00005053 82.35 None No 0.01 NP (NDs) BRGWC-34S 0.0002 0.00012 0.002 16 0.0001737 0.00005188 75 NP (NDs) Mercury (mg/L) None No 0.01 0.0002 0.00013 BRGWC-35S 0.002 16 0.0001819 0.00004053 0.01 NP (NDs) Mercury (mg/L) No 81.25 None No 0.00013 Mercury (mg/L) BRGWC-36S 0.0002 0.002 No 16 0.0001812 0.00004177 81.25 None Nο 0.01 NP (NDs) Mercury (mg/L) BRGWC-37S 0.0002 0.00014 0.002 No 0.0001819 0.00004167 81.25 None No 0.01 NP (NDs) Mercury (mg/L) BRGWC-38S 0.000154 0.0000953 0.002 No 0.0001464 0.00004947 18.75 Kaplan-Meier 0.01 Param. BRGWC-17S 0.002487 0.00177 0.05 18 0.002903 0.001315 22 22 Kaplan-Meier Param Selenium (mg/L) Nο In(x) 0.01 Selenium (mg/L) BRGWC-33S 0.005 0.0028 0.05 No 19 0.004142 0.001271 47.37 None No 0.01 NP (normality) BRGWC-36S 0.004886 0.002917 18 0.004002 0.001788 Selenium (mg/L) 0.05 None sqrt(x) 0.01 Param. BRGWC-38S 0.0403 0.03213 18 0.03622 0.006757 Selenium (ma/L) 0.05 No 0 None 0.01 Param. No Selenium (mg/L) PZ-13S 0.004543 0.0006174 0.05 No 4 0.00258 0.0008644 0 None No 0.01 Param Thallium (mg/L) 0.002 0.000066 0.0004558 BRGWC-17S 0.002 No 0.001893 94.44 None No NP (NDs) Thallium (mg/L) BRGWC-33S 0.00024 0.00018 0.002 19 0.0005753 0.0007561 NP (normality) No 21.05 None No 0.01 0.002 0.0002 18 0.0008294 NP (normality) Thallium (mg/L) BRGWC-38S 0.002 Nο 0.0008535 33.33 None Nο

## Non-Parametric Confidence Interval



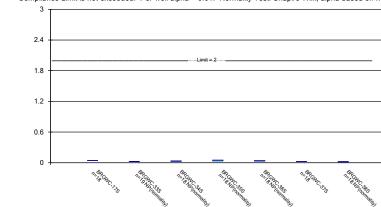


Constituent: Antimony Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

# Parametric and Non-Parametric (NP) Confidence Interval

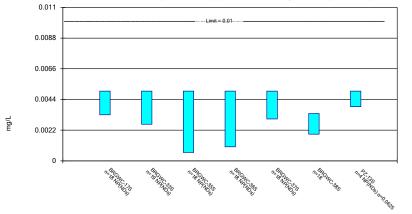
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 3/20/2023 11:10 AM View: Pond E - 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.

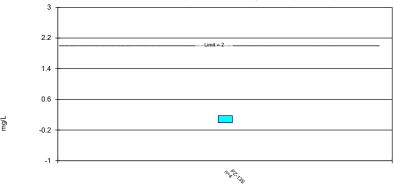


Constituent: Arsenic Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

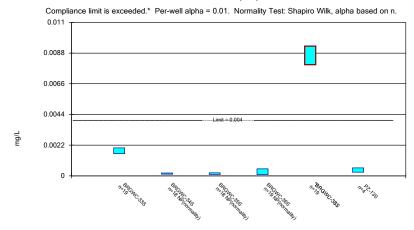
# Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

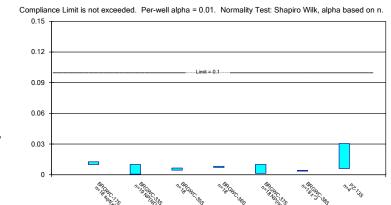
# Parametric and Non-Parametric (NP) Confidence Interval



Constituent: Beryllium Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

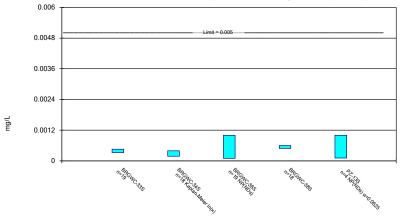
# Parametric and Non-Parametric (NP) Confidence Interval



Constituent: Chromium Analysis Run 3/20/2023 11:10 AM View: Pond E - 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.



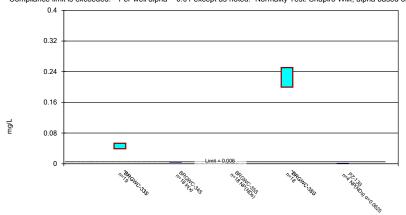
Constituent: Cadmium Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

# Parametric and Non-Parametric (NP) Confidence Interval

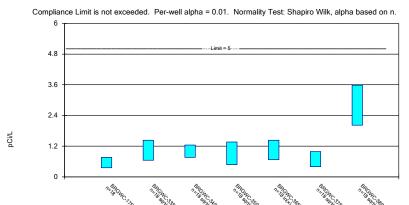
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

## Parametric Confidence Interval

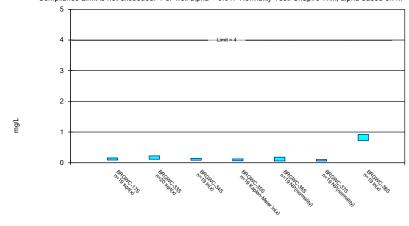


Constituent: Combined Radium 226 + 228 Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence I
Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

# Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

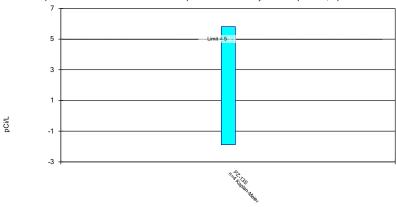


Constituent: Fluoride Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals

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.

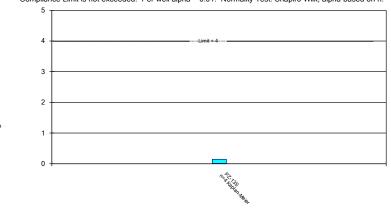


Constituent: Combined Radium 226 + 228 Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence I
Plant Branch Client: Southern Company Data: Plant Branch AP

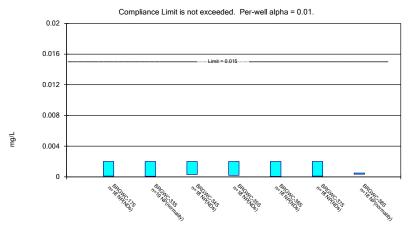
## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

# Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



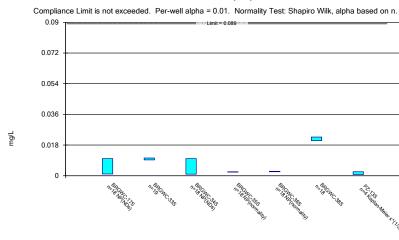
## Non-Parametric Confidence Interval



Constituent: Lead Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

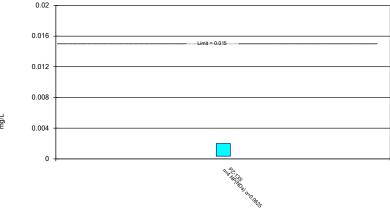
# Parametric and Non-Parametric (NP) Confidence Interval



Constituent: Lithium Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

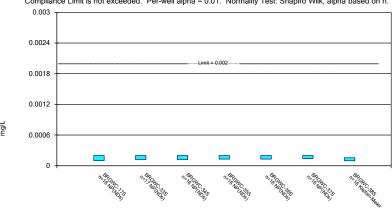


Constituent: Lead Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals Plant Branch Client: Southern Company Data: Plant Branch AP

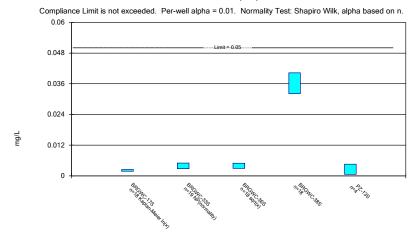
## Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

# Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



# Parametric and Non-Parametric (NP) Confidence Interval

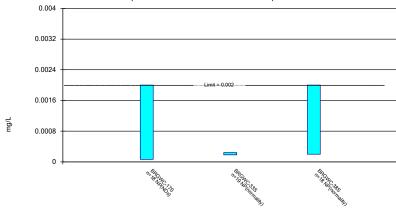


Constituent: Selenium Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.37 Groundwater Stats Consulting. UG

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 3/20/2023 11:10 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Constituent: Antimony (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	<0.003	<0.003		<0.003
11/17/2016	<0.003			
11/18/2016		0.0016 (J)		
11/21/2016				0.0009 (J)
2/22/2017	<0.003			
2/23/2017		<0.003	<0.003	<0.003
4/17/2017			0.0004 (J)	
5/15/2017			<0.003	
6/15/2017	0.0009 (J)	0.0006 (J)	0.0006 (J)	0.0007 (J)
9/28/2017	<0.003	<0.003	<0.003	<0.003
2/15/2018	<0.003	<0.003	<0.003	<0.003
6/27/2018	<0.003			
6/28/2018		<0.003	<0.003	<0.003
12/19/2018	<0.003	<0.003	<0.003	
12/20/2018				<0.003
8/28/2019	<0.003	0.00035 (J)	<0.003	
8/29/2019				<0.003
10/16/2019			<0.003	<0.003
12/3/2019	<0.003	0.00049 (J)		
3/3/2020	<0.003			
3/5/2020		<0.003	<0.003	<0.003
8/19/2020	<0.003	<0.003	<0.003	<0.003
9/16/2020	<0.003	<0.003	<0.003	
9/17/2020				<0.003
3/3/2021		<0.003	<0.003	
3/4/2021	<0.003			<0.003
9/22/2021	<0.003	<0.003		
9/23/2021			<0.003	<0.003
2/1/2022	<0.003	<0.003		<0.003
2/2/2022			<0.003	
8/23/2022			<0.003	<0.003
8/24/2022	<0.003	<0.003		
1/24/2023	<0.003			
1/25/2023		<0.003	<0.003	<0.003
Mean	0.002883	0.002502	0.002722	0.002756
Std. Dev.	0.000495	0.0009876	0.0008092	0.0007123
Upper Lim.	0.003	0.003	0.003	0.003
Lower Lim.	0.0009	0.0016	0.0006	0.0009

Constituent: Arsenic (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

0/7/2016	BRGWC-17S	BRGWC-33S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S
9/7/2016 11/17/2016	<0.005	<0.005	<0.005	<0.005		0.0026 (J)	
	<0.005	<0.005	<0.005	<0.00E			
11/18/2016				<0.005		0.0024 (1)	
11/21/2016	.0.005	.0.005	.0.005			0.0034 (J)	
2/22/2017	<0.005	<0.005	<0.005	.0.005	.0.005	0.000 (1)	
2/23/2017				<0.005	<0.005	0.003 (J)	
4/17/2017					<0.005		
5/15/2017					<0.005		
6/14/2017		0.0006 (J)					
6/15/2017	0.0006 (J)		0.0006 (J)	0.0007 (J)	<0.005	0.005 (J)	
9/27/2017		<0.005					
9/28/2017	<0.005		<0.005	<0.005	<0.005	0.0046 (J)	
2/15/2018	<0.005	<0.005	<0.005	<0.005	<0.005	0.0016 (J)	
6/27/2018	<0.005	<0.005	<0.005				
6/28/2018				<0.005 (X)	<0.005 (X)	<0.005 (X)	
12/18/2018		<0.005 (X)					
12/19/2018	<0.005		<0.005	<0.005	<0.005		
12/20/2018						0.00098 (J)	
1/15/2019							<0.005
8/27/2019		<0.005					
8/28/2019	0.00073 (J)	<0.005	0.00044 (J)	0.00045 (J)	0.00038 (J)		
8/29/2019						0.0013 (J)	
10/16/2019		0.00056 (J)	0.0004 (J)		0.00078 (J)	0.0024 (J)	
10/22/2019							<0.005
12/3/2019	0.00058 (J)			0.001 (J)			
3/3/2020	0.0033 (J)						
3/5/2020		<0.005	<0.005	<0.005	0.00044 (J)	0.0011 (J)	
8/19/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.0021 (J)	
9/16/2020	<0.005	<0.005	<0.005	<0.005	<0.005		
9/17/2020						0.0015 (J)	
3/3/2021		<0.005		<0.005	<0.005		
3/4/2021	<0.005		<0.005			0.0029 (J)	
9/22/2021	<0.005	<0.005		<0.005			
9/23/2021			<0.005		<0.005	0.002 (J)	
2/1/2022	<0.005	<0.005	<0.005	<0.005		<0.005	
2/2/2022					<0.005		
8/23/2022		0.00262 (J)			<0.005	0.00337 (J)	<0.005
8/24/2022	<0.005		<0.005	<0.005			
1/24/2023	<0.005	0.00201 (J)	<0.005				
1/25/2023				<0.005	0.003 (J)	0.00486 (J)	
1/26/2023							0.00388 (J)
Mean	0.004178	0.004252	0.004247	0.004286	0.004144	0.002651	0.00472
Std. Dev.	0.001678	0.001547	0.001734	0.001645	0.001728	0.001231	0.00056
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.003395	0.005
Lower Lim.	0.0033	0.00262	0.0006	0.001	0.003	0.001906	0.00388

Constituent: Barium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	0.0377	0.0214		0.101	0.0674		0.044
9/8/2016			0.0415				
11/17/2016	0.0405	0.0211	0.04	0.0808			
11/18/2016					0.0546		
11/21/2016							0.0428 (J)
2/22/2017	0.0392	0.0243	0.0415	0.0701			
2/23/2017					0.0489	0.0229	0.0338
4/17/2017						0.0227	
5/15/2017						0.0227	
6/14/2017		0.0218	0.0341				
6/15/2017	0.0364			0.0518	0.0415	0.0218	0.0239
9/27/2017		0.0219	0.0347				
9/28/2017	0.0408			0.047	0.0397	0.0222	0.0247
2/15/2018	0.0396	0.0248	0.0346	0.0485	0.038	0.0243	0.0215
6/27/2018	0.041	0.023	0.028	0.046			
6/28/2018					0.035	0.023	0.018
12/18/2018		0.023	0.029				
12/19/2018	0.038			0.04	0.035	0.024	
12/20/2018							0.017
8/27/2019		0.02					
8/28/2019	0.044	0.02	0.026	0.039	0.034	0.027	
8/29/2019							0.016
10/16/2019		0.019	0.022	0.037		0.024	0.015
12/3/2019	0.043				0.031		
3/3/2020	0.036						
3/5/2020		0.022	0.025	0.039	0.033	0.025	0.016
8/19/2020	0.047	0.02	0.024	0.04	0.037	0.026	0.016
9/16/2020	0.044	0.019	0.023	0.033	0.03	0.024	
9/17/2020							0.014
3/3/2021		0.02	0.024		0.031	0.024	
3/4/2021	0.039			0.034			0.015
9/22/2021	0.043	0.019	0.021		0.028		
9/23/2021				0.036		0.027	0.014
2/1/2022	0.045	0.023	0.024	0.033	0.029		0.015
2/2/2022						0.025	
8/23/2022		0.0409				0.026	0.0141
8/24/2022	0.0512		0.0249	0.0339	0.0296		
1/24/2023	0.0422	0.0368	0.0232	0.0291			
1/25/2023					0.0278	0.0247	0.018
Mean	0.04153	0.02321	0.02892	0.04662	0.03725	0.02424	0.02104
Std. Dev.	0.003865	0.005815	0.006961	0.01897	0.01041	0.001557	0.009558
Upper Lim.	0.04387	0.0243	0.0347	0.0518	0.0415	0.02518	0.0247
Lower Lim.	0.0392	0.02	0.0232	0.0339	0.0296	0.0233	0.015

Constituent: Barium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-13S
1/15/2019	0.14
10/22/2019	0.077
8/23/2022	0.0562
1/26/2023	0.0525
Mean	0.08143
Std. Dev.	0.04051
Upper Lim.	0.1734
Lower Lim.	-0.01055

Constituent: Beryllium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-38S	PZ-13S
9/7/2016	0.0019 (J)		9E-05 (J)	<0.0005	0.0079	
9/8/2016		0.0001 (J)				
9/23/2016					0.0096 (R)	
11/17/2016	0.002 (J)	0.0001 (J)	0.0001 (J)			
11/18/2016				0.0001 (J)		
11/21/2016					0.0092	
2/22/2017	0.0022 (J)	0.0002 (J)	0.0001 (J)			
2/23/2017				0.0001 (J)	0.01	
6/14/2017	0.0019 (J)	<0.0005				
6/15/2017			0.0001 (J)	9E-05 (J)	0.0104	
9/27/2017	0.0017 (J)	0.0001 (J)				
9/28/2017			0.0001 (J)	0.0001 (J)	0.0098	
2/15/2018	<0.003	<0.0005	<0.0005	<0.0005	0.011 (J)	
6/27/2018	0.002 (J)	0.00013 (J)	0.00015 (J)			
6/28/2018				8.1E-05 (J)	0.0085	
12/18/2018	0.0021 (J)	0.00012 (J)				
12/19/2018			<0.0005 (X)	<0.0005 (X)		
12/20/2018					0.0092	
1/15/2019						0.0005 (J)
8/27/2019	0.0019 (J)					
8/28/2019	0.0019 (J)	0.00014 (J)	0.00016 (J)	0.00011 (J)		
8/29/2019					0.0088	
10/16/2019	0.0018 (J)	0.00014 (J)	0.00015 (J)		0.0079	
10/17/2019				<0.0005		
10/22/2019						0.0004 (J)
12/3/2019				9.7E-05 (J)		
3/5/2020	0.0018 (J)	0.00015 (J)	0.00015 (J)	9.2E-05 (J)	0.0082	
8/19/2020	0.0014 (J)	0.00015 (J)	0.00015 (J)	0.00011 (J)	0.0079	
9/16/2020	0.0015 (J)	0.00014 (J)	0.00014 (J)	8E-05 (J)		
9/17/2020					0.0073	
3/3/2021	0.0013	0.00015 (J)		7.9E-05 (J)		
3/4/2021			0.00012 (J)		0.0077	
9/22/2021	0.0012	0.00015 (J)		8.4E-05 (J)		
9/23/2021			0.00016 (J)		0.0071	
2/1/2022	0.0013	0.00015 (J)	0.00015 (J)	8.7E-05 (J)	0.0072	
8/23/2022	0.00241				0.00854	0.000331 (J)
8/24/2022		<0.0005	0.00021 (J)	<0.0005		
1/24/2023	0.00235	<0.0005	<0.0005			
1/25/2023				<0.0005	0.0078	
1/26/2023						0.000422 (J)
Mean	0.001798	0.0002178	0.0001961	0.0002216	0.008634	0.0004133
Std. Dev.	0.0003539	0.000157	0.000143	0.0001945	0.001134	6.962E-05
Upper Lim.	0.002005	0.0002	0.00021	0.0005	0.009297	0.0005713
Lower Lim.	0.001591	0.00012	0.0001	8.4E-05	0.00797	0.0002552

Constituent: Cadmium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-33S	BRGWC-34S	BRGWC-36S	BRGWC-38S	PZ-13S
9/7/2016	0.0005 (J)		8E-05 (J)	0.0004 (J)	
9/8/2016		<0.001			
11/17/2016	0.0005 (J)	0.0009 (J)			
11/18/2016			<0.001		
11/21/2016				0.0005 (J)	
2/22/2017	0.0006 (J)	0.0005 (J)			
2/23/2017			0.0001 (J)	0.0007 (J)	
6/14/2017	0.0004 (J)	0.0004 (J)			
6/15/2017			<0.001	0.0006 (J)	
9/27/2017	0.0004 (J)	0.0007 (J)			
9/28/2017			<0.001	0.0007 (J)	
2/15/2018	<0.001	<0.001	<0.001	0.00069 (J)	
6/27/2018	0.00038 (J)	0.00017 (J)			
6/28/2018			<0.001	0.00056 (J)	
12/18/2018	0.00046 (J)	0.00023 (J)			
12/19/2018			<0.001 (X)		
12/20/2018				<0.001 (X)	
1/15/2019					0.00011 (J)
8/27/2019	0.00032 (J)				
8/28/2019	0.00032 (J)	0.00025 (J)	<0.001		
8/29/2019				0.00053 (J)	
10/16/2019	0.00039 (J)	0.0004 (J)		0.00057 (J)	
10/17/2019			<0.001		
10/22/2019					<0.001
12/3/2019			<0.001		
3/5/2020	0.00038 (J)	0.00018 (J)	<0.001	0.00059 (J)	
8/19/2020	0.00029 (J)	0.00018 (J)	<0.001	0.00056 (J)	
9/16/2020	0.00032 (J)	0.00017 (J)	<0.001		
9/17/2020				0.0005 (J)	
3/3/2021	0.00022 (J)	0.00015 (J)	<0.001		
3/4/2021				0.00042 (J)	
9/22/2021	0.00019 (J)	0.00033 (J)	<0.001		
9/23/2021				0.00048 (J)	
2/1/2022	0.00023 (J)	0.00012 (J)	<0.001	0.00058	
8/23/2022	0.000509 (J)			0.000459 (J)	<0.001
8/24/2022		0.000517 (J)	<0.001		
1/24/2023	0.000482 (J)	<0.001			
1/25/2023			<0.001	0.00043 (J)	
1/26/2023					<0.001
Mean	0.000389	0.0004554	0.0009042	0.0005427	0.0007775
Std. Dev.	0.0001124	0.0003243	0.0002869	9.208E-05	0.000445
Upper Lim.	0.0004548	0.0003893	0.001	0.0005984	0.001
Lower Lim.	0.0003232	0.0001816	0.0001	0.000487	0.00011

Constituent: Chromium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S
9/7/2016	0.01 (J)	<0.01	0.0019 (J)	0.0073 (J)		0.0014 (J)	
11/17/2016	0.0185	<0.01	0.0024 (J)				
11/18/2016				0.008 (J)			
11/21/2016						0.003 (J)	
2/22/2017	0.0122	<0.01	0.004 (J)				
2/23/2017				0.0086 (J)	0.001 (J)	0.0028 (J)	
4/17/2017					0.0018 (J)		
5/15/2017					0.0014 (J)		
6/14/2017		<0.01					
6/15/2017	0.0117		0.0033 (J)	0.0082 (J)	0.0013 (J)	0.0038 (J)	
9/27/2017		<0.01					
9/28/2017	0.0114		0.0052 (J)	0.0083 (J)	0.0014 (J)	0.0037 (J)	
2/15/2018	0.011	<0.01	<0.01	0.0086 (J)	<0.01	0.0044 (J)	
6/27/2018	0.0098 (J)	<0.01	0.0062 (J)				
6/28/2018				0.0076 (J)	<0.01	0.0041 (J)	
12/18/2018		<0.01					
12/19/2018	0.0095 (J)		0.0073 (J)	0.0085 (J)	<0.01		
12/20/2018						0.0041 (J)	
1/15/2019							0.025
8/27/2019		<0.01					
8/28/2019	0.013	<0.01	0.0071 (J)	0.0078 (J)	0.0017 (J)		
8/29/2019						0.0044 (J)	
10/16/2019		0.00049 (J)	0.0064 (J)		0.0014 (J)	0.0038 (J)	
10/22/2019							0.02
12/3/2019	0.011			0.007 (J)			
3/3/2020	0.0081 (J)						
3/5/2020		<0.01	0.0076 (J)	0.0087 (J)	0.0016 (J)	0.0038 (J)	
8/19/2020	0.012	<0.01	0.0073 (J)	0.0094 (J)	0.0017 (J)	0.0043 (J)	
9/16/2020	0.012	<0.01	0.0058 (J)	0.0064 (J)	0.0018 (J)		
9/17/2020						0.0042 (J)	
3/3/2021		<0.01		0.0067	0.0014 (J)		
3/4/2021	0.01		0.0053			0.004 (J)	
9/22/2021	0.0091	<0.01		0.0065			
9/23/2021			0.0065		0.0016 (J)	0.004 (J)	
2/1/2022	0.013	<0.01	0.0056	0.0068		0.0035 (J)	
2/2/2022					0.0015 (J)		
8/23/2022		<0.01			<0.01	0.00398 (J)	0.0128
8/24/2022	0.0127		0.00752 (J)	0.00713 (J)			
1/24/2023	0.00886 (J)	<0.01	0.00524 (J)				
1/25/2023				0.00682 (J)	<0.01	0.00362 (J)	
1/26/2023							0.0153
Mean	0.01133	0.009499	0.005537	0.007686	0.003867	0.003717	0.01828
Std. Dev.	0.002321	0.002182	0.001715	0.000893	0.003919	0.0007207	0.005386
Upper Lim.	0.01259	0.01	0.006574	0.008226	0.01	0.00411	0.0305
Lower Lim.	0.009933	0.00049	0.004499	0.007146	0.0014	0.003499	0.006047

Constituent: Cobalt (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-38S	PZ-13S
9/7/2016	0.0612		0.0023 (J)	0.236	
9/8/2016		0.0029 (J)			
11/17/2016	0.0551	0.0028 (J)	0.0012 (J)		
11/21/2016				0.298	
2/22/2017	0.0567	0.0041 (J)	0.0008 (J)		
2/23/2017				0.277	
6/14/2017	0.0557	0.0036 (J)			
6/15/2017			0.0004 (J)	0.262	
9/27/2017	0.049	0.0028 (J)			
9/28/2017			0.0003 (J)	0.279	
2/15/2018	0.0536	<0.01	<0.001	0.279	
6/27/2018	0.054	0.0041 (J)	<0.001		
6/28/2018				0.23	
12/18/2018	0.049	0.0032 (J)			
12/19/2018			<0.001		
12/20/2018				0.25	
1/15/2019					<0.001
8/27/2019	0.045				
8/28/2019	0.045	0.0037 (J)	<0.001		
8/29/2019				0.21	
10/16/2019	0.042	0.0043 (J)	<0.001	0.21	
10/22/2019					0.00037 (J)
3/5/2020	0.037	0.0031 (J)	<0.001	0.22	
8/19/2020	0.036	0.0041 (J)	<0.001	0.22	
9/16/2020	0.034	0.0042 (J)	<0.001		
9/17/2020				0.2	
3/3/2021	0.028	0.0046 (J)			
3/4/2021			<0.001	0.2	
9/22/2021	0.024	0.0075			
9/23/2021			<0.001	0.17	
2/1/2022	0.027	0.0044 (J)	<0.001	0.18	
8/23/2022	0.0639			0.173	<0.001
8/24/2022		0.00438	<0.001		
1/24/2023	0.0582	0.00351	<0.001		
1/25/2023				0.158	
1/26/2023					<0.001
Mean	0.04602	0.004016	0.001	0.2251	0.0008425
Std. Dev.	0.01212	0.001087	0.0003926	0.04201	0.000315
Upper Lim.	0.05312	0.004512	0.0012	0.2505	0.001
Lower Lim.	0.03893	0.003371	0.0008	0.1997	0.00037

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	
9/7/2016	1.18	0.541 (U)		0.189 (U)	0.638 (U)		0.816 (U)	
9/8/2016			0.998 (U)					
11/17/2016	0.145 (U)	1.02 (U)	0.613	0.729 (U)				
11/18/2016					1.22 (U)			
11/21/2016							2.94	
2/22/2017	0.0213 (U)	0.482 (U)	1.01 (U)	0.293 (U)				
2/23/2017					0.554 (U)	0.567 (U)	1.92	
4/17/2017						0.335 (U)		
5/15/2017						0.261 (U)		
6/14/2017		0.723 (U)	0.801 (U)					
6/15/2017	0.41 (U)			1.09	0.77 (U)	0.188 (U)	3.6	
9/27/2017		1.5	1.44					
9/28/2017	0.496 (U)			1.02 (U)	1.07 (U)	0.627 (U)	3.3	
2/15/2018	0.672 (U)	1.14 (U)	0.668 (U)	0.742 (U)	0.751 (U)	0.869 (U)	2.31 (J+X)	
6/27/2018	0.692 (U)	1.3 (U)	1.06 (U)	0.739 (U)				
6/28/2018					0.392 (U)	0.336 (U)	1.75 (UX)	
12/18/2018		1.64 (UX)	1.22					
12/19/2018	0.325 (U)			0.465 (U)	0.693 (U)	0.454 (U)		
12/20/2018							2.8 (J+X)	
8/27/2019		1.38						
8/28/2019	0.24 (U)		0.811 (U)	0.995 (U)	0.866 (U)	0.809 (U)		
8/29/2019							3.68	
10/16/2019		1.16 (U)	0.561 (U)	1.69		0.815 (U)	2.66	
12/18/2019	1.16 (U)				1.91			
3/3/2020	0.756 (U)							
3/5/2020		0.683 (U)	0.792 (U)	0.858 (U)	1.3	0.791 (U)	2.21	
8/19/2020	0.985 (U)	1.14 (U)	1.21 (U)	0.162 (U)	1.4	0.582 (U)	3.17	
9/16/2020	0.478 (U)	0.195 (U)	0.72 (U)	1.25 (U)	1.17 (U)	0.844 (U)		
9/17/2020							2.92	
3/3/2021		0.708 (U)	1.12		0.307 (U)	1.12		
3/4/2021	0.38 (U)			0.461 (U)			1.99	
9/22/2021	0.734 (U)	0.382 (U)	0.91 (U)		0.808 (U)			
9/23/2021				0.394 (U)		0.078 (U)	1.4	
2/1/2022	0.503 (U)	0.583 (U)	0.535 (U)	0.672 (U)	1.61 (U)		7.64	
2/2/2022						0.654 (U)		
8/23/2022		1.94				2.37	3.12	
8/24/2022	0.152		1.86	3.1	1.38			
1/24/2023	0.728 (U)	3.31 (U)	2.14 (U)	3.34				
1/25/2023					4.86	1.67 (U)	3.79	
Mean	0.5587	1.102	1.026	1.011	1.206	0.7428	2.89	
Std. Dev.	0.335	0.7251	0.4342	0.8935	1.008	0.5511	1.44	
Upper Lim.	0.7614	1.433	1.244	1.363	1.43	0.9846	3.583	
Lower Lim.	0.3561	0.6495	0.7613	0.4806	0.6703	0.3975	2.021	

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-13S
1/15/2019	<0.983
10/22/2019	0.631 (U)
8/23/2022	1.83
1/26/2023	4.77
Mean	2.053
Std. Dev.	1.88
Upper Lim.	5.806
Lower Lim.	-1.875

Constituent: Fluoride (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	0.22 (J)	0.19 (J)		0.34	0.18 (J)		0.66
9/8/2016			0.17 (J)				
11/17/2016	0.12 (J)	0.12 (J)	0.06 (J)	0.14 (J)			
11/18/2016					0.03 (J)		
11/21/2016							0.9 (D)
2/22/2017	0.11 (J)	0.21 (J)	0.17 (J)	0.09 (J)			
2/23/2017					0.07 (J)	0.1 (J)	0.75
4/17/2017						0.08 (J)	
5/15/2017						0.02 (J)	
6/14/2017		0.18 (J)	0.1 (J)				
6/15/2017	0.05 (J)			0.03 (J)	0.01 (J)	0.03 (J)	0.77
9/27/2017		0.42	0.4				
9/28/2017	0.05 (J)			<0.1	<0.1	<0.1	0.8
2/15/2018	<0.3	0.42	<0.3	<0.1	<0.1	<0.1	0.82
6/27/2018	0.093 (J)	0.32	0.21 (J)	0.22 (J)			
6/28/2018					0.51 (J+X)	<0.1	1.5 (J+X)
12/18/2018		0.28 (J)	0.12 (J)				
12/19/2018	0.16 (J)			0.11 (J)	<0.1	0.094 (J)	
12/20/2018							0.68
3/19/2019	0.1 (J)				<0.1		
3/20/2019		0.14 (J)	0.074 (J)	0.088 (J)		0.062 (J)	0.95
8/27/2019		0.11 (J)					
8/28/2019	0.085 (J)	0.11 (J)	0.057 (J)	0.056 (J)	<0.1	<0.1	
8/29/2019							0.9
10/16/2019		0.17 (J)	0.13 (J)	0.08 (J)		0.059 (J)	0.61
12/3/2019	0.2 (J)				0.15 (J)		
3/3/2020	0.093 (J)						
3/5/2020		0.088 (J)	0.072 (J)	0.067 (J)	<0.1	0.05 (J)	0.92
8/19/2020	0.1	0.11	0.074 (J)	0.06 (J)	0.051 (J)	0.055 (J)	0.95
9/16/2020	0.1	0.085 (J)	0.077 (J)	0.062 (J)	<0.1	<0.1	
9/17/2020							0.68
3/3/2021		0.069 (J)	0.071 (J)		<0.1	<0.1	
3/4/2021	0.096 (J)			0.076 (J)			0.83
9/22/2021	0.1	0.068 (J)	0.1		0.054 (J)		
9/23/2021				0.073 (J)		<0.1	0.85
2/1/2022	0.079 (J)	0.053 (J)	0.06 (J)	0.055 (J)	<0.1		0.95
2/2/2022						<0.1	
8/23/2022		0.187				0.105	0.609
8/24/2022	0.274		0.14	<0.1	0.194		
1/24/2023	0.216	0.193	0.122	0.239			
1/25/2023					0.183	0.114	0.708
Mean	0.1261	0.1762	0.1241	0.1098	0.1227	0.08258	0.8335
Std. Dev.	0.06127	0.1086	0.08005	0.07679	0.1058	0.02773	0.1982
Upper Lim.	0.1553	0.2225	0.1454	0.125	0.18	0.1	0.9214
Lower Lim.	0.08879	0.1111	0.08016	0.06256	0.054	0.055	0.7211

Constituent: Fluoride (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-13S
1/15/2019	0.06 (J)
10/22/2019	<0.1
8/23/2022	0.128
1/26/2023	<0.1
Mean	0.097
Std. Dev.	0.02798
Upper Lim.	0.1439
Lower Lim.	0.01015

Constituent: Lead (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	<0.002	0.0002 (J)		0.0001 (J)	<0.002		0.0004 (J)
9/8/2016			<0.002				
11/17/2016	0.0001 (J)	0.0002 (J)	0.0001 (J)	0.0002 (J)			
11/18/2016					<0.002		
11/21/2016							0.0005 (J)
2/22/2017	<0.002	0.0001 (J)	0.0003 (J)	0.0001 (J)			
2/23/2017					<0.002	<0.002	0.0005 (J)
4/17/2017						0.0001 (J)	
5/15/2017						<0.002	
6/14/2017		9E-05 (J)	<0.002				
6/15/2017	<0.002			<0.002	<0.002	<0.002	0.0004 (J)
9/27/2017		7E-05 (J)	9E-05 (J)				
9/28/2017	<0.002			<0.002	<0.002	0.0001 (J)	0.0004 (J)
2/15/2018	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00047 (J)
6/27/2018	<0.002	<0.002	<0.002	<0.002			
6/28/2018					<0.002	<0.002	0.00036 (J)
12/18/2018		<0.002	<0.002				
12/19/2018	<0.002			<0.002	<0.002	<0.002	
12/20/2018							0.00039 (J)
8/27/2019		0.00013 (J)					
8/28/2019	<0.002	0.00013 (J)	<0.002	<0.002	<0.002	<0.002	
8/29/2019							0.00035 (J)
10/16/2019		8.8E-05 (J)	<0.002	<0.002		<0.002	0.00035 (J)
12/3/2019	<0.002				<0.002		
3/3/2020	<0.002						
3/5/2020		8.7E-05 (J)	<0.002	<0.002	<0.002	<0.002	0.00041 (J)
8/19/2020	<0.002	6E-05 (J)	<0.002	<0.002	4.7E-05 (J)	<0.002	0.00031 (J)
9/16/2020	5.4E-05 (J)	6.3E-05 (J)	<0.002	0.00012 (J)	<0.002	<0.002	
9/17/2020							0.00032 (J)
3/3/2021		5.8E-05 (J)	<0.002		<0.002	<0.002	
3/4/2021	<0.002			<0.002			0.00034 (J)
9/22/2021	<0.002	<0.002	<0.002		<0.002		
9/23/2021				<0.002		<0.002	<0.002
2/1/2022	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002
2/2/2022						<0.002	
8/23/2022		<0.002				<0.002	<0.002
8/24/2022	<0.002		<0.002	<0.002	<0.002		
1/24/2023	<0.002	<0.002	<0.002	<0.002			
1/25/2023					<0.002	<0.002	<0.002
Mean	0.001786	0.000804	0.001694	0.001584	0.001892	0.001789	0.00075
Std. Dev.	0.0006219	0.0009393	0.0007055	0.0008002	0.0004603	0.0006144	0.0006896
Upper Lim.	0.002	0.002	0.002	0.002	0.002	0.002	0.0005
Lower Lim.	0.0001	7E-05	0.0003	0.0002	4.7E-05	0.0001	0.00035

Constituent: Lead (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	PZ-13S
1/15/2019	<0.002
10/22/2019	0.00035 (J)
8/23/2022	<0.002
1/26/2023	<0.002
Mean	0.001588
Std. Dev.	0.000825
Upper Lim.	0.002
Lower Lim.	0.00035

Constituent: Lithium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-38S	PZ-13S
9/7/2016	<0.01	0.0092 (J)		0.0021 (J)	0.0024 (J)	0.0193 (J)	
9/8/2016			<0.01				
11/17/2016	<0.01	0.0097 (J)	<0.01	0.0022 (J)			
11/18/2016					0.0026 (J)		
11/21/2016						0.0223 (J)	
2/22/2017	<0.01	0.0106 (J)	<0.01	0.0023 (J)			
2/23/2017					0.0026 (J)	0.0229 (J)	
6/14/2017		0.0097 (J)	<0.01				
6/15/2017	<0.01			0.0023 (J)	0.0026 (J)	0.0227 (J)	
9/27/2017		0.0099 (J)	<0.01				
9/28/2017	<0.01			0.0021 (J)	0.0025 (J)	0.023 (J)	
2/15/2018	<0.01	0.0106 (J)	<0.01	0.0021 (J)	<0.01	0.0254 (J)	
6/27/2018	<0.01	0.01 (J)	<0.01	0.0021 (J)			
6/28/2018					0.0022 (J)	0.021 (J)	
12/18/2018		0.011 (J)	<0.01				
12/19/2018	<0.01			0.0021 (J)	0.0026 (J)		
12/20/2018						0.022 (J)	
1/15/2019							0.0017 (J)
8/27/2019		0.01 (J)					
8/28/2019	0.00097 (J)	0.01 (J)	0.0009 (J)	0.0021 (J)	0.0025 (J)		
8/29/2019						0.021 (J)	
10/16/2019		0.0098 (J)	0.00078 (J)	0.0022 (J)		0.02 (J)	
10/22/2019							0.001 (J)
12/3/2019	0.001 (J)				0.0024 (J)		
3/3/2020	<0.01						
3/5/2020		0.011 (J)	0.00089 (J)	0.0021 (J)	0.0025 (J)	0.021 (J)	
8/19/2020	0.001 (J)	0.009 (J)	0.00082 (J)	0.0021 (J)	0.0024 (J)	0.021 (J)	
9/16/2020	0.00096 (J)	0.0089 (J)	<0.01	0.002 (J)	0.0022 (J)		
9/17/2020						0.02 (J)	
3/3/2021		0.0085 (J)	0.00096 (J)		0.0024 (J)		
3/4/2021	0.00086 (J)			0.0021 (J)		0.021 (J)	
9/22/2021	0.0011 (J)	0.008 (J)	<0.01		0.0026 (J)		
9/23/2021				0.0022 (J)		0.019 (J)	
2/1/2022	0.00096 (J)	0.0083 (J)	0.00085 (J)	0.0021 (J)	0.0023 (J)	0.02 (J)	
8/23/2022		0.0109				0.0214	<0.01
8/24/2022	<0.01		<0.01	<0.01	<0.01		
1/24/2023	<0.01	0.0115	<0.01	<0.01			
1/25/2023					<0.01	0.0256	
1/26/2023							<0.01
Mean	0.006492	0.009821	0.006956	0.002456	0.003711	0.02159	0.005675
Std. Dev.	0.004526	0.000983	0.00443	0.0009288	0.002897	0.001839	0.005002
Upper Lim.	0.01	0.0104	0.01	0.0023	0.0026	0.0227	0.002281
Lower Lim.	0.00097	0.009245	0.00089	0.0021	0.0023	0.02048	0.0006748

Constituent: Mercury (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S
9/7/2016	<0.0002	<0.0002		<0.0002	<0.0002		7E-05 (J)
9/8/2016			<0.0002				
11/17/2016	<0.0002	<0.0002	<0.0002	<0.0002			
11/18/2016					<0.0002		
11/21/2016							0.00012 (J)
2/22/2017	<0.0002	<0.0002	<0.0002	<0.0002			
2/23/2017					<0.0002	<0.0002	7E-05 (J)
4/17/2017						<0.0002	
5/15/2017						<0.0002	
6/14/2017		7E-05 (J)	7E-05 (J)				
6/15/2017	6E-05 (J)			7E-05 (J)	7E-05 (J)	6E-05 (J)	0.00016 (J)
9/27/2017		4E-05 (J)	4E-05 (J)				
9/28/2017	<0.0002			<0.0002	<0.0002	<0.0002	0.00011 (J)
2/15/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00015 (J)
6/27/2018	<0.0002	<0.0002	<0.0002	<0.0002			
6/28/2018					<0.0002	<0.0002	<0.0002 (X)
12/18/2018		<0.0002	<0.0002				
12/19/2018	<0.0002			<0.0002	<0.0002	<0.0002	
12/20/2018							0.00017 (J)
8/27/2019		<0.0002					
8/28/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
8/29/2019							0.00018 (J)
8/19/2020	8.4E-05 (J)	<0.0002	0.00012 (J)	0.00013 (J)	0.00013 (J)	0.00014 (J)	0.00018 (J)
9/16/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
9/17/2020							0.00011 (J)
3/3/2021		<0.0002	<0.0002		<0.0002	<0.0002	
3/4/2021	<0.0002			<0.0002			8.5E-05 (J)
9/22/2021	0.0001 (J)	0.00012 (J)	0.00015 (J)		0.0001 (J)		
9/23/2021				0.00011 (J)		0.00011 (J)	0.00022
2/1/2022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
2/2/2022						<0.0002	
8/23/2022		<0.0002				<0.0002	0.000117 (J)
8/24/2022	<0.0002		<0.0002	<0.0002	<0.0002		( )
1/24/2023	<0.0002	<0.0002	<0.0002	<0.0002			
1/25/2023					<0.0002	<0.0002	<0.0002
Mean	0.0001777	0.0001782	0.0001737	0.0001819	0.0001812	0.0001819	0.0001464
Std. Dev.	4.84E-05	5.053E-05	5.188E-05	4.053E-05	4.177E-05	4.167E-05	4.947E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.000154
Lower Lim.	0.0001	0.00012	0.00012	0.00013	0.00013	0.00014	9.53E-05
LOWOI LIII.	0.0001	J.55012	5.550 IZ	0.00010	0.00010	3.33017	3.30L 00

Constituent: Selenium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-36S	BRGWC-38S	PZ-13S
9/7/2016	0.0024 (J)	0.0032 (J)	0.0079 (J)	0.0311	
11/17/2016	0.0028 (J)	0.0028 (J)			
11/18/2016			0.0082 (J)		
11/21/2016				0.0409	
2/22/2017	0.0018 (J)	0.0018 (J)			
2/23/2017			0.0061 (J)	0.0354	
6/14/2017		0.004 (J)			
6/15/2017	0.0024 (J)		0.0046 (J)	0.0511	
9/27/2017		0.0036 (J)			
9/28/2017	<0.005		0.0042 (J)	0.0484	
2/15/2018	<0.005	<0.005	0.0045 (J)	0.0435	
6/27/2018	0.002 (J)	0.0017 (J)			
6/28/2018			0.0033 (J)	0.037	
12/18/2018		<0.005			
12/19/2018	0.0014 (J)		0.0042 (J)		
12/20/2018				0.037	
1/15/2019					0.0033 (J)
8/27/2019		<0.005			
8/28/2019	0.003 (J)	<0.005	0.0041 (J)		
8/29/2019				0.036	
10/16/2019		0.0028 (J)		0.033	
10/22/2019					0.0033 (J)
12/3/2019	0.0041 (J)		0.0035 (J)		
3/3/2020	0.0019 (J)				
3/5/2020		<0.005	0.0034 (J)	0.032	
8/19/2020	0.003 (J)	<0.005	0.002 (J)	0.041	
9/16/2020	<0.005	0.0028 (J)	0.0031 (J)		
9/17/2020				0.029	
3/3/2021		<0.005	0.0024 (J)		
3/4/2021	<0.005			0.039	
9/22/2021	0.0015 (J)	<0.005	0.0032 (J)		
9/23/2021				0.031	
2/1/2022	0.0021 (J)	<0.005	0.0025 (J)	0.029	
8/23/2022		0.0061		0.0296	0.00157 (J)
8/24/2022	0.00208 (J)		0.00246 (J)		
1/24/2023	0.00178 (J)	0.0049 (J)			
1/25/2023			0.00237 (J)	0.0279	
1/26/2023					0.00215 (J)
Mean	0.002903	0.004142	0.004002	0.03622	0.00258
Std. Dev.	0.001315	0.001271	0.001788	0.006757	0.0008644
Upper Lim.	0.002487	0.005	0.004886	0.0403	0.004543
Lower Lim.	0.00177	0.0028	0.002917	0.03213	0.0006174

Constituent: Thallium (mg/L) Analysis Run 3/20/2023 11:11 AM View: Pond E - Confidence Intervals

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-17S	BRGWC-33S	BRGWC-38S
9/7/2016	<0.002	0.0002 (J)	<0.002
11/17/2016	<0.002	0.0002 (J)	
11/21/2016			0.0004 (J)
2/22/2017	<0.002	0.0002 (J)	
2/23/2017			0.0003 (J)
6/14/2017		0.0002 (J)	
6/15/2017	<0.002		0.0003 (J)
9/27/2017		0.0002 (J)	
9/28/2017	<0.002		0.0003 (J)
2/15/2018	<0.002	0.00024 (J)	0.00026 (J)
6/27/2018	<0.002	0.00022 (J)	
6/28/2018			0.00018 (J)
12/18/2018		0.00022 (J)	
12/19/2018	<0.002		
12/20/2018			<0.002 (X)
8/27/2019		0.00016 (J)	
8/28/2019	<0.002	0.00016 (J)	
8/29/2019			0.00021 (J)
10/16/2019		0.00019 (J)	0.0002 (J)
12/3/2019	6.6E-05 (J)		
3/3/2020	<0.002		
3/5/2020		0.0002 (J)	0.0002 (J)
8/19/2020	<0.002	0.00018 (J)	0.00019 (J)
9/16/2020	<0.002	0.00018 (J)	
9/17/2020			0.00017 (J)
3/3/2021		0.00018 (J)	
3/4/2021	<0.002		<0.002
9/22/2021	<0.002	<0.002	
9/23/2021			0.00022 (J)
2/1/2022	<0.002	<0.002	<0.002
8/23/2022		<0.002	<0.002
8/24/2022	<0.002		
1/24/2023	<0.002	<0.002	
1/25/2023			<0.002
Mean	0.001893	0.0005753	0.0008294
Std. Dev.	0.0004558	0.0007561	0.0008535
Upper Lim.	0.002	0.00024	0.002
Lower Lim.	6.6E-05	0.00018	0.0002

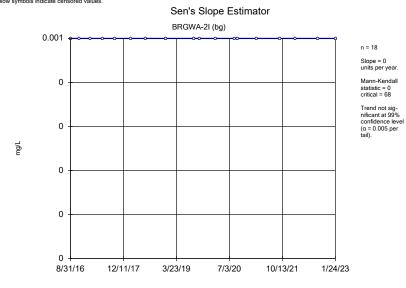
# FIGURE I.

# Appendix IV Trend Tests - Confidence Interval Exceedances - Significant Results

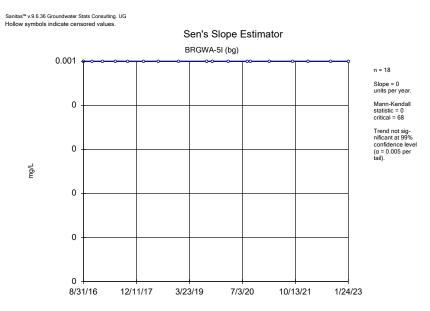
	Plant Branch Client: Southern Compa	ny Data: Pla	nt Branch	AP Print	ed 2/27	7/2023,	3:39 PM	I			
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality Normality	<u>Xform</u>	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWC-38S	-0.0004273	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0003527	-101	-68	Yes	18	11.11	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-33S	-0.005794	-91	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-38S	-0.02005	-115	-68	Yes	18	0	n/a	n/a	0.01	NP

# Appendix IV Trend Tests - Confidence Interval Exceedances - All Results

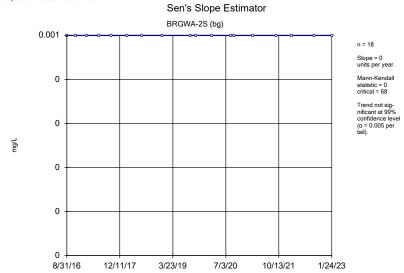
	Plant Branch Client: Southern Compan	y Data: Plan	t Branch A	Printe	d 2/27/	2023, 3	:39 PM				
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Beryllium (mg/L)	BRGWA-2I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-2S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5I (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-6S (bg)	0	0	68	No	18	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWC-38S	-0.0004273	-87	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2I (bg)	0	-25	-68	No	18	66.67	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-2S (bg)	-0.0003527	-101	-68	Yes	18	11.11	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5I (bg)	-0.000106	-52	-58	No	16	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5S (bg)	0	31	68	No	18	72.22	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-6S (bg)	0	12	68	No	18	72.22	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-33S	-0.005794	-91	-74	Yes	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWC-38S	-0.02005	-115	-68	Yes	18	0	n/a	n/a	0.01	NP



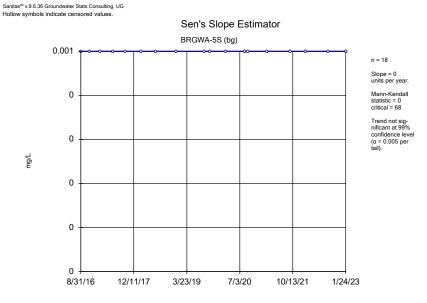
Constituent: Beryllium Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Beryllium Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Beryllium Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



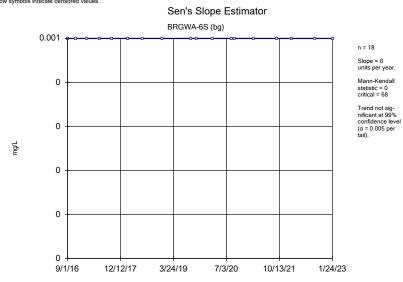
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Plant Branch Client: Southern Company Data: Plant Branch AP

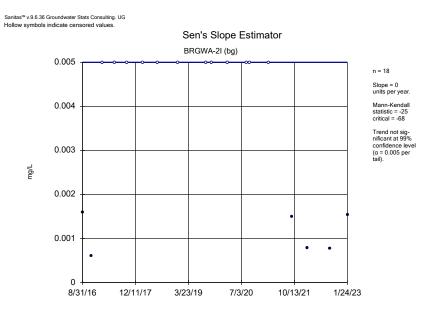
Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG

8/31/16

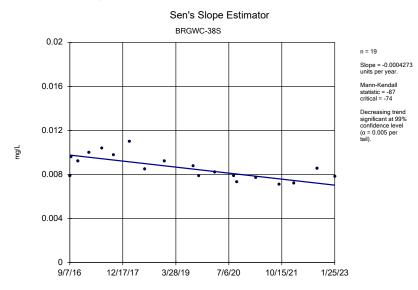
12/11/17



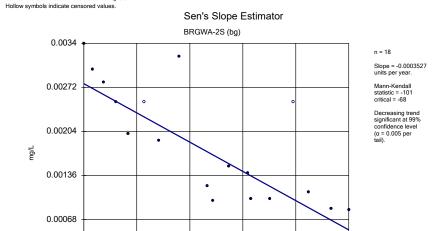
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Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Cobalt Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Beryllium Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



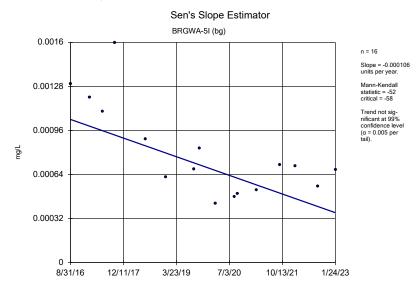
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Plant Branch Client: Southern Company Data: Plant Branch AP

7/3/20

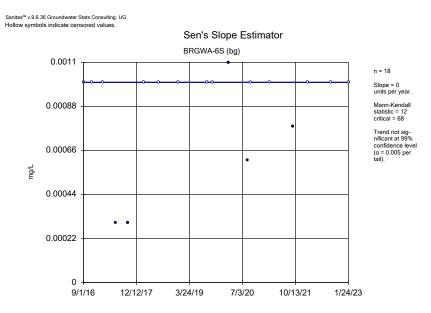
10/13/21

1/24/23

3/23/19

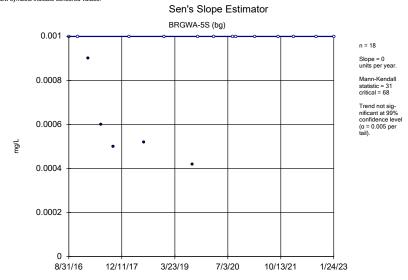


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Plant Branch Client: Southern Company Data: Plant Branch AP



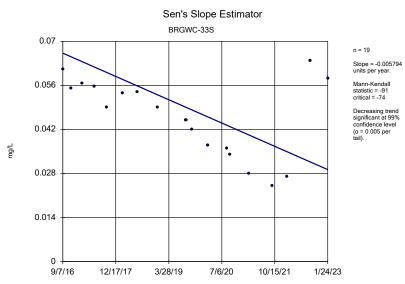
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Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

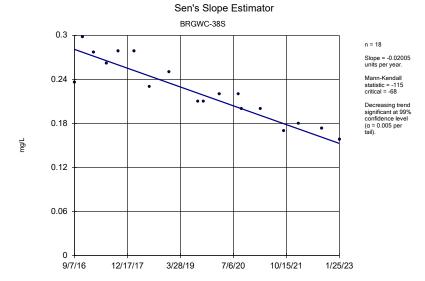


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Plant Branch Client: Southern Company Data: Plant Branch AP

#### Sanitas™ v.9.6.36 Groundwater Stats Consulting. UG



Constituent: Cobalt Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Cobalt Analysis Run 2/27/2023 3:38 PM View: Pond E - Appendix IV Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

# APPENDIX E

Semiannual Remedy Selection and Design Progress Report

Prepared for



## **Georgia Power Company**

241 Ralph McGill Blvd NE Atlanta, Georgia 30308

# SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

# PLANT BRANCH ASH POND E

Prepared by



engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200 Kennesaw, Georgia 30144

Project Number GW8862

July 2023



## **CERTIFICATION STATEMENT**

This Semiannual Remedy Selection and Design Progress Report, Plant Branch Ash Pond E has been prepared in compliance with 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 391-3-4-.01.

## **Report Prepared by:**



Lauren E. Fitzgerald Georgia Professional Engineer No. 048960 July 31, 2023

Date



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#### LIST OF ACRONYMS AND ABBREVIATIONS

ACM Assessment of Corrective Measures

AP ash pond

CCR coal combustion residuals
CEC cation exchange capacity
CFR Code of Federal Regulations

cm/sec centimeters per second CSM conceptual site model

Fe/Mn iron/manganese ft/day feet per day

GA EPD Georgia Environmental Protection Division

Georgia Power Georgia Power Company
Geosyntec Geosyntec Consultants, Inc.
GWPS Groundwater Protection Standard

K<sub>h</sub> hydraulic conductivity

meq/100g milliequivalents per 100 grams

mg/kg milligrams per kilogram
MNA monitored natural attenuation
PRB permeable reactive barrier
PWR partially weathered rock
redox oxidation/reduction

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 Pond E (AP-E 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-E is not subject to the CCR Rule. AP-E is managed directly under the State CCR Rule, which incorporates the CCR Rule by reference. This semiannual progress report is the first progress report since the issuance of the Assessment of Corrective Measures Report – Plant Branch Ash Pond E (AP-E) (Geosyntec, 2022) (ACM Report) and describes the progress made since then in selecting and designing a remedy.

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 will be regularly submitted to document the efforts of evaluating and progressing toward selecting a groundwater corrective measure.

## 1.2 Site Background and Overview of AP-E Pond Closure

Ash Pond E (AP-E) is surrounded by forested, rural land. The ash pond is approximately 348 acres in size and covers four converging valleys and side-channels. The ash pond was first used for CCR disposal in 1982 and stopped receiving CCR in 2015. This unit 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 under the State CCR Rule.

Georgia Power intends to close AP-E (**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

1

from AP-E, 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-E 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 October 2019 identified statistically significant levels (SSL) for cobalt and beryllium at concentrations exceeding the state and/or federal Groundwater Protection Standards (GWPS)<sup>1</sup>. Georgia Power submitted an Alternate Source Demonstration (ASD) to GA EPD for the observed SSLs (Golder, 2020). In a letter dated April 22, 2022, GA EPD expressed nonconcurrence with the ASD report, while acknowledging that site-specific lithology and pH may induce mobilization for cobalt and beryllium. Within 90 days of receiving GA EPD's nonconcurrence letter, pursuant to § 257.96, Georgia Power initiated an ACM program for AP-E on July 21, 2022. The ACM Report was submitted to GA EPD on December 16, 2022 and posted to the CCR compliance website (Geosyntec, 2022).

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 beryllium SSLs downgradient of AP-E. The monitoring well network is shown on **Figure 2**; **Table 1** provides well construction details.

Statistical analysis of the January 2023 semiannual assessment monitoring groundwater data identified SSLs of the following Appendix IV constituents at concentrations exceeding the applicable GWPS at AP-E:

Beryllium: BRGWC-38S; and

<sup>&</sup>lt;sup>1</sup> 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 of 0.005 milligrams per liter.

Cobalt: BRGWC-33S and BRGWC-38S.

Details are provided in the 2023 Annual Groundwater Monitoring and Corrective Action Report (2023 Annual Groundwater Report) to which this semiannual progress report is appended.

The groundwater data collected between January and February 2023 were used to generate the beryllium and cobalt iso-concentration maps presented on **Figures 3** and **4**, respectively. Based on the groundwater data reported in the 2023 Annual Groundwater Report, the horizontal and vertical delineation status of identified cobalt and beryllium SSLs is the following.

- BRGWC-33S cobalt is horizontally delineated downgradient by PZ-13S and vertically by PZ-52D.
- BRGWC-38S beryllium and cobalt are horizontally delineated downgradient by PZ-70I and vertically by PZ-53D.

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 2023 Annual Groundwater Report. Statistically significant decreasing trends (at 99% confidence) were identified for beryllium in BRGWC-38S and cobalt in BRGWC-33S and BRGWC-38S.

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate beryllium and cobalt that are present at SSLs in groundwater at AP-E. 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 beryllium and cobalt detected in groundwater at AP-E between September 2016 and August 2022 are not expected to pose a risk to human health or the environment (Geosyntec, 2023).

Georgia Power will continue to adaptively manage the Site and use ongoing data collection to evaluate the need for additional wells at AP-E. Pursuant to § 257.96, groundwater in the vicinity of AP-E 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-E. A comparative screening of the corrective measures is provided in **Table 2**.

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

PRB and subsurface vertical barrier wall corrective measures have been removed from consideration based on the ash pond closure plan of closure by removal, limited extent of SSL impacts, and initial geochemical investigations.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2022) 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. The phases are briefly outlined below:

• 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.

#### 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 ACM in December 2022 (Geosyntec, 2022). The routine monitoring events associated with the assessment monitoring program are discussed in the 2023 Annual Groundwater Report, to which this semiannual progress report is appended.

## 2.1 Field Activities

Additional field investigation activities since the issuance of the ACM report include aquifer testing and soil boring installation. These activities are detailed below.

#### 2.1.1 Aquifer Testing

In October 2022, slug testing was conducted at PZ-70I in order to collect additional hydraulic conductivity data in the study area. The pneumatic slug method was used since the appropriate screened zone was fully submerged and the well riser was not vented at the top. 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.

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 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**.

#### 2.1.2 Soil Boring Installation

In September 2022, soil borings SB-1 and SB-2 were installed for the collection of soil samples in the vicinity of detection wells exhibiting SSLs. Soil sample locations are shown on **Figure 5**. SB-1 was collocated with BRGWC-33S, and SB-2 was collocated with BRGWC-38S. Soil samples were collected from SB-1 and SB-2 at the corresponding elevation of the screen interval for BRGWC-33S and BGWC-38S, respectively. These aquifer solids were collected for characterization purposes and to evaluate the sorption capacity for SSL constituents cobalt and beryllium.

## 2.2 <u>Data Analysis Activities</u>

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 metals, sulfur, sulfide, cation exchange capacity (CEC) and mineralogical characterization data using x-ray diffraction (XRD) and whole rock analysis were reported for aquifer solids collected from the installation of SB-1 and SB-2. CEC is a measure of the capacity of the aquifer matrix to sorb exchangeable metal cations. Whole rock analysis is an analytical method for lithogeochemical classification of samples providing elemental analysis of sample mineralogy that can be used to help inform XRD. The laboratory results are included as **Appendix B**.

In addition, aquifer solids from SB-1 and SB-2 were analyzed by sequential extraction procedure (SEP) to assess the geochemical fractionation of trace elements within the aquifer solids. SEP is chemical extractions used to remove metals from specific solid-associated phases. SEP uses progressively stronger reagents to solubilize metals from increasingly recalcitrant phases. Although these procedures do not identify the specific metal phases in a soil/aquifer matrix, they do provide a means to evaluate the class of solids and relative stability in relation to oxidation/reduction (redox) potential and pH fluctuations (Tessier et al, 1979; Kuo et al., 1983; Sposito et al., 1984; Hickey and Kittrick, 1984; Gruebel et al., 1988).

SEP data can be used to interpret the mechanism and potential reversibility of attenuation processes, consistent with Phases II and III of the MNA guidance. These data also supplement information collected during the baseline characterization, such as CEC, as well as the presence of certain minerals and/or metal oxyhydroxides. SGS Environmental Services in Lakefield, Ontario uses a 6-step extraction procedure for SEP as described below.

- Step 1 (Water Soluble Phase): This extraction includes trace elements that are water soluble. Therefore, deionized water is utilized for this extraction step as the trace elements will solubilize into the solution.
- Step 2 (Exchangeable Phase): This extraction includes trace elements that are reversibly sorbed to soil minerals, amorphous solids, and/or organic material by electrostatic forces. These forces may be overcome by exposing the soil to a

concentrated electrolyte solution, such as 1 molar (M) magnesium sulfate that displaces the trace elements from solid surfaces.

- Step 3 (Carbonate Phase): This extraction targets trace elements that are sorbed or otherwise bound to carbonate minerals. This phase is soluble in a mild acid solution (e.g., 1M sodium acetate solution in 25% acetic acid at pH 4.5 5 or acetic acid (buffered to pH 3–3.5 or 5) and the complexing agent disodium ethylenediaminetetraacetic acid at pH 4.6).
- Step 4 (Metal Oxide Phase or reducible fraction): Trace elements bound to crystalline hydroxides of iron or manganese are extracted by establishment of reducing conditions. This can be achieved using a solution of 1M hydroxylamine hydrochloride in acetic acid, a sodium citrate/sodium dithionite buffer, or an ascorbic acid/ammonium oxalate mixture. This phase often provides significant attenuation capacity.
- Step 5 (Organic Phase or oxidizable fraction): This extraction targets trace elements strongly bound via chemisorption to organic material. Oxidation of soil organic matter (e.g., hydrogen peroxide [H<sub>2</sub>O<sub>2</sub>] in an acidic medium, sodium hypochlorite at pH 9.5, tetrasodium pyrophosphate at pH 9.5, or a hydrogen peroxide/ammonium acetate mixture), will bring into solution metals bound to organic functional groups.
- Step 6 (Residual Fraction): Trace elements remaining in the soil after the previous extractions will be distributed between silicates, phosphates, and refractory oxides. These residual metals can be removed from the soil through total dissolution with concentrated acid (e.g., hydrofluoric acid, nitric acid, hydrochloric acid, and boric acid). These are mostly stable, and naturally occurring fraction, which are not easily leached nor provides notable attenuating capacity for trace elements in groundwater.

#### 2.2.2 Groundwater Analytical Analysis

The analytical groundwater data reported for the assessment monitoring event conducted in January 2023 sampling event were evaluated in support of characterizing the nature and extent of cobalt and beryllium impacts. This data was used to assess if any correlations exist between the cobalt and beryllium SSLs and other groundwater constituents including pH.

## 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

PZ-70I was installed as an assessment monitoring well in August 2022 and is screened within the lower portion of the saprolite and partially weathered rock (PWR), at or near the top of the underlying bedrock. The associated boring log for PZ-70I is provided in the well installation report included in the 2022 Semiannual Groundwater Report (Geosyntec, 2023). The resulting  $K_h$  for PZ-70I was  $4.9 \times 10^{-4}$  centimeters per second (cm/sec) (1.40 feet per day [ft/day]), consistent with previous observations for the saprolite/PWR unit at the Site, which ranged from  $1.5 \times 10^{-4}$  to  $6.7 \times 10^{-3}$  cm/sec (0.43 to 18.84 ft/day). These  $K_h$  values are also consistent with reference values for fractured crystalline rock ( $10^{-2}$  to  $10^{-6}$  cm/sec) and saprolite ( $10^{-3}$  to  $10^{-7}$  cm/sec) (Freeze and Cherry, 1979). A summary of the input parameters and results of the data analysis is included in **Table 3** and the curvematching data plots generated in AQTESOLV are included in **Appendix B**.

## 3.2 <u>Summary of Data Analysis Activities</u>

#### 3.2.1 Soil Characterization

Total metals were completed on solids collected from the two soil borings (SB-1 and SB-2) for inorganic characterization of the soil downgradient of AP-E. The quantitative total metals analysis on samples collected from SB-1 and SB-2 (see **Table 4**) indicated the presence of SSL constituents beryllium and cobalt up to 2 and 17 milligrams per kilogram (mg/kg), respectively, in the solid phase. Based on previous total metals results for samples collected in 2020 (see **Table 4**), these concentrations of beryllium and cobalt in the solid phase downgradient of AP-E are on the same order or lower relative to background locations (BRGWA-2S, BRGWA-5S, and BRGWA-6S). Beryllium in background ranges from 0.31 to 0.67 mg/kg, while cobalt in background ranges from 36 to 72 mg/kg. Different downgradient geochemical conditions (i.e., low pH) could serve as or contribute to the mechanism for mobilization of the SSL constituents from the solid to the aqueous phase. Background and downgradient soil sample locations are shown on **Figure 5**.

In addition to inorganic characterization, the aquifer solids were analyzed for the sulfur and sulfide content along with CEC (see **Table 5**) for a further understanding of the geochemical conditions in the solid matrix. Sulfide was non-detect for both samples and low concentrations of sulfur (0.009 %) were observed in SB-1, while SB-2 was non-detect. Observations below the detection limit do not indicate that sulfides are not present at sufficient quantities to impact the geochemistry of the system. The results of CEC analysis indicated a slightly lower CEC for SB-1 at 5.43 milliequivalents per 100 grams (meq/100g) relative to SB-2 at 12.98 meq/100g. Soil observed at SB-2 would provide some sorption capacity through clay minerals like kaolinite. While the CEC data provide a measure of exchangeable cations and the data suggest relatively low sorption capacity, the mineralogical and SEP data provide additional sources for sorption such as iron and aluminum oxides.

Mineralogic characterization of the aquifer matrix was accomplished by whole rock analysis and XRD. Overall, the mineralogy by whole rock analysis in SB-1 and SB-2 (see **Table 6**) is characterized by an abundance of silicates (e.g., SiO<sub>2</sub>) and aluminum oxides (e.g., Al<sub>2</sub>O<sub>3</sub>) downgradient of AP-E. Whole rock analysis indicates aluminum oxides representing about 17 wt. % in SB-1 and SB-2 soils. This observation was confirmed by XRD where quartz and mica were the dominant mineral fractions (see **Table 7**). The presence of iron oxides (e.g., Fe<sub>2</sub>O<sub>3</sub>) was noted in the whole rock analysis up to approximately 6 wt. % and could potentially provide surface sites for adsorption of beryllium and cobalt onto the solid phase. In addition, a significant fraction of clay (kaolinite) was identified in XRD and could provide potential sorption capacity. Iron and aluminum oxides are expected to provide sorption capacity for attenuation of metals in groundwater at AP-E.

Finally, aquifer solids were evaluated for the fractionation of beryllium and cobalt using a 6-step SEP analysis method. The results are summarized in **Table 8**. The sum of steps 1 through 6 in Table 8 represents the total concentrations of beryllium and cobalt and these concentrations match closely to the total concentrations reported in Table 4, which suggests the results of SEP analysis as acceptable for data evaluation. Beryllium was not recovered in the first two steps (water soluble and exchangeable). The bulk of beryllium concentrations were associated with the residual phase (about 70%) and iron/manganese (Fe/Mn) oxides phase (about 20%). This indicates that beryllium is mostly in the resistant phase and is unavailable for sorption/desorption reactions, except for a smaller portion that is associated with the Fe/Mn oxides, which can be potentially released to groundwater. The SEP results for cobalt are comparable to that of beryllium but there some differences, including the availability of cobalt in water soluble and exchangeable fractions in low concentrations. Cobalt in the residual fraction represents 30 to 60% of



the total cobalt concentration, whereas cobalt in the Fe/Mn oxides and carbonate fractions represent 37% (SB-1) to 54% (SB-2). Thus, there are significant amounts of cobalt present in the Fe/Mn oxides of the aquifer solids available for mobilization to groundwater.

## 3.2.2 Groundwater Geochemical Analysis

Review of the groundwater analytical data (**Table 9**) collected during the January 2023 groundwater sampling event indicate that the detection monitoring wells that exhibit SSLs (BRGWC-33S and BRGWC-38S) are characterized by a lower pH (less than 5) relative to monitoring wells and piezometers where beryllium and/or cobalt impacts are not observed. This is consistent with prior groundwater data reported for previous assessment monitoring events. The correlations between aqueous cobalt and beryllium concentrations and pH are presented in **Figure 6**.

#### 4.0 UPDATED CONCEPTUAL SITE MODEL

As noted previously, the closure strategy for AP-E 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.

- A statistically significant decreasing trend was observed for beryllium in BRGWC-38S (**Figure 7**).
- A statistically significant decreasing trend was observed for cobalt in BRGWC-33S and BRGWC-38S (**Figure 7**).
- The downgradient lateral extent of beryllium and cobalt are delineated by sampling of PZ-13S and PZ-70I (**Figures 3** and **4**).
- The characterization of aquifer solids downgradient of AP-E indicate iron/manganese oxides provide surface sites and ion exchange capacities to attenuate beryllium and cobalt.
- The SEP data indicates a source of cobalt in the aquifer solids (residual phase in **Table 8**) and the potential mobilization of cobalt to groundwater (Fe/Mn phase in **Table 8**), which can occur at slightly acidic conditions, similar to the groundwater pH noted at these locations (**Table 9**). The SEP data strongly supports that cobalt naturally occurs in Site solids (**Tables 4** and **8**) and the phase association of cobalt in the aquifer solids and groundwater pH (**Table 9**) provides the mobilization for the occurrence of cobalt in groundwater at AP-E.
- Exceedances of beryllium and cobalt downgradient of AP-E appear to be correlated to the relatively lower pH of the downgradient groundwater in BRGWC-33S and BRGWC-38S (**Figure 6**). Wells BRGWC-33S and BRGWC-38S have consistently shown a pH less than 5 (over the monitoring period); the mobilization of cobalt at these pH conditions are well documented in the literature and Site conditions support such a mechanism for the mobilization of cobalt into groundwater. However, since these wells also show CCR indicator parameters such as boron and sulfate at relatively higher concentrations compared to upgradient groundwater, the mobilization of mechanism of cobalt is being investigated to document the change in groundwater pH along groundwater flow paths from AP-E to these detection monitoring wells.

# 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:

o Geochemical injections include the use of an injection well network, or other means of introducing reagents into the subsurface, to promote conditions (i.e., pH and redox) suitable for the attenuation of beryllium and cobalt. The attenuation of beryllium and cobalt is expected to occur under both aerobic (via sorption to manganese or iron oxides) and anaerobic conditions (via formation of sulfide minerals). Therefore, the applicability of injection mechanisms for the treatment of beryllium 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:

o 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 redox reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. The characterization of aquifer solids presented in this progress reports suggest that the aquifer matrix has the potential for attenuation of beryllium and cobalt. Therefore, MNA remains a viable corrective measure. MNA may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts.



# • Phytoremediation

O Phytoremediation is the use of plants to degrade, immobilize, or contain constituents in soil, groundwater, surface water, and sediments. Based on the current understanding of groundwater flow velocities downgradient of AP-E (approximately 62 feet/year) and the screen intervals where the beryllium and cobalt SSLs are observed (between 16 and 38 feet below ground surface), an engineered phytoremediation approach (TreeWell® system) would appear to be viable and will be retained for further evaluation.

Continued groundwater monitoring and updates to the statistical analyses will further refine the CSM and allow for the continued evaluation of an appropriate groundwater corrective measure at the Site.

# 6.0 PLANNED ACTIVITIES 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-E, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2022) 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-E 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 beryllium and cobalt in assessment monitoring wells.
- Complete a laboratory scale evaluation of sorption and desorption capacity of aquifer solids downgradient of AP-E.
- Progress geochemical investigations to identify the mechanisms of mobilization and potential attenuation of beryllium and cobalt.
- Evaluate the need for additional bench-scale treatability testing to support in-situ geochemical injection remedial alternatives.
- Assess the application of geochemical modeling to support remedy selection.

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



provided in accordance with \$ 257.105(h)(12), \$ 257.106(h)(9), and \$ 257.107(h)(9), respectively.

# 7.0 REFERENCES

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# **TABLES**

Table 1
Monitoring Well Network Summary
Plant Branch AP-E, Putnam County, Georgia

Well ID	Hydraulic Location	Installation Date	Easting (1)	Northing <sup>(1)</sup>	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation <sup>(2)</sup> (ft)	Well Depth (ft BGS)	Screen Interval Length (ft)
AP-BCD Detection Mo	onitoring Well Network									
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
AP-E Detection Monit	oring Well Network									
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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Table 1
Monitoring Well Network Summary
Plant Branch AP-E, Putnam County, Georgia

Well ID	Hydraulic Location	Installation Date	Easting (1)	Northing <sup>(1)</sup>	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation (2) (ft)	Well Depth (ft BGS)	Screen Interval Length (ft)
AP-BCD Assessmen	t 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
PZ-68D	Downgradient D	9/06/2022	2558512.90	1160690.48	402.5	405.25	328.8	318.8	84.3	10
PZ-74I	Downgradient D	5/24/2023	2557970.94	1160189.30	368.3	371.13	330.5	320.5	48.0	10
PZ-75I	Downgradient D	6/27/2023	2558343.03	1160009.37	354.9	357.86	337.9	327.9	27.4	10
AP-E Assessment M	onitoring 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	8									<u>.                                      </u>
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	1160766.13	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

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Table 1
Monitoring Well Network Summary
Plant Branch AP-E, Putnam County, Georgia

Well ID	Hydraulic Location	Installation Date	Easting (1)	Northing (1)	Ground Surface Elevation (ft)	Top of Casing Elevation <sup>(2)</sup> (ft)	Top of Screen Elevation <sup>(2)</sup> (ft)	Bottom of Screen Elevation <sup>(2)</sup> (ft)	Well Depth (ft BGS)	Screen Interval Length (ft)
PZ-19S	Downgradient	3/4/2014	2558894.60	1159805.43	368.4	371.42	350.8	340.8	28.0	10
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-69I	Downgradient D	8/31/2022	2558447.46	1160311.39	377.0	379.36	348.2	338.2	39.3	10
PZ-71I	Downgradient D	5/2/2023	2558230.83	1160295.35	382.6	385.34	352.8	342.8	40.0	10
PZ-72I	Downgradient D	5/9/2023	2558394.65	1160133.29	365.9	368.57	342.0	332.0	34.2	10
PZ-73I	Downgradient D	5/10/2023	2558559.30	1160226.37	349.9	352.63	334.9	324.9	25.3	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

<sup>\* =</sup> piezometers that were abandoned between May and June 2023

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

<sup>(2)</sup> Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).

Dogulatory Citation for Cuitaria		40 CED 3	257.96(C)(1)	40 CFR 257.96(C)(1)	40 CFR 257.96(C)(1)
Regulatory Citation for Criteria:  Corrective Measure	Description	Performance 40 CFR 2	Reliability	Ease of Implementation	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 promote either anaerobic or aerobic attenuation of beryllium (Be) and cobalt (Co). However, the main attenuation mechanism for Be and Co is sorption, which is more dependent on pH than redox. Under anaerobic conditions, Be and Co would be attenuated within sparingly soluble sulfide minerals. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Be and Co 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 roticion (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Be and Co.	reasonable time frame. This immobilization has been shown at other sites under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur)	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. Benchand/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Be and Co 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 implementation 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 studied and implemented.
Hydraulic Containment ("Pump and Treat")	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved Be and Co.	Pump and treat (P&T) is 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 BRGWC-38S and BRGWC-33S, implementation of the corrective measure is contingent on completing additional assessment activities (i.e., high-resolution site characterization, 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 Be and Co. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	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.
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 Be and Co at BRGWC-38S and Co at BRGWC-33S, 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 Be and Co, the main attenuation processes include sorption to iron and manganese oxides and for Co, formation of sparingly soluble sulfide minerals.	Physical and chemical MNA mechanisms for Be and Co, 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 Be and Co are already occurring at the site as evidenced by 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. The attenuation processes already at work for Be and Co at BRGWC-33S and for Co at BRGWC-33S will further enhance the effectiveness of MNA.	Reliable as long as the aquifer conditions that result in Be and Co attenuation remain favorable (and/or are being enhanced) and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Be and Co, 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	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 zero valent iron (ZVI)-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the removal of Co. The carbon could be composed of peat moss, mulch or another carbon source. The effectiveness of a PRB on the removal of Be is relatively unknown. Further research and testing is required to see if Be could be attenuated by a PRB. Exact placement of the PRB is contingent on finalization of the nature and extent 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.		Reliable groundwater corrective measure, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.	Moderate to difficult. Trenching at depth (up to 40 feet) would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary.	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 / TreeWells	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-E, this corrective measure would likely use an engineered (proprietary) TreeWell phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of Be and Co within the root zone as well as incidental uptake of dissolved Be 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 Be and Co concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Additional aquifer testing and/or groundwater flow modeling may be needed to confirm the suitability of this technology.	Engineered phytoremediation is a proven technology where hydrogeologic factor are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approac through the use of trees as the "pumps" driving the system. Careful design will b 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.		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; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. A barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. Barrier walls can also be used in downgradient applications; to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Sturry walls can be installed up to approximately 90 ft below ground surface (bgs), and groundwater impacts at the site are observed at depths less than 40 ft bgs. Within the context of BRGWC-33S and BRGWC-38S, groundwater could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is typically 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 will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Minimal impacts are expected following the construction of the remedy. Short- term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.

Regulatory Citation for Criteria:	40 CFR 257.96(C)(2)	40 CFR	257.96(C)(3)	1	
Corrective Measure	Time Requirement to Begin/Complete	Institutional Requirements	Other Env or Public Health Requirements	Relative Costs	Evaluation of Retainage
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. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Potential for mobilization of redox-sensitive constituents exists during implementation of an anerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)	Remedial approach retained as a targeted injection layout may result in decreased concentrations of Co and Be 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 Be and Co.	control (UIC) permit may be needed if groundwater reinjection is chosen.	Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	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 Co and Be in groundwater at Plant Branch and will be retained for further evaluation.
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 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.		Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S.	Low	Under current conditions, attenuation processes for Co and Be are already occurring as evidenced by groundwater data from assessment wells. Therefore, MNA is a potentially viable corrective measure for Co and Be 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 pilottesting 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. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Following installation, the remedy is passive (but may require replacement). However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement i not necessary	s Given AP-E closure by removal, the limited extent of impacts, and initial geochemical investigation, Permeable Reactive Barriers have not been retained for further consideration.
Phytoremediation / TreeWells	The design phase will require some groundwater modeling for optimal placement of the TreeWell units, which may take up to 6 months. Additional aquifer testing and design may be required, which may take up to 24 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.		None expected at this point. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements	Given groundwater depth and velocity at the Site, phytoremediation presents a viable groundwater corrective measure and will be retained for further consideration.
Subsurface Vertical Barrier Walls	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, design and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.	No institutional requirements are expected at this time.	Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Given AP-E closure by removal, the limited extent of impacts, and initial geochemical investigation, Subsurface Vertical Barrier Walls have not been retained for further consideration.

Page 2 of 2

# Table 3 Summary of Estimated Horizontal Hydraulic Conductivity Values Plant Branch AP-E, Putnam County, Georgia

				Well Information				Horizontal Hydraulic Conductivity (Kh)						
Well ID/Test No.	Screen Zone Material	Slug Test Type	Depth to Sensor [ft bTOC]	Static DTW [ft bTOC]	DTW after Pressure Release [ft bTOC]	Top Screen	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-70I Test 1	Saprolite/PWR	Pneumatic	48.0	28.9	36.3	39.6	49.6	50.0	1.222	1.535	1.40	4.3E-04	5.4E-04	4.9E-04
PZ-70I Test 2	Saprome/P w K	Pneumatic	48.0	28.9	35.3	39.6	49.6	50.0	1.309	1.566	1.40	4.6E-04	5.5E-04	4.9E-04

### 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

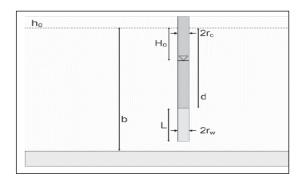
 r(w)
 Radius of well open or perforated interval

 r(sk)
 Outside radius of well skin distrubed zone enveloping filter pack

 bTOC
 Below Top Of Casing

 DTW
 Depth To Water

<sup>1.</sup> 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-E, Putnam County, Georgia

Location ID	BRGWA-2S	BRGWA-2S	BRGWA-5S	BRGWA-5S	BRGWA-6S	BRGWA-6S	SB-1	SB-2
Sample Depth	39 ft BGS	43 ft BGS	32 ft BGS	38 ft BGS	42 ft BGS	48 ft BGS	16.4 to 26.4 ft BGS	28.2 to 38.2 ft BGS
Sample Date	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020	9/11/2022	9/14/2022
Analysis (1,2)								
Beryllium	0.66	0.46	0.67	0.60	0.66 J	0.31 J	2	2
Cobalt	72	54 J	36	43	58	64	17	10
Iron	97000	98000	58000	56000	61000	91000	46000	21000
Manganese	1700	840	770	750	1100	1000	650	460

Notes: SB-1 is collocated with BRGWC-33S with well screen interval 16.0 to 26.0 ft BGS and SB-2 is collocated with BRGWC-38S with well screen interval 27.8 to 37.8 ft BGS. BRGWA-2S, BRGWA-5S, and BRGWA-6S are upgradient of AP-E and SB-1 and SB-2 are downgradient of AP-E.

- BROWA-2S, BROWA-SS, and BROWA-SS are upgradient of AF-E and SB-1 and SB-2 are downgradient of AF-E.

   Parameter was not analyzed

  < = Indicates the parameter was not analyzed

  < = Indicates the parameter was not analyzed

  (1) Parameters are reported in units of milligram per kilogram (mg/kg).

  (2) Metals were analyzed by EPA Method 6010B (samples collected 6/5/2020) or EPA Method 6010D, 6020B.

  (3) Analysis for all BRGWA wells was completed by Eurofins analytical laboratory and analysis of SB-1 and SB-2 was completed by SGS analytical laboratory.

# Table 5

# Summary of Cation Exchange Capacity, Sulfur, and Sulfide Plant Branch AP-E, Putnam County, Georgia

Location ID	SB-1	SB-2	
Sample Depth	16.4 to 26.4 ft BGS	28.2 to 38.2 ft BGS	Units
Sample Date	9/11/2022	9/14/2022	
Analysis			
CEC Actual	5.43	12.98	meq/100g
Sulfur	0.009	< 0.005	%
Sulfide	< 0.04	< 0.04	%

# Notes:

SB-1 is collocated with BRGWC-33S with well screen interval 16.0 to 26.0 ft BGS and SB-2 is collocated with BRGWC-38S with well screen interval 27.8 to 37.8 ft BGS.

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

CEC = Cation Exchange Capacity

ft BGS = feet below ground surface

**Table 6**Summay of Whole Rock Analysis
Plant Branch AP-E, Putnam County, Georgia

<b>Location ID</b>	SB-1	SB-2	
Sample Depth	16.4 to 26.4 ft BGS	28.2 to 38.2 ft BGS	Units
Sample Date	9/11/2022	9/14/2022	
Mineral/Compound			
$Al_2O_3$	17.6	16.5	%
CaO	0.23	0.34	%
$Cr_2O_3$	0.04	0.03	%
Fe <sub>2</sub> O <sub>3</sub>	6.32	2.32	%
K <sub>2</sub> O	2.61	4.98	%
Loss on Ignition (LOI)	7.14	5.12	%
MgO	1.38	0.76	%
MnO	0.07	0.03	%
Na <sub>2</sub> O	0.37	0.52	%
$P_2O_5$	0.08	0.02	%
SiO <sub>2</sub>	62.7	68.1	%
TiO <sub>2</sub>	0.76	0.26	%
$V_2O_5$	0.02	< 0.01	%
Sum	99.3	99	%

# Notes:

SB-1 is collocated with BRGWC-33S with well screen interval 16.0 to 26.0 ft BGS and SB-2 is collocated with BRGWC-38S with well screen interval 27.8 to 37.8 ft BGS. <= Indicates the parameter was not detected above the analytical method

detection limit (MDL).

ft BGS = feet below ground surface

**Table 7**Summary of X-ray Diffraction Analysis
Plant Branch AP-E, Putnam County, Georgia

	Location ID	SB-1	SB-2	
	Sample Depth	16.4 to 26.4 ft BGS	28.2 to 38.2 ft BGS	Units
	Sample Date	9/11/2022	9/14/2022	
Mi	neral/Compound			
Quartz	$SiO_2$	36.7	36	wt. %
Plagioclase	(NaSi,CaAl)AlSi <sub>2</sub> O <sub>8</sub>	4.6	9.6	wt. %
Potassium-feldspar	KAlSi <sub>3</sub> O <sub>8</sub>	14.1	16	wt. %
Mica <sup>(1)</sup>	K(Mg,Fe)Al <sub>2</sub> Si <sub>3</sub> AlO <sub>10</sub> (OH) <sub>2</sub>	20.5	22.9	wt. %
Kaolinite	$Al_2Si_2O_5(OH)_4$	23.3	15	wt. %
Gypsum	CaSO <sub>4</sub> ·2H <sub>2</sub> O			wt. %
Magnetite	Fe <sub>3</sub> O <sub>4</sub>	0	0.1	wt. %
Diopside	CaMgSi <sub>2</sub> O <sub>6</sub>	0.6	0.5	wt. %
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$			wt. %
Chlorite	(Fe,(Mg,Mn) <sub>5</sub> ,Al)(Si <sub>3</sub> Al)O <sub>10</sub> (OH) <sub>8</sub>			wt. %
Grossular	$Ca_3Al_2Si_3O_{12}$	0.1		wt. %
Ilmenite	FeTiO <sub>3</sub>	0.1		wt. %
	Sum	100	100	wt. %

### Notes

SB-1 is collocated with BRGWC-33S with well screen interval 16.0 to 26.0 ft BGS and SB-2 is collocated with BRGWC-38S with well screen interval 27.8 to 37.8 ft BGS.

-- = Indicates the mineral was not identified.

ft BGS = feet below ground surface

wt. % = weight percent

(1) Sum of muscovite and biotite mica.

**Table 8**Summary of Sequential Extraction Procedure Plant Branch AP-E, Putnam County, Georgia

<b>Location ID</b>		SB-1	SB-2
Sample Depth	SEP Fraction	16.4 to 26.4 ft BGS	28.2 to 38.2 ft BGS
Sample Date		9/11/2022	9/14/2022
Analyte			
	Water Soluble	< 0.02	< 0.02
	Exchangeable	< 0.02	< 0.02
Beryllium	Carbonate	0.1	0.14
Dei ymum	Fe/Mn Oxides	0.44	0.3
	Organic-Bound	0.12	0.09
	Residual	1.5	1.10
	Water Soluble	< 0.01	0.01
	Exchangeable	0.08	0.10
Cobalt	Carbonate	1.1	1.4
Cobait	Fe/Mn Oxides	4.40	4
	Organic-Bound	0.45	0.70
	Residual	9.10	3.70

# **Notes:**

SB-1 is collocated with BRGWC-33S with well screen interval 16.0 to 26.0 ft BGS and SB-2 is collocated with BRGWC-38S with well screen interval 27.8 to 37.8 ft BGS.

All results are reported in mg of constituent/kg of total sample mass.

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

SEP = sequential extraction procedure

ft BGS = feet below ground surface

Fe = Iron

Mn = Manganese

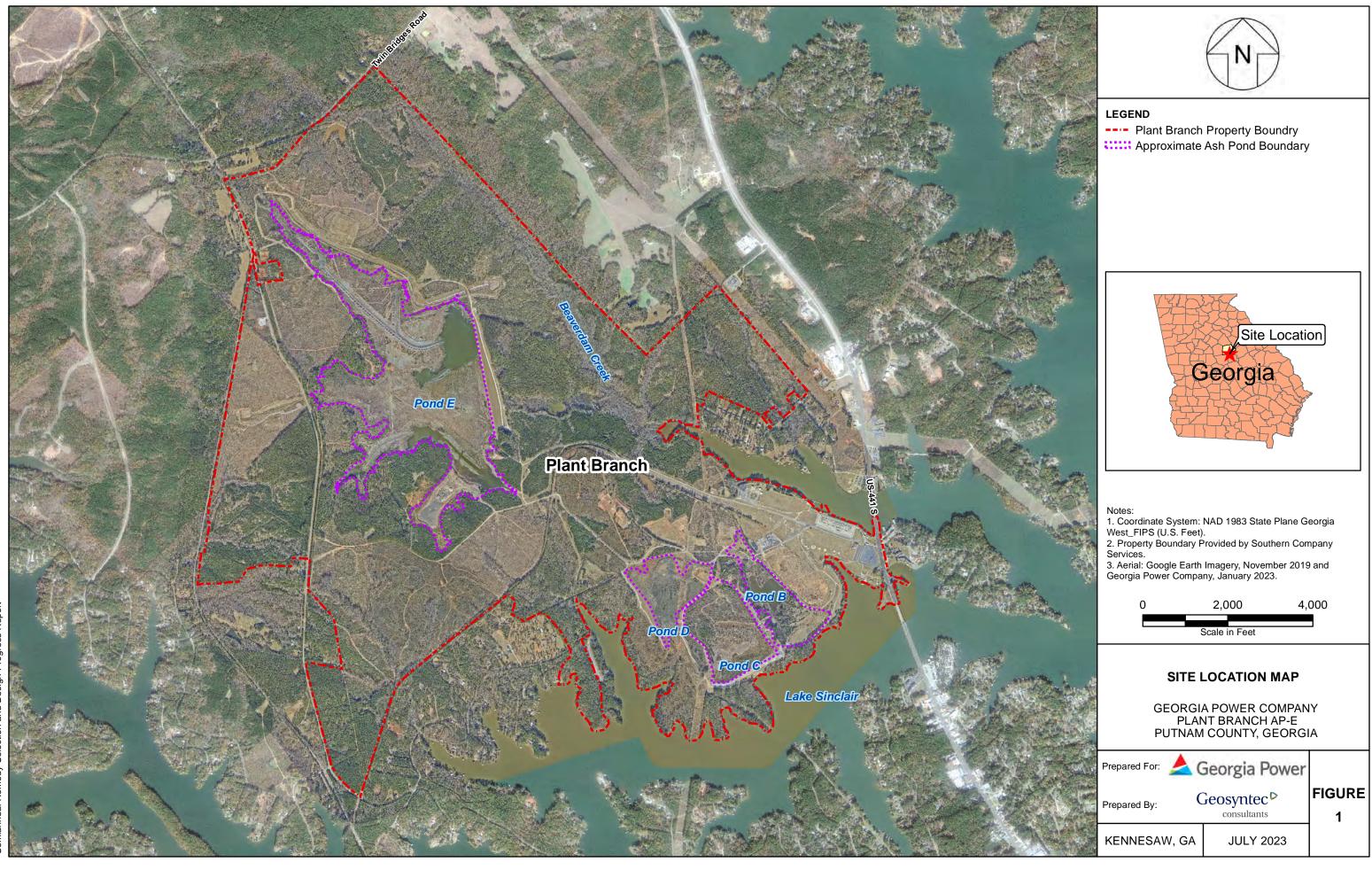
Table 9 Summary of Groundwater Analytical Data Plant Branch AP-E, Putnam County, Georgia

	Well ID:	BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWC-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S	BRGWC-38S	PZ-13S	PZ-52D	PZ-52D	PZ-52D	PZ-53D	PZ-70I
	Sample Date:	1/24/2023	1/24/2023	1/24/2023	1/24/2023	1/24/2023	1/24/2023	1/24/2023	1/24/2023	1/24/2023	1/25/2023	1/25/2023	1/25/2023	1/26/2023	1/25/2023	1/26/2023	2/2/2023	1/25/2023	1/26/2023
	Parameter (1,2,3)					I	I	I	l				l.		I.	I	I.	I	ı
	Boron	< 0.0052	< 0.0052	< 0.0052	< 0.0052	< 0.0052	0.0326	1.19	2.21	2.23	1.18	< 0.0052	1.63	0.0104 J	0.0362			1.11	1.04
Ħ	Calcium	4.86	14.2	19.4	15.8	3.9	41.3	116	80	67.5	48.2	3.65	32.8	16.8	46.3			78.5	33.4
	Chloride	2.16	2.09	3.56	3.93	2.3	6.31	29	7.5	6.46	7.93	1.92	6.53	3.36		12.3		4.66	5.37
APPENDIX	Fluoride	< 0.033	< 0.033	0.158	0.149	0.12	0.216	0.193	0.122	0.239	0.183	0.114	0.708	< 0.033		1.93		0.282	< 0.066
E	pH (field)	5.26	6.7	6.47	6.42	6.54	6.37	4.79	5.93	6.08	5.64	5.84	4.75	5.56	7.14			7.1	5.6
<del> </del>	Sulfate	0.465	3.58	0.66	3.34	0.484	153	375	267	334	237	0.325 J	291	75.3		142		285	147
4	TDS	63	93	104	124	64	344	615	433	507	418	28	484	148	443			517	272
۵. ۲	Beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00235	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0078	0.000422 J	< 0.0002			< 0.0002	0.000217 J
APP.	Cobalt	0.000829 J	0.00154	< 0.0003	0.000677 J	< 0.0003	< 0.0003	0.0582	0.00351	< 0.0003	< 0.0003	< 0.0003	0.158	< 0.0003	0.00249			< 0.0003	0.000682 J
	Alkalinity (Bicarbonate as CaCO3)	35	65.2	78.4	79.4	25.6	81.4	3.8 J	30	51.6	22	21.2	3 J	20.6		179		49	14.4
	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
	,							-					-						
	Alkalinity (total) as CaCO3	35	65.2	78.4	79.4	25.6	81.4	3.8 J	30	51.6	22	21.2	3 J	20.6		179		49	14.4
GEOCHEM	Ferrous Iron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 5	Iron	0.0824 J	0.134	0.071 J	< 0.033	0.0593 J	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.22			0.204	0.0364 J
Ŏ	Magnesium	5.34	8.28	9.02	10.9	4.14	26.1	15	18.6	36.5	20.1	1.35	36.9	9.68	9.93			19.4	11.9
5	Manganese	0.0348	0.028	0.00658	0.00165 J	0.00159 J	< 0.001	2.68	3.29	0.0113	0.00205 J	< 0.001	1.65	0.00207 J	0.0315			0.628	0.271
	Nitrogen Nitrate	0.327	1.41	0.173	0.371	0.638	0.119	0.0607	0.0165	0.149	0.131	0.318	0.145	0.0655	0.00825			0.033	0.275
	Potassium	0.432	2.85	0.522	1.35	0.706	1.08	14.5	3.54	4.05	3.84	1.94	6.12	4.41	8.93			6.66	4.27
	Sodium	3.63	5.29	4.78	5.22	2.54	25.5	37.2	21.7	20.1	40.4	4.85	42.3	11.7	94.4			48.6	23
	Sulfide	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.0354	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033			< 0.033	< 0.033
	Dissolved Oxygen (DO)	4.39	0.79	1.9	3.33	6.98	1.59	-0.04	1.65	0.17	2	7.14	1.71	3.59	7.16			2.16	1.56
	Oxidation-reduction potential (ORP) (mV)	105.1	42.8	65	135.3	27.6	26.8	176.9	32.3	36.6	93	156.2	124.2	121.8	146.5			0.6	79.8
FIELD	Temperature (°C)	15.58	15.89	17.59	17.02	17.51	14.75	20.53	18.39	17.86	15.8	18.88	18.53	15.52	18.47			18.79	16.95
F	Conductivity (µS/cm)	65.34	102.25	157.2	135.71	53.27	434.81	676.33	561.59	590.15	598.9	47.92	675.19	147.8	651.81			675.06	396.73
	pH (S.U.)	5.26	6.7	6.47	6.42	6.54	6.37	4.79	5.93	6.08	5.64	5.84	4.75	5.56	7.14			7.1	5.6
	Turbidity (NTU)	0.64	1.69	3.61	1.13	0.96	0.57	0.31	0.65	0.22	3.34	0.19	0.88	0.36	3.79			2.83	0.55

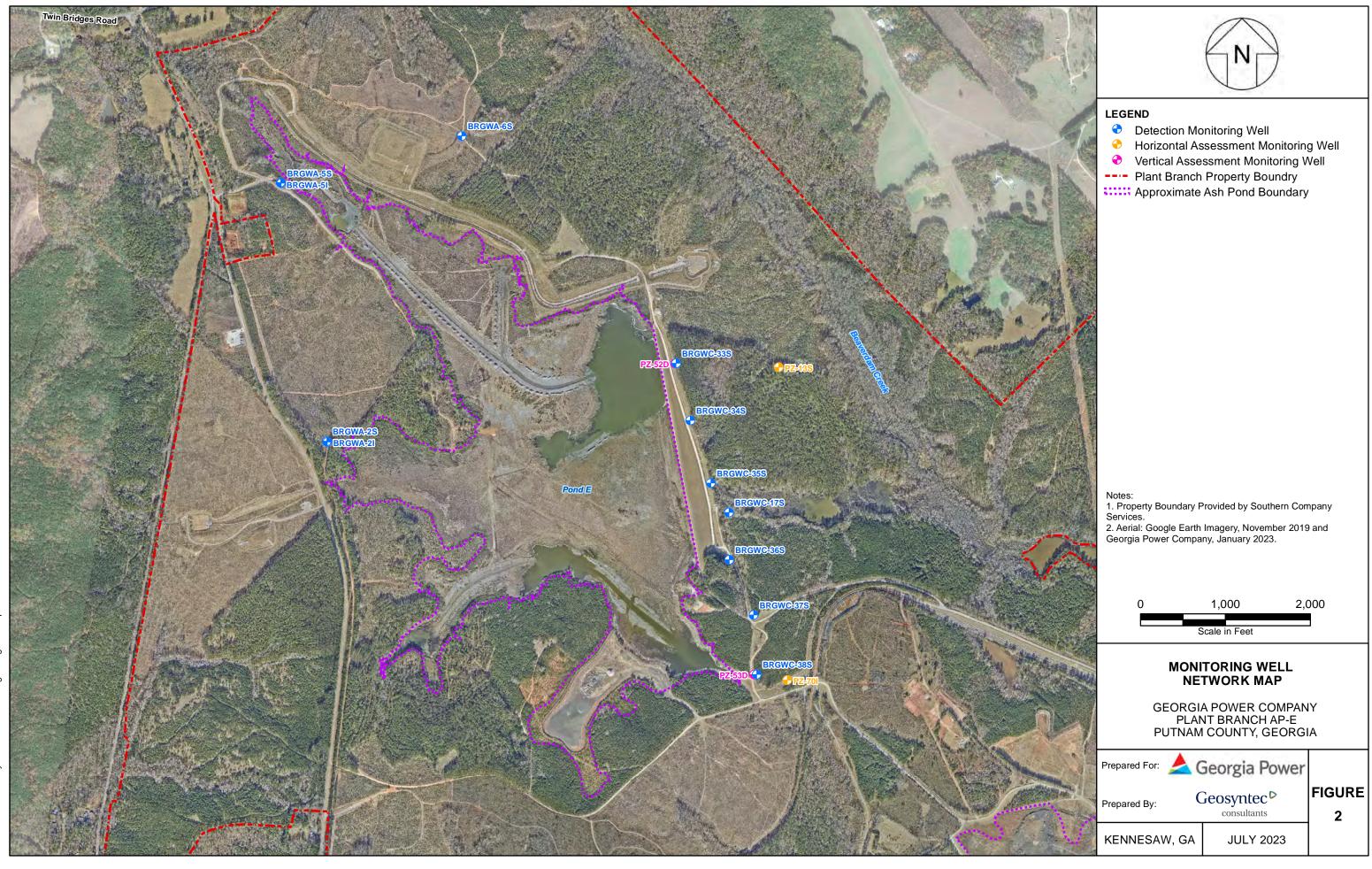
- -- = Parameter was not analyzed

- -- = 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; mV = millivolts; μS/cm = microsiemens per centimeter; S.U. = standard units; NTU is nephelometric turbidity units
  U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228).
  (1) Apendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L) unless otherwise noted.
  (2) Metals were analyzed by EPA Method 6010D, 6020B, 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.

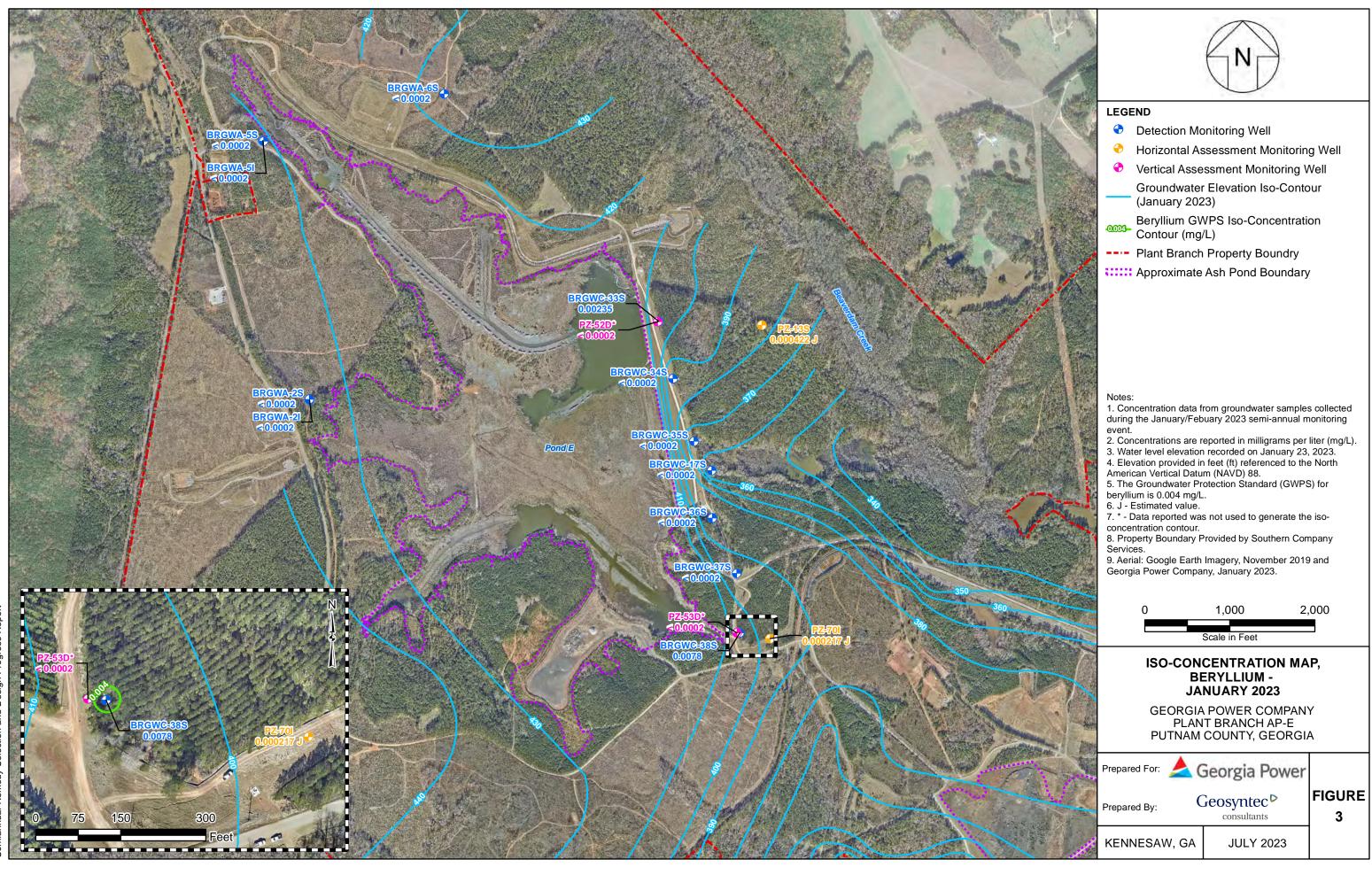
# **FIGURES**



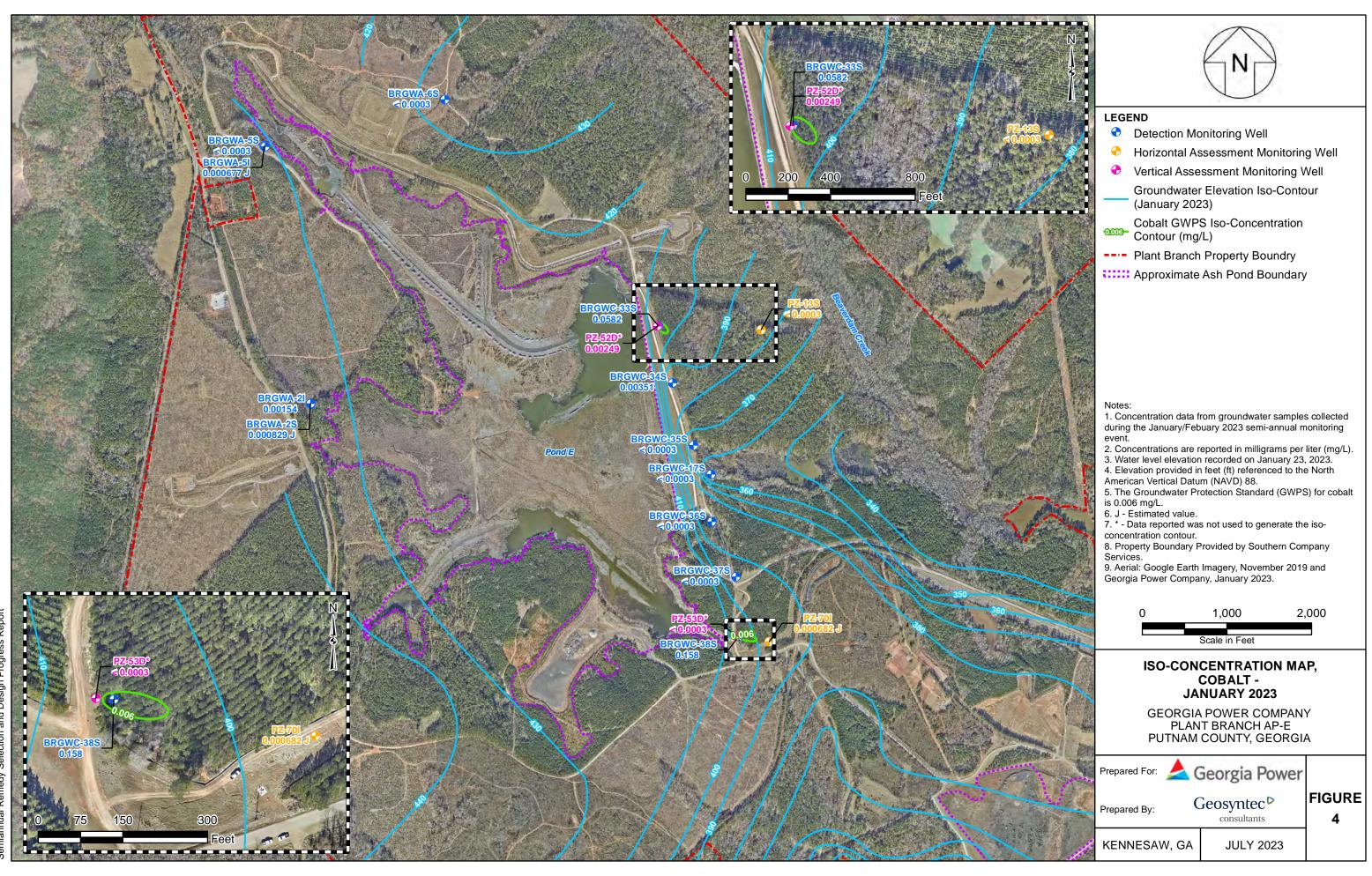
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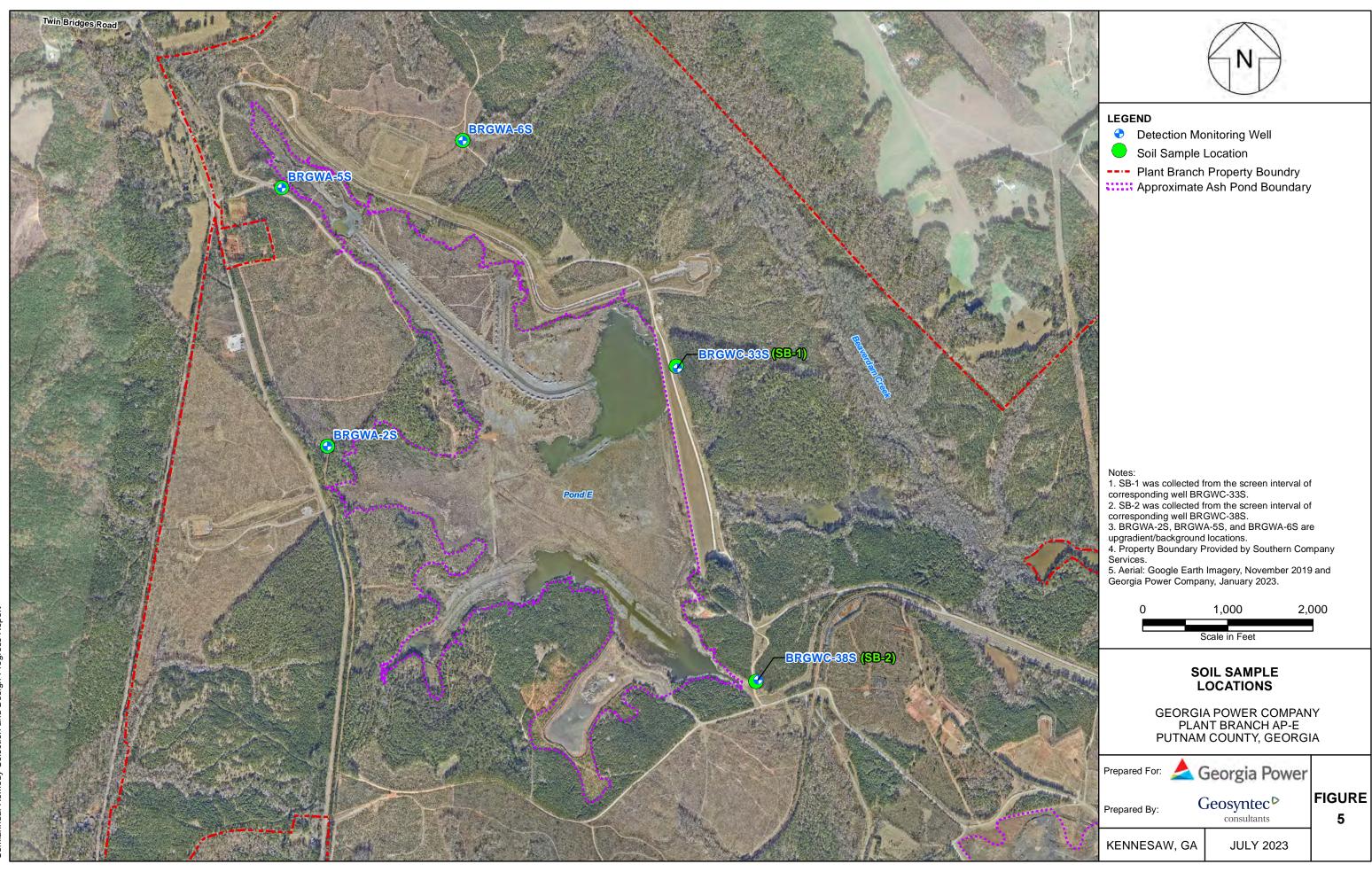
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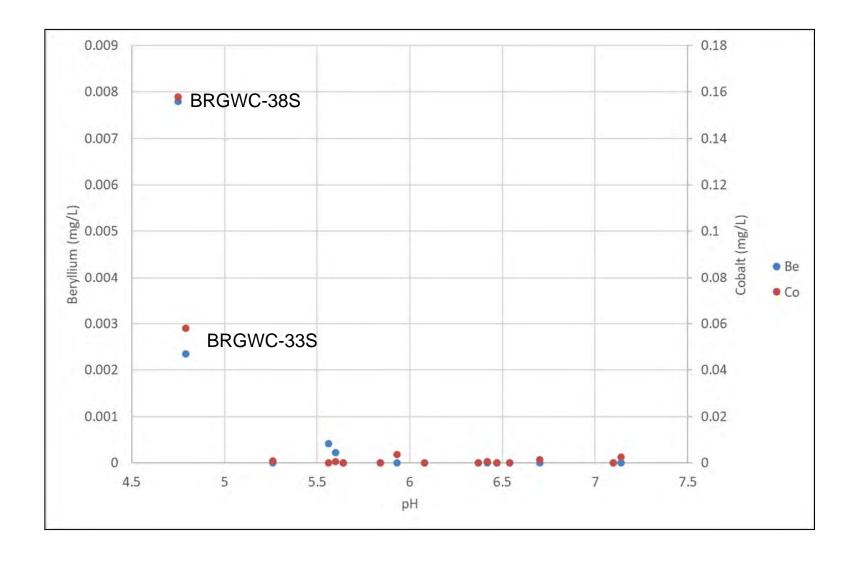
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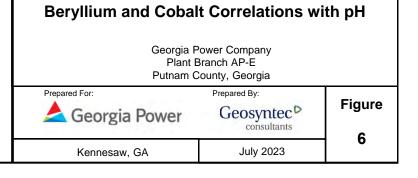


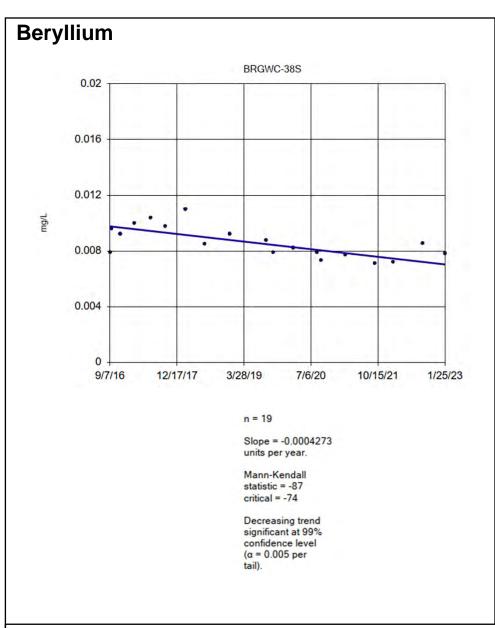
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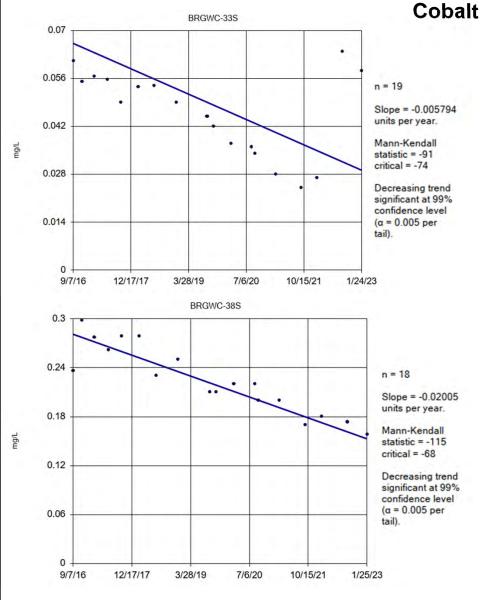


# Notes:

- 1. Groundwater samples collected during the spring semi-annual sampling event between 1/24/2023 and 2/2/2023.
- 2. mg/L = milligrams per liter
- 3. Be = beryllium
- 4. Co = cobalt







### Notes:

- Groundwater trends completed by Groundwater Stats Consulting using groundwater data collected for the full monitoring period through the January 2023 semiannual sampling event.
- 2. Trends shown are in wells where statistically significant levels (SSLs) have been identified.
- 3. mg/L = milligrams per liter



# APPENDIX A

**Analytical Laboratory Reports** 



## SGS Canada Inc.

P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

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

# SiREM Laboratory

Attn: Jacques Smith

180B Market Place Blvd Knoxville, Tennesse 37922, USA

Phone: 865-291-4695

Fax:

# 22-November-2022

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:	2:	3:	4:	5:	6:	7:	8:	9:	10:
	Analysis Start Date	Analysis Start Time	Analysis Completed	Analysis Completed	PZ-64	PZ-65	PZ-66	PZ-68	SB-1	SB-2
	Otal C Date	Otart Timo	Date	Time						
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
TI [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 2HO

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>U [μg/g]</u>	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
Υ [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, B.Sc., C.Chem

Project Specialist,

Environment, Health & Safety



### SGS Canada Inc.

P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

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

SiREM Laboratory

Attn: Jacques Smith

180B Market Place Blvd Knoxville, Tennesse

37922, USA

Phone: 865-291-4695

Fax:

22-November-2022

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	4: Analysis Completed	5: PZ-64	6: PZ-65	7: PZ-66	8: PZ-68	9: SB-1	10: SB-2
			Date	Time						
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



# **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

BRUKER AXS D8 Advance Diffractometer Instrument:

Co radiation, 35 kV, 40 mA; Detector: LYNXEYE Test Conditions:

Regular Scanning: Step: 0.02°, Step time: 0.75s, 2θ range: 6-80°

PDF2/PDF4 powder diffraction databases issued by the International Center Interpretations:

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.Geo. Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo. Senior Mineralogist

Jaym Z

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

	PZ-64	PZ-65	PZ-66	PZ-68	SB-1	SB-2
Mineral/Compound	OCT4533-1	OCT4533-2	OCT4533-3	OCT4533-4	OCT4533-5	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

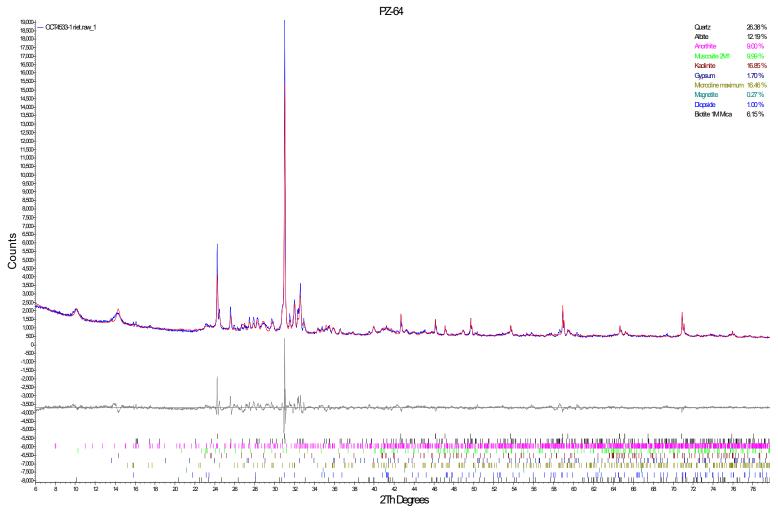
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

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

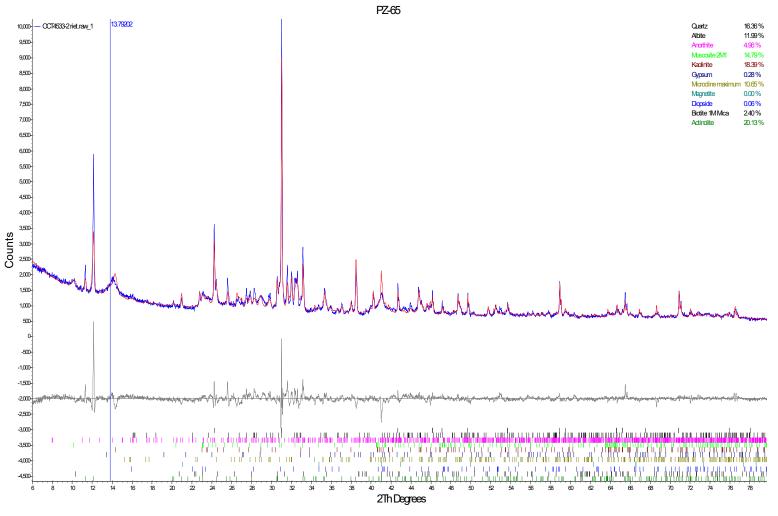
The weight percent quantities indicated have been normalized to a sum of 100%.

Mineral/Compound	Formula
Quartz	SiO <sub>2</sub>
Plagioclase	(NaSi,CaAl)AlSi <sub>2</sub> O <sub>8</sub>
Potassium-feldspar	KAISi <sub>3</sub> O <sub>8</sub>
Mica	K(Mg,Fe)Al <sub>2</sub> Si <sub>3</sub> AlO <sub>10</sub> (OH) <sub>2</sub>
Kaolinite	$Al_2Si_2O_5(OH)_4$
Gypsum	CaSO <sub>4</sub> ·2H <sub>2</sub> O
Magnetite	Fe <sub>3</sub> O <sub>4</sub>
Diopside	CaMgSi <sub>2</sub> O <sub>6</sub>
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$
Chlorite	$(Fe,(Mg,Mn)_5,AI)(Si_3AI)O_{10}(OH)_8$
Grossular	Ca <sub>3</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub>
Ilmenite	FeTiO <sub>3</sub>

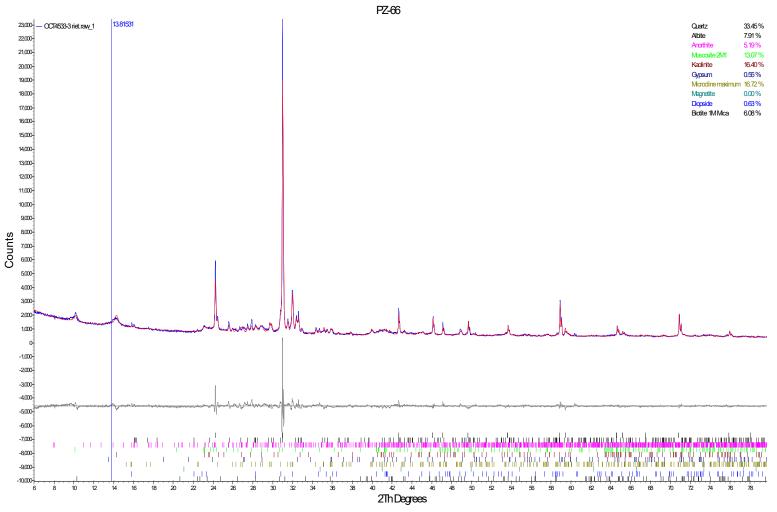




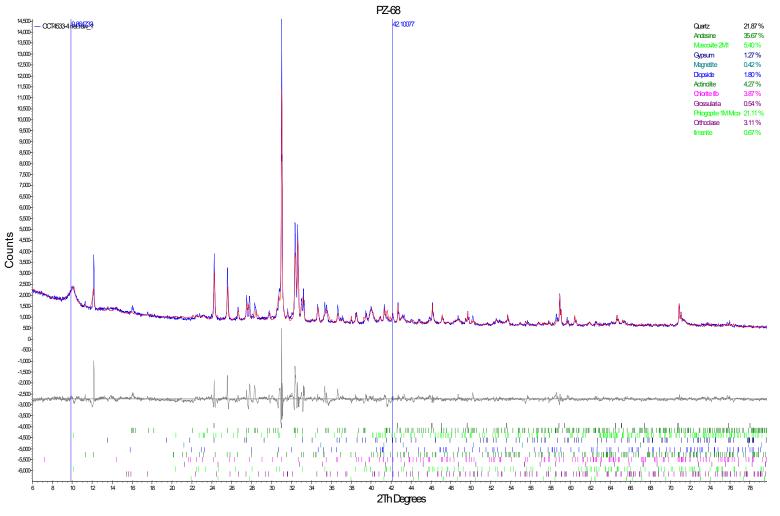




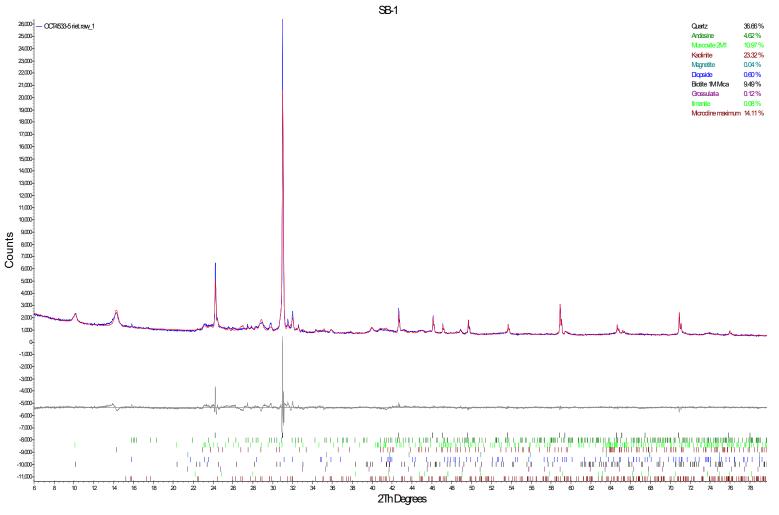




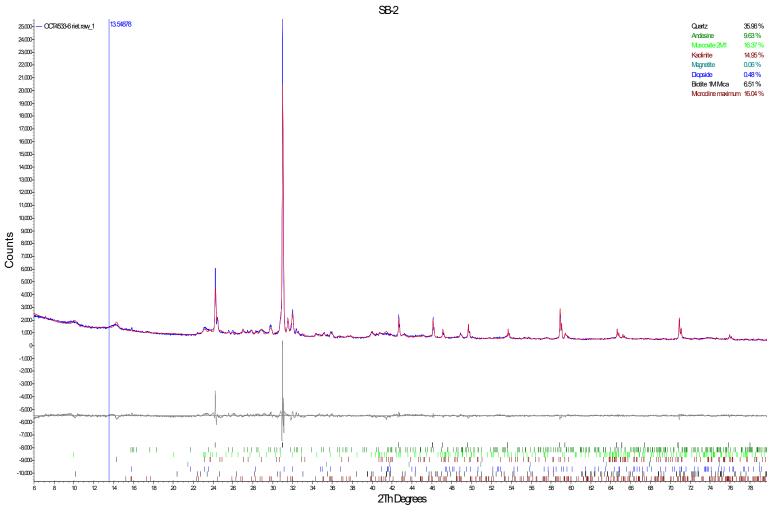














### **SiREM Laboratory**

Attn: Jacques Smith

180B Market Place Blvd Knoxville, Tennesse 37922, USA

Phone: 865-291-4695

Fax:

31-January-2023

Date Rec.: 28 November 2022 LR Report: CA19283-NOV22

Reference: Plant Branch SIREMLABUS, 02, 10.

8151

**Copy:** #1

## CERTIFICATE OF ANALYSIS Final Report

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	8: PZ-68	9: SB-1	10: SB-2
Sample Date & Time			31-Aug-22	06-Oct-22 08:30	06-Oct-22 08:30
As [μg/g]	31-Jan-23	09:52	0.7	< 0.5	< 0.5
Be [µg/g]	31-Jan-23	09:52	1.4	1.5	1.1
Co [µg/g]	31-Jan-23	09:52	16	9.1	3.7
Se [µg/g]	31-Jan-23	09:52	< 0.7	< 0.7	< 0.7

Fraction 6 Residual metals

Catharine Arnold, B.Sc., C.Chem Project Specialist,



### **SiREM Laboratory**

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31-January-2023

Date Rec.: 28 November 2022 LR Report: CA19282-NOV22

**Reference:** Plant Branch SIREMLABUS. 02. 10.

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## CERTIFICATE OF ANALYSIS Final Report

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	8: PZ-68	9: SB-1	10: SB-2
Sample Date & Time			31-Aug-22	06-Oct-22 08:30	06-Oct-22 08:30
As [μg/g]	31-Jan-23	09:52	< 0.5	< 0.5	< 0.5
Be [µg/g]	31-Jan-23	09:52	0.05	0.12	0.09
Co [µg/g]	31-Jan-23	09:52	0.27	0.45	0.70
Se [µg/g]	31-Jan-23	09:52	< 0.7	< 0.7	< 0.7

Fraction 5 Bound to Organic Material

Catharine Arnold, B.Sc., C.Chem Project Specialist,



**SiREM Laboratory** 

Attn: Jacques Smith

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Fax:

Tessier Leach Fraction 4 - Metals Bound to Fe and Mn Oxides

31-January-2023

Date Rec.: 28 November 2022 LR Report: CA19281-NOV22

Reference: Plant Branch SIREMLABUS. 02. 10.

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## CERTIFICATE OF ANALYSIS Final Report

Analysis	3: Analysis Completed Date	4: Analysis Completed Time	8: PZ-68	9: SB-1	10: SB-2
Sample Date & Time			31-Aug-22	06-Oct-22 08:30	06-Oct-22 08:30
As [μg/g]	31-Jan-23	09:51	< 0.5	< 0.5	< 0.5
Be [µg/g]	31-Jan-23	09:51	0.10	0.44	0.30
Co [µg/g]	31-Jan-23	09:51	2.4	4.4	4.0
Se [µg/g]	31-Jan-23	09:51	< 0.7	< 0.7	< 0.7

Fraction 4 Metals Bound to Fe and Mn Oxides

Catharine Arnold, B.Sc., C.Chem Project Specialist,



**SiREM Laboratory** 

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Phone: 865-291-4695

Fax:

31-January-2023

Date Rec.: 28 November 2022 LR Report: CA19280-NOV22

**Reference:** Plant Branch SIREMLABUS. 02. 10.

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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	8: PZ-68	9: SB-1	10: SB-2
Sample Date & Time					31-Aug-22	06-Oct-22 08:30	06-Oct-22 08:30
As [μg/g]	19-Jan-23	23:42	31-Jan-23	09:50	< 0.5	< 0.5	< 0.5
Be [µg/g]	19-Jan-23	23:42	31-Jan-23	09:50	0.02	0.10	0.14
Co [µg/g]	19-Jan-23	23:42	31-Jan-23	09:50	0.76	1.1	1.4
Se [µg/g]	19-Jan-23	23:42	31-Jan-23	09:50	< 0.7	< 0.7	< 0.7

Fraction 3 Metals Bound to Carbonates

Catharine Arnold, B.Sc., C.Chem Project Specialist,



**SiREM Laboratory** 

Attn: Jacques Smith

180B Market Place Blvd Knoxville, Tennesse 37922, USA

Phone: 865-291-4695

Fax:

31-January-2023

Date Rec.: 28 November 2022 LR Report: CA19279-NOV22

**Reference:** Plant Branch SIREMLABUS. 02. 10.

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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	8: PZ-68	9: SB-1	10: SB-2
Sample Date & Time					31-Aug-22	06-Oct-22 08:30	06-Oct-22 08:30
As [μg/g]	19-Jan-23	23:42	31-Jan-23	09:50	< 0.5	< 0.5	< 0.5
Be [µg/g]	19-Jan-23	23:42	31-Jan-23	09:50	< 0.02	< 0.02	< 0.02
Co [µg/g]	19-Jan-23	23:42	31-Jan-23	09:50	0.02	0.08	0.10
Se [µg/g]	19-Jan-23	23:42	31-Jan-23	09:50	< 0.7	< 0.7	< 0.7

Fraction 2 Exchangeable Metals

Catharine Arnold, B.Sc., C.Chem Project Specialist,



# **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 140-19131-1

Client Project/Site: SCS Site, Plant Branch

For:

Golder Associates Inc. 5170 Peachtree Road Building 100, Suite 300 Atlanta, Georgia 30341

Attn: Brian Steele

Authorized for release by: 6/25/2020 3:51:10 PM

Ryan Henry, Project Manager I

(865)291-3000

william.henry@testamericainc.com

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

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

2

3

4

5

7

8

9

4 4

12

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Laboratory Job ID: 140-19131-1

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### **Definitions/Glossary**

Client: Golder Associates Inc. Job ID: 140-19131-1 Project/Site: SCS Site, Plant Branch

**Qualifiers** 

Metals Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
В	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L	A negative instrument reading had an absolute value greater than the reporting limit

L	A negative instrument reading had an absolute value greater than the reporting limit
Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)

Minimum Detectable Concentration (Radiochemistry) MDC Method Detection Limit MDL Minimum Level (Dioxin) ML MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

MCL

MDA

ND Not Detected at the reporting limit (or MDL or EDL if shown)

EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry)

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) TEQ

TNTC Too Numerous To Count

#### **Case Narrative**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

Job ID: 140-19131-1

Laboratory: Eurofins TestAmerica, Knoxville

**Narrative** 

Job Narrative 140-19131-1

#### Receipt

The samples were received on 5/20/2020 at 9:45am and arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8° C.

#### **Receipt Exceptions**

The Field Sampler was not listed on the Chain of Custody.

#### Metals

7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

- · Step 1 Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO4), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- · Step 2 Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- · Step 3 Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 4 Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- · Step 5 Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- · Step 6 Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCI-HNO3-H2O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 7 Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO3, HCl and H3BO3. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

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

#### Where:

C = Concentration from instrument readout, μg/mL

V = Final volume of digestate, mL

D = Instrument dilution factor

V1 = Total volume of leachate, mL

V2 = Volume of leachate digested, mL

W = Wet weight of sample, g

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#### **Case Narrative**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

#### Job ID: 140-19131-1 (Continued)

#### **Laboratory: Eurofins TestAmerica, Knoxville (Continued)**

S = Percent solids/100

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

#### SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Method 6010B: The following samples were diluted due to the presence of Iron which interferes with Cadmium and Selenium: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10) and PZ-53D 30 FT BGS (140-19131-11). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted due to the presence of Manganese which interferes with Selenium: BRGWA-2S(2) 39 FT BGS (140-19131-1) and PZ-52D 18 FT BGS (140-19131-7). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted due to the presence of titanium which interferes with Cobalt: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), PZ-52D 24-25 FT BGS (140-19131-8), BRGWC-50(2) 59 FT BGS (140-19131-9), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10), PZ-53D 30 FT BGS (140-19131-11) and PZ-53D 36 FT BGS (140-19131-12). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted to bring the concentration of target analyte, aluminum, within the calibration range: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), PZ-52D 24-25 FT BGS (140-19131-8), BRGWC-50(2) 59 FT BGS (140-19131-9), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10), PZ-53D 30 FT BGS (140-19131-11) and PZ-53D 36 FT BGS (140-19131-12). Elevated reporting limits (RLs) are provided.

Method 6010B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: BRGWA-6S(2) 42 FT BGS (140-19131-5) and BRGWC-50(2) 63-63.5 FT BGS (140-19131-10).

Method 6010B SEP: The following sample was diluted due to the presence of silicon which interferes with Selenium: BRGWA-2S(2) 39 FT BGS (140-19131-1). Elevated reporting limits (RLs) are provided.

Method 6010B SEP: The following samples were diluted due to the nature of the sample matrix: BRGWA-2S(2) 39 FT BGS (140-19131-1), BRGWA-2S(2) 43 FT BGS (140-19131-2), BRGWA-5S(2) 38 FT BGS (140-19131-3), BRGWA-5S(2) 32 FT BGS (140-19131-4), BRGWA-6S(2) 42 FT BGS (140-19131-5), BRGWA-6S(2) 48 FT BGS (140-19131-6), PZ-52D 18 FT BGS (140-19131-7), PZ-52D 24-25 FT BGS (140-19131-8), BRGWC-50(2) 59 FT BGS (140-19131-9), BRGWC-50(2) 63-63.5 FT BGS (140-19131-10), PZ-53D 30 FT BGS (140-19131-11) and PZ-53D 36 FT BGS (140-19131-12). Elevated reporting limits (RLs) are provided for aluminum. The serial dilution analysis indicated a matrix issue with the results for aluminum increasing with dilution.

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#### **Case Narrative**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

### Job ID: 140-19131-1 (Continued)

#### Laboratory: Eurofins TestAmerica, Knoxville (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **General Chemistry**

% Moisture: The samples were analyzed for percent moisture using SOP number KNOX-WC-0012 (based on Modified MCAWW 160.3 and SM2540B and on the percent moisture determinations described in methods 3540C and 3550B).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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## **Sample Summary**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-19131-1	BRGWA-2S(2) 39 FT BGS	Solid	05/13/20 14:30	05/20/20 09:45
140-19131-2	BRGWA-2S(2) 43 FT BGS	Solid	05/13/20 14:40	05/20/20 09:45
140-19131-3	BRGWA-5S(2) 38 FT BGS	Solid	05/14/20 07:40	05/20/20 09:45
140-19131-4	BRGWA-5S(2) 32 FT BGS	Solid	05/14/20 07:50	05/20/20 09:45
140-19131-5	BRGWA-6S(2) 42 FT BGS	Solid	05/14/20 12:05	05/20/20 09:45
140-19131-6	BRGWA-6S(2) 48 FT BGS	Solid	05/14/20 12:15	05/20/20 09:45
140-19131-7	PZ-52D 18 FT BGS	Solid	05/14/20 14:40	05/20/20 09:45
40-19131-8	PZ-52D 24-25 FT BGS	Solid	05/14/20 14:50	05/20/20 09:45
40-19131-9	BRGWC-50(2) 59 FT BGS	Solid	05/15/20 09:00	05/20/20 09:45
40-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Solid	05/15/20 09:20	05/20/20 09:45
40-19131-11	PZ-53D 30 FT BGS	Solid	05/16/20 16:15	05/20/20 09:45
140-19131-12	PZ-53D 36 FT BGS	Solid	05/16/20 16:25	05/20/20 09:45

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1 Date Collected: 05/13/20 14:30 **Matrix: Solid** Date Received: 05/20/20 09:45

Percent Solids: 71.0

Analyte	EP Metals (ICP) - S Result	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND				mg/Kg	— <del>-</del>	06/02/20 08:00	06/16/20 12:21	4
Beryllium	ND		1.4		mg/Kg	☼	06/02/20 08:00	06/16/20 12:21	4
Cadmium	ND.		1.4		mg/Kg	₩	06/02/20 08:00	06/16/20 12:21	4
Cobalt	ND		14		mg/Kg				4
Iron	ND ND		28		mg/Kg	₩		06/16/20 12:21	4
	0.37		4.2			☆		06/16/20 12:21	4
Manganese Solonium	0.37 ND				mg/Kg				4
Selenium	ND		2.8	0.96	mg/Kg	**	06/02/20 06.00	06/16/20 12:21	4
Method: 6010B SEP - SI	FP Metals (ICP) - 9	Sten 2							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8.9	J *	42	6.8	mg/Kg	<u> </u>	06/03/20 08:00	06/16/20 14:15	3
Beryllium	ND	*	1.1		mg/Kg	₩	06/03/20 08:00	06/16/20 14:15	3
Cadmium	ND		1.1		mg/Kg	₩	06/03/20 08:00		3
Cobalt	ND		11		mg/Kg	 \$		06/16/20 14:15	3
Iron	ND	*	21		mg/Kg	☆		06/16/20 14:15	3
Manganese	ND ND		3.2		mg/Kg	₽		06/16/20 14:15	3
Selenium	ND		2.1		mg/Kg			06/16/20 14:15	3
·	ND		2.1	0.72	mg/rtg		00/00/20 00:00	00/10/20 14:10	O
Method: 6010B SEP - SI	EP Metals (ICP) - 9	Step 3							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	270		14	3.0	mg/Kg	<u> </u>	06/08/20 08:00	06/18/20 12:10	1
Beryllium	0.16	J	0.35		mg/Kg	₩	06/08/20 08:00	06/18/20 12:10	1
Cadmium	0.016	J B *	0.35		mg/Kg	☼	06/08/20 08:00	06/18/20 12:10	1
Cobalt	14		3.5		mg/Kg		06/08/20 08:00	06/18/20 12:10	1
Iron	2000		7.0	4.1		₩	06/08/20 08:00		1
Manganese	320	В	1.1		mg/Kg	₩		06/18/20 12:10	1
Selenium	0.45		0.70		mg/Kg	 \$		06/18/20 12:10	
Colonian	0.40		00	0.2.	99		00.00.20	00/10/20 12/10	
Method: 6010B SEP - SI	EP Metals (ICP) -	Step 4							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1900		14	2.3	mg/Kg	₩	06/10/20 08:00	06/18/20 14:04	1
Beryllium	0.77		0.35	0.023	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Cadmium	ND		0.35	0.015	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Cobalt	6.5		3.5	0.075	mg/Kg		06/10/20 08:00	06/18/20 14:04	1
Iron	17000		7.0	4.1	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Manganese	240		1.1	0.18	mg/Kg	☼	06/10/20 08:00	06/18/20 14:04	1
Selenium	1.5	B *	0.70		mg/Kg		06/10/20 08:00	06/18/20 14:04	1
Method: 6010B SEP - SI									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Aluminum		* *1	210		mg/Kg	<u></u>	06/12/20 08:00	06/19/20 11:43	5
Beryllium	ND	*	5.3	0.44	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Cadmium	ND		5.3	0.23	mg/Kg	₩		06/19/20 11:43	5
Cobalt	ND	*	53		mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Iron	ND	* *1	110	62	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Manganese	3.0	J *	16	2.6	mg/Kg	☼	06/12/20 08:00	06/19/20 11:43	5
Selenium	ND		11	3.7	mg/Kg	₽	06/12/20 08:00	06/19/20 11:43	5
Method: 6010B SEP - SI									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Aluminum	14000		14		mg/Kg	<del>-</del>	00/40/00 00:00	06/19/20 13:38	1

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30

Date Received: 05/20/20 09:45

Matrix: Solid

Percent Solids: 71.0

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.29	J	0.35	0.017	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 13:38	1
ND	L	0.35	0.015	mg/Kg	₩	06/12/20 08:00	06/19/20 13:38	1
8.3		7.0	0.13	mg/Kg	₩	06/12/20 08:00	06/19/20 16:54	2
24000		7.0	4.1	mg/Kg	₩	06/12/20 08:00	06/19/20 13:38	1
71		1.1	0.35	mg/Kg	₩	06/12/20 08:00	06/19/20 13:38	1
0.79		0.70	0.24	mg/Kg		06/12/20 08:00	06/19/20 13:38	1
Result 52000	Qualifier	RL 140	MDL 23		— D ☆	Prepared 06/15/20 08:00	Analyzed 06/22/20 15:00	
	Qualifier							
	Qualifier		23	mg/Kg		06/15/20 08:00		
52000	<u> </u>	140	23 0.011	mg/Kg		06/15/20 08:00 06/15/20 08:00	06/22/20 15:00	10 10 5
<b>52000</b> ND	J	140 0.35	23 0.011 0.077	mg/Kg mg/Kg		06/15/20 08:00 06/15/20 08:00 06/15/20 08:00	06/22/20 15:00 06/22/20 13:18	10
52000 ND 0.21	J	140 0.35 1.8	23 0.011 0.077 0.18	mg/Kg mg/Kg mg/Kg		06/15/20 08:00 06/15/20 08:00 06/15/20 08:00 06/15/20 08:00	06/22/20 15:00 06/22/20 13:18 06/22/20 16:27	10 1 5
52000 ND 0.21 8.1	J	140 0.35 1.8 18	23 0.011 0.077 0.18 29	mg/Kg mg/Kg mg/Kg mg/Kg		06/15/20 08:00 06/15/20 08:00 06/15/20 08:00 06/15/20 08:00 06/15/20 08:00	06/22/20 15:00 06/22/20 13:18 06/22/20 16:27 06/22/20 16:27	10 1 5
	0.29 ND 8.3 24000 71 0.79	24000 71	0.29 J 0.35  ND L 0.35  8.3 7.0  24000 7.0  71 1.1  0.79 0.70  P Metals (ICP) - Step 7	0.29     J     0.35     0.017       ND     L     0.35     0.015       8.3     7.0     0.13       24000     7.0     4.1       71     1.1     0.35       0.79     0.70     0.24       P Metals (ICP) - Step 7	0.29         J         0.35         0.017         mg/Kg           ND         L         0.35         0.015         mg/Kg           8.3         7.0         0.13         mg/Kg           24000         7.0         4.1         mg/Kg           71         1.1         0.35         mg/Kg           0.79         0.70         0.24         mg/Kg           P Metals (ICP) - Step 7	0.29 J       0.35       0.017 mg/Kg       □         ND L       0.35       0.015 mg/Kg       □         8.3       7.0       0.13 mg/Kg       □         24000       7.0       4.1 mg/Kg       □         71       1.1       0.35 mg/Kg       □         0.79       0.70       0.24 mg/Kg       □         P Metals (ICP) - Step 7	0.29 J       0.35       0.017 mg/Kg       □ 06/12/20 08:00         ND L       0.35       0.015 mg/Kg       □ 06/12/20 08:00         8.3       7.0       0.13 mg/Kg       □ 06/12/20 08:00         24000       7.0       4.1 mg/Kg       □ 06/12/20 08:00         71       1.1       0.35 mg/Kg       □ 06/12/20 08:00         0.79       0.70       0.24 mg/Kg       □ 06/12/20 08:00         P Metals (ICP) - Step 7	0.29 J       0.35       0.017 mg/Kg       □ 06/12/20 08:00 06/19/20 13:38         ND L       0.35 0.015 mg/Kg       □ 06/12/20 08:00 06/19/20 13:38         8.3       7.0 0.13 mg/Kg       □ 06/12/20 08:00 06/19/20 16:54         24000       7.0 4.1 mg/Kg       □ 06/12/20 08:00 06/19/20 13:38         71 1.1 0.35 mg/Kg       □ 06/12/20 08:00 06/19/20 13:38         0.79 0.70 0.24 mg/Kg       □ 06/12/20 08:00 06/19/20 13:38

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	69000	10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	1.2	0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.22 J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	36	2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	82000	5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	930	0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.8	0.50	0.17	mg/Kg			06/25/20 11:53	1

Analyte	Result Qualifie	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	92000	140	23	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 14:27	10
Beryllium	0.66	0.35	0.011	mg/Kg	₩	05/29/20 08:00	06/23/20 12:43	1
Cadmium	1.4 J	3.5	0.15	mg/Kg	₩	05/29/20 08:00	06/23/20 14:27	10
Cobalt	72	70	0.73	mg/Kg	φ.	05/29/20 08:00	06/23/20 17:24	20
Iron	97000	70	58	mg/Kg	₩	05/29/20 08:00	06/23/20 14:27	10
Manganese	1700	2.1	0.31	mg/Kg	₩	05/29/20 08:00	06/23/20 16:04	2
Selenium	3.2 J	7.0	2.4	mg/Kg	<del>.</del>	05/29/20 08:00	06/23/20 14:27	10

6/25/2020

Job ID: 140-19131-1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

Date Collected: 05/13/20 14:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 75.0

Pate Received: 05/20/20 09:45								Percent Solid	is: 75.0
Method: 6010B SEP - SEP Metals (IC Analyte R	•	Step 1 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		53	8.5	mg/Kg	 ₩	06/02/20 08:00	06/16/20 12:26	
Beryllium	ND		1.3		mg/Kg	₽	06/02/20 08:00	06/16/20 12:26	4
Cadmium	ND		1.3	0.085	mg/Kg	₽	06/02/20 08:00	06/16/20 12:26	4
Cobalt	ND		13	0.24	mg/Kg	φ.	06/02/20 08:00	06/16/20 12:26	4
Iron	ND		27		mg/Kg	₩	06/02/20 08:00	06/16/20 12:26	4
Manganese	0.80	J	4.0		mg/Kg	₽		06/16/20 12:26	4
Selenium	ND		2.7		mg/Kg	φ.		06/16/20 12:26	4
Method: 6010B SEP - SEP Metals (IC	2) <sub>-</sub> 9	Sten 2							
·	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.6		40		mg/Kg	₩	06/03/20 08:00	06/16/20 14:20	3
Beryllium	ND	*	1.0		mg/Kg	₽	06/03/20 08:00	06/16/20 14:20	3
Cadmium	ND		1.0		mg/Kg	☼	06/03/20 08:00		3
Cobalt	ND		1.0		mg/Kg	ф.		06/16/20 14:20	3
Iron	ND	*	20		mg/Kg	Ψ Φ		06/16/20 14:20	3
	ND		3.0		mg/Kg	Ď.		06/16/20 14:20	3
Manganese Selenium	ND		2.0		mg/Kg mg/Kg	<del>ү</del> Д		06/16/20 14:20	3
selenium	ND		2.0	0.08	mg/kg	<b>γ</b>	06/03/20 06.00	00/10/20 14.20	3
Method: 6010B SEP - SEP Metals (IC Analyte R	•	Step 3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	290	Qualifier	13		mg/Kg	☼	06/08/20 08:00	06/18/20 12:15	DII Fac
						Ψ Φ			1
Beryllium	0.15	J *	0.33		mg/Kg	ж Ф	06/08/20 08:00		•
Cadmium	ND		0.33		mg/Kg	ببر ببر		06/18/20 12:15	1
Cobalt	14		3.3		mg/Kg	<del>1,</del> 		06/18/20 12:15	1
	1100		6.7		mg/Kg	#		06/18/20 12:15	1
Manganese	94		1.0		mg/Kg	<b>#</b>		06/18/20 12:15	1
Selenium	0.38	J	0.67	0.23	mg/Kg	₩	06/08/20 08:00	06/18/20 12:15	1
Method: 6010B SEP - SEP Metals (IC						_			
		Qualifier	RL		Unit	 D	Prepared	Analyzed	Dil Fac
	2400		13		mg/Kg	<b>#</b>	06/10/20 08:00	06/18/20 14:10	1
Beryllium	0.47		0.33		mg/Kg	<b>p</b>	06/10/20 08:00	06/18/20 14:10	1
Cadmium	ND		0.33		mg/Kg	₽	06/10/20 08:00		1
Cobalt	13		3.3	0.071	mg/Kg	₽	06/10/20 08:00	06/18/20 14:10	1
Iron 1	0000		6.7	3.9	mg/Kg	₩	06/10/20 08:00	06/18/20 14:10	1
Manganese	89		1.0		mg/Kg	₽	06/10/20 08:00	06/18/20 14:10	1
Selenium	1.1	B *	0.67	0.63	mg/Kg	φ.	06/10/20 08:00	06/18/20 14:10	1
Method: 6010B SEP - SEP Metals (IC	P) - §	Step 5							
Analyte R		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Aluminum	240	* *1	200	31	mg/Kg	☼	06/12/20 08:00	06/19/20 11:48	- 5
Beryllium	ND	*	5.0	0.42	mg/Kg	₩	06/12/20 08:00	06/19/20 11:48	5
Cadmium	ND		5.0	0.21	mg/Kg	₩	06/12/20 08:00	06/19/20 11:48	5
Cobalt	ND	*	50	0.80	mg/Kg	Φ.	06/12/20 08:00	06/19/20 11:48	5
Iron	ND	* *1	100	59	mg/Kg	₩	06/12/20 08:00	06/19/20 11:48	5
Manganese	ND	*	15		mg/Kg	₽		06/19/20 11:48	5
Selenium	4.2	J	10		mg/Kg	φ.	06/12/20 08:00	06/19/20 11:48	5
Method: 6010B SEP - SEP Metals (IC	•	•				_	_		
		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aluminum 1	5000		13	2 1	mg/Kg	 <del>\</del>	06/12/20 08:00	06/19/20 13:43	

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10

4.0

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Date Collected: 05/13/20 14:40

Date Received: 05/20/20 09:45

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Lab Sample ID: 140-19131-2

**Matrix: Solid** 

Percent Solids: 75.0

Job ID: 140-19131-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.16	J -	0.33	0.016	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 13:43	1
Cadmium	ND		0.33	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Cobalt	5.2		3.3	0.061	mg/Kg	₽	06/12/20 08:00	06/19/20 13:43	1
Iron	15000		6.7	3.9	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Manganese	32		1.0	0.33	mg/Kg	☼	06/12/20 08:00	06/19/20 13:43	1
Selenium	0.64	J	0.67	0.23	mg/Kg	\$	06/12/20 08:00	06/19/20 13:43	1

Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	36000		130	21	mg/Kg	<u> </u>	06/15/20 08:00	06/22/20 15:05	10
Beryllium	ND		0.33	0.010	mg/Kg	☼	06/15/20 08:00	06/22/20 13:23	1
Cadmium	0.59	J	1.7	0.073	mg/Kg	☼	06/15/20 08:00	06/22/20 16:32	5
Cobalt	28	J	33	0.35	mg/Kg	₩.	06/15/20 08:00	06/22/20 15:05	10
Iron	71000		33	27	mg/Kg	☼	06/15/20 08:00	06/22/20 16:32	5
Manganese	840		1.0	0.15	mg/Kg	☼	06/15/20 08:00	06/22/20 13:23	1
Selenium	3.0	J	3.3	1.1	mg/Kg		06/15/20 08:00	06/22/20 16:32	5

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	55000	10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.78	0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.59	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	60	2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	97000	5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1100	0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	9.4	0.50	0.17	mg/Kg			06/25/20 11:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	80000		130	21	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 14:32	10
Beryllium	0.46		0.33	0.010	mg/Kg	₩	05/29/20 08:00	06/23/20 12:49	1
Cadmium	1.6	J	3.3	0.15	mg/Kg	₩	05/29/20 08:00	06/23/20 14:32	10
Cobalt	54	J	67	0.69	mg/Kg		05/29/20 08:00	06/23/20 17:29	20
Iron	98000		67	55	mg/Kg	₩	05/29/20 08:00	06/23/20 14:32	10
Manganese	840		1.0	0.15	mg/Kg	₩	05/29/20 08:00	06/23/20 12:49	1
Selenium	3.9	J	6.7	2.3	mg/Kg	₽	05/29/20 08:00	06/23/20 14:32	10

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3 Date Collected: 05/14/20 07:40 **Matrix: Solid** Date Received: 05/20/20 09:45

Percent Solids: 84.1

A natuta	Decula	Ouglifier	DI.	MIDI	l Init		Drongered	Analyzad	DHE-
Analyte		Qualifier	RL _		Unit	— ×	Prepared	Analyzed	Dil Fa
Aluminum	ND		48		mg/Kg	±	06/02/20 08:00	06/16/20 12:31	
Beryllium	ND		1.2		mg/Kg	<b>*</b>	06/02/20 08:00	06/16/20 12:31	
Cadmium	ND		1.2		mg/Kg		06/02/20 08:00	06/16/20 12:31	
Cobalt	ND		12		mg/Kg	₩	06/02/20 08:00	06/16/20 12:31	
lron	ND		24	14	mg/Kg	≎	06/02/20 08:00	06/16/20 12:31	
Manganese	0.44	J	3.6	0.15	mg/Kg	₩	06/02/20 08:00	06/16/20 12:31	
Selenium	ND		2.4	0.81	mg/Kg	\$	06/02/20 08:00	06/16/20 12:31	
Method: 6010B SEP - SE	· · · · · · · · · · · · · · · · · · ·	•							
Analyte		Qualifier	RL _		Unit	D	Prepared	Analyzed	Dil Fa
Aluminum		J *	36		mg/Kg	<del>\</del>	06/03/20 08:00	06/16/20 14:25	
Beryllium	ND	*	0.89	0.057	mg/Kg	₽	06/03/20 08:00	06/16/20 14:25	
Cadmium	ND		0.89	0.039	mg/Kg	☆	06/03/20 08:00	06/16/20 14:25	
Cobalt	ND		8.9	0.22	mg/Kg	≎	06/03/20 08:00	06/16/20 14:25	
Iron	ND	*	18	10	mg/Kg	₩	06/03/20 08:00	06/16/20 14:25	
Manganese	ND		2.7	1.0	mg/Kg	₩	06/03/20 08:00	06/16/20 14:25	
Selenium	0.72	J	1.8	0.61	mg/Kg	₽	06/03/20 08:00	06/16/20 14:25	
Method: 6010B SEP - SE	EP Metals (ICP) - S	Step 3							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	130		12	2.5	mg/Kg	<del>\</del>	06/08/20 08:00	06/18/20 12:20	-
Beryllium	0.073	J	0.30	0.018	mg/Kg	≎	06/08/20 08:00	06/18/20 12:20	
Cadmium	0.023	JB*	0.30	0.013	mg/Kg	≎	06/08/20 08:00	06/18/20 12:20	
Cobalt	6.0		3.0		mg/Kg		06/08/20 08:00	06/18/20 12:20	
ron	410		5.9		mg/Kg	₩		06/18/20 12:20	
Manganese	78	R	0.89		mg/Kg	☆		06/18/20 12:20	
Selenium	ND		0.59		mg/Kg			06/18/20 12:20	
Method: 6010B SEP - SE	EP Metals (ICP) - S	Step 4							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	1900		12	1.9	mg/Kg	<del></del>	06/10/20 08:00	06/18/20 14:15	
Beryllium	0.21	J	0.30		mg/Kg	≎	06/10/20 08:00	06/18/20 14:15	
Cadmium	ND		0.30		mg/Kg	⇔	06/10/20 08:00	06/18/20 14:15	
Cobalt	2.9		3.0		mg/Kg		06/10/20 08:00		
Iron	4500		5.9		mg/Kg	₩	06/10/20 08:00		
	4300		0.89		mg/Kg	₩		06/18/20 14:15	
Manganese Selenium		B *	0.59		mg/Kg		06/10/20 08:00		
Method: 6010B SEP - SE	D Motale (ICD) -	Stop 5							
Analyte		Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum		J * *1	180		mg/Kg	— <del>ğ</del>	06/12/20 08:00	-	
Beryllium	ND		4.5		mg/Kg		06/12/20 08:00		
Cadmium	ND ND		4.5		mg/Kg	т Ф		06/19/20 11:53	
	ND ND	*						06/19/20 11:53	
Cobalt			45		mg/Kg				
ron		* *1	89		mg/Kg	<b>☆</b>		06/19/20 11:53	
Manganese	ND	<b>*</b> 	13		mg/Kg	<u>.</u> .	06/12/20 08:00		
Selenium	ND		8.9	3.1	mg/Kg	₩	06/12/20 08:00	06/19/20 11:53	
Method: 6010B SEP - SE Analyte		Step 6 Qualifier	RL	MADI	Unit	D	Prepared	Analyzed	Dil Fa

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Manganese

Selenium

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Lab Sample ID: 140-19131-3

Date Collected: 05/14/20 07:40

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 84.1

Method: 6010B SEP Analyte	- SEP Metals (ICP) - S	Step 6 (Cont Qualifier	inued) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Beryllium	0.075	J	0.30	0.014	mg/Kg	<u></u>	06/12/20 08:00	06/19/20 13:48	
Cadmium	ND		0.30		mg/Kg	₩	06/12/20 08:00	06/19/20 13:48	
Cobalt	5.4		3.0	0.055	mg/Kg	₩.	06/12/20 08:00	06/19/20 13:48	
Iron	11000		5.9	3.4	mg/Kg	₩	06/12/20 08:00	06/19/20 13:48	
Manganese	42		0.89	0.30	mg/Kg	☼	06/12/20 08:00	06/19/20 13:48	
Selenium	0.41	J	0.59	0.20	mg/Kg	₽	06/12/20 08:00	06/19/20 13:48	
Method: 6010B SEP	- SEP Metals (ICP) - S	Step 7							
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Aluminum	34000		120	19	mg/Kg	<del>\</del>	06/15/20 08:00	06/22/20 15:10	10
Beryllium	0.33		0.30	0.0089	mg/Kg	₩	06/15/20 08:00	06/22/20 13:29	
Cadmium	ND		1.5	0.065	mg/Kg	☼	06/15/20 08:00	06/22/20 16:37	į
Cobalt	15		15	0.15	mg/Kg	₽	06/15/20 08:00	06/22/20 16:37	
Iron	45000		30	24	mg/Kg	☼	06/15/20 08:00	06/22/20 16:37	
Manganese	580		0.89	0.13	mg/Kg	₩	06/15/20 08:00	06/22/20 13:29	•
Manganese Selenium	580 1.2	J	0.89		mg/Kg mg/Kg			06/22/20 13:29 06/22/20 16:37	
Selenium			3.0						
Selenium  Method: 6010B SEP	1.2 - SEP Metals (ICP) - S		3.0		mg/Kg				
Selenium  Method: 6010B SEP  Analyte	1.2 - SEP Metals (ICP) - S	Sum of Step	3.0 <b>s 1-7</b>	1.0 <b>MDL</b>	mg/Kg	<u>\$</u>	06/15/20 08:00	06/22/20 16:37	Dil Fac
Selenium  Method: 6010B SEP  Analyte  Aluminum	- SEP Metals (ICP) - Sesult	Sum of Step	3.0 s 1-7 RL	1.0 <b>MDL</b>	mg/Kg  Unit mg/Kg	<u>\$</u>	06/15/20 08:00	06/22/20 16:37  Analyzed	Dil Fac
Selenium	1.2 - SEP Metals (ICP) - 3 Result 47000	Sum of Step Qualifier	3.0 s 1-7 RL 10	1.0 MDL 1.6 0.0075	mg/Kg  Unit mg/Kg	<u>\$</u>	06/15/20 08:00	06/22/20 16:37  Analyzed 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium	1.2 - SEP Metals (ICP) - 9 Result 47000 0.69	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25	1.0 MDL 1.6 0.0075 0.011	mg/Kg  Unit mg/Kg mg/Kg	<u>\$</u>	06/15/20 08:00	06/22/20 16:37  Analyzed  06/25/20 11:53 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium	1.2 - SEP Metals (ICP) - Sesult 47000 0.69 0.023	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25	1.0 MDL 1.6 0.0075 0.011 0.023	mg/Kg  Unit mg/Kg mg/Kg mg/Kg	<u>\$</u>	06/15/20 08:00	06/22/20 16:37  Analyzed  06/25/20 11:53 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt	1.2 - SEP Metals (ICP) - 3 Result 47000 0.69 0.023	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25 2.5	1.0 MDL 1.6 0.0075 0.011 0.023 4.1	mg/Kg  Unit mg/Kg mg/Kg mg/Kg mg/Kg	<u>\$</u>	06/15/20 08:00	Analyzed 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt	1.2 - SEP Metals (ICP) - 3 Result 47000 0.69 0.023 30 60000	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25 2.5 5.0	1.0 MDL 1.6 0.0075 0.011 0.023 4.1 0.052	mg/Kg  Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>\$</u>	06/15/20 08:00	Analyzed  06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53	Dil Face 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese Selenium	1.2 - SEP Metals (ICP) - 3 Result 47000 0.69 0.023 30 60000 740	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25 2.5 5.0 0.75	1.0 MDL 1.6 0.0075 0.011 0.023 4.1 0.052	mg/Kg  Unit  mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>\$</u>	06/15/20 08:00	Analyzed 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese Selenium	1.2 - SEP Metals (ICP) - S Result 47000 0.69 0.023 30 60000 740 3.4 P Metals (ICP) - Total	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25 2.5 5.0 0.75	1.0 MDL 1.6 0.0075 0.011 0.023 4.1 0.052	mg/Kg  Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>\$</u>	06/15/20 08:00	Analyzed 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese Selenium  Method: 6010B - SE	1.2 - SEP Metals (ICP) - S Result 47000 0.69 0.023 30 60000 740 3.4 P Metals (ICP) - Total	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25 2.5 5.0 0.75 0.50	1.0 MDL 1.6 0.0075 0.011 0.023 4.1 0.052 0.17	mg/Kg  Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	06/15/20 08:00 Prepared	Analyzed 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese Selenium  Method: 6010B - SEI Analyte	1.2 - SEP Metals (ICP) - Sesult 47000 0.69 0.023 30 60000 740 3.4 P Metals (ICP) - Total Result	Sum of Step Qualifier	3.0 s 1-7 RL 10 0.25 0.25 2.5 5.0 0.75 0.50	1.0 MDL 1.6 0.0075 0.011 0.023 4.1 0.052 0.17	mg/Kg  Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	D	Prepared Prepared	Analyzed  O6/25/20 11:53 Analyzed	Dil Fac
Selenium  Method: 6010B SEP Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese Selenium  Method: 6010B - SEI Analyte Aluminum	1.2 - SEP Metals (ICP) - Sesult 47000 0.69 0.023 30 60000 740 3.4 P Metals (ICP) - Total Result 86000	Sum of Step Qualifier	3.0  s 1-7  RL  10  0.25  0.25  2.5  5.0  0.75  0.50  RL  120	MDL 1.6 0.0075 0.011 0.023 4.1 0.052 0.17  MDL 19 0.0089	mg/Kg  Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	D	Prepared  Prepared  05/29/20 08:00	Analyzed  06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53 06/25/20 11:53	Dil Fac

12

0.89

1.2

9.7 mg/Kg

0.13 mg/Kg

0.40 mg/Kg

56000

**750** 

ND

☼ 05/29/20 08:00 06/23/20 16:15

☼ 05/29/20 08:00 06/23/20 12:54

© 05/29/20 08:00 06/23/20 16:15

Job ID: 140-19131-1

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12

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6/25/2020

1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Date Collected: 05/14/20 07:50 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-4

**Matrix: Solid** Percent Solids: 82.3

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND -	49	7.8	mg/Kg	<u> </u>	06/02/20 08:00	06/16/20 12:36	4
Beryllium	ND	1.2	0.37	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Cadmium	ND	1.2	0.078	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Cobalt	ND	12	0.22	mg/Kg	₩	06/02/20 08:00	06/16/20 12:36	4
Iron	ND	24	14	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Manganese	0.43 J	3.6	0.15	mg/Kg	☼	06/02/20 08:00	06/16/20 12:36	4
Selenium	ND	2.4	0.83	mg/Kg		06/02/20 08:00	06/16/20 12:36	4

Method: 6010B SEP - SEF	P Metals (ICP) - S	•							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	7.5	J *	36	5.8	mg/Kg	<u> </u>	06/03/20 08:00	06/16/20 14:31	3
Beryllium	ND	*	0.91	0.058	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Cadmium	ND		0.91	0.040	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Cobalt	ND		9.1	0.23	mg/Kg	₩.	06/03/20 08:00	06/16/20 14:31	3
Iron	ND	*	18	11	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Manganese	ND		2.7	1.0	mg/Kg	☼	06/03/20 08:00	06/16/20 14:31	3
Selenium	0.73	J	1.8	0.62	mg/Kg	₽	06/03/20 08:00	06/16/20 14:31	3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	140		12	2.6	mg/Kg	₩	06/08/20 08:00	06/18/20 12:26	1
Beryllium	0.089	J	0.30	0.018	mg/Kg	₩	06/08/20 08:00	06/18/20 12:26	1
Cadmium	0.021	J B *	0.30	0.013	mg/Kg	₩	06/08/20 08:00	06/18/20 12:26	1
Cobalt	4.9		3.0	0.055	mg/Kg	₽	06/08/20 08:00	06/18/20 12:26	1
Iron	590		6.1	3.5	mg/Kg	₩	06/08/20 08:00	06/18/20 12:26	1
Manganese	120	В	0.91	0.033	mg/Kg	₩	06/08/20 08:00	06/18/20 12:26	1
Selenium	ND		0.61	0.21	mg/Kg	<b>*</b>	06/08/20 08:00	06/18/20 12:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1800		12	1.9	mg/Kg	<u> </u>	06/10/20 08:00	06/18/20 14:20	1
Beryllium	0.25	J	0.30	0.019	mg/Kg	₩	06/10/20 08:00	06/18/20 14:20	1
Cadmium	0.018	J	0.30	0.013	mg/Kg	₩	06/10/20 08:00	06/18/20 14:20	1
Cobalt	2.7	J	3.0	0.064	mg/Kg	₩.	06/10/20 08:00	06/18/20 14:20	1
Iron	4700		6.1	3.5	mg/Kg	₩	06/10/20 08:00	06/18/20 14:20	1
Manganese	65		0.91	0.16	mg/Kg	₩	06/10/20 08:00	06/18/20 14:20	1
Selenium	0.90	B *	0.61	0.57	mg/Kg	ф.	06/10/20 08:00	06/18/20 14:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	160	J * *1	180	29	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 11:58	5
Beryllium	ND	*	4.6	0.38	mg/Kg	₩	06/12/20 08:00	06/19/20 11:58	5
Cadmium	ND		4.6	0.19	mg/Kg	₩	06/12/20 08:00	06/19/20 11:58	5
Cobalt	ND	*	46	0.73	mg/Kg	₩.	06/12/20 08:00	06/19/20 11:58	5
Iron	ND	* *1	91	53	mg/Kg	₩	06/12/20 08:00	06/19/20 11:58	5
Manganese	ND	*	14	2.2	mg/Kg	₩	06/12/20 08:00	06/19/20 11:58	5
Selenium	ND		9.1	3.2	mg/Kg	ф.	06/12/20 08:00	06/19/20 11:58	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6										
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Aluminum	9000	12	1.9	mg/Kg	₩	06/12/20 08:00	06/19/20 13:53	1		

Eurofins TestAmerica, Knoxville

Page 14 of 72

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Selenium

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Lab Sample ID: 140-19131-4

1.1 J

Date Collected: 05/14/20 07:50

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 82.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.082	J	0.30	0.015	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 13:53	1
Cadmium	ND		0.30	0.013	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Cobalt	4.0		3.0	0.056	mg/Kg	₽	06/12/20 08:00	06/19/20 13:53	1
Iron	9100		6.1	3.5	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Manganese	32		0.91	0.30	mg/Kg	☼	06/12/20 08:00	06/19/20 13:53	1
Selenium	ND		0.04	0.24	malka		00/40/00 00:00	06/19/20 13:53	
-		Sten 7	0.61	0.21	mg/Kg	¥	06/12/20 08:00	06/19/20 13.53	1
Method: 6010B SEP -	SEP Metals (ICP) - S	•							
Method: 6010B SEP - Analyte	SEP Metals (ICP) - S	Step 7 Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: 6010B SEP -	SEP Metals (ICP) - S	•		MDL				Analyzed	Dil Fac
Method: 6010B SEP -	SEP Metals (ICP) - S	•	RL	<b>MDL</b> 19	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 06/22/20 15:15	
Method: 6010B SEP - Analyte Aluminum	SEP Metals (ICP) - S Result 37000	Qualifier	RL 120	MDL 19 0.0091	Unit mg/Kg	D	Prepared 06/15/20 08:00 06/15/20 08:00	Analyzed 06/22/20 15:15	
Method: 6010B SEP - Analyte Aluminum Beryllium	SEP Metals (ICP) - 5 Result 37000 0.35	Qualifier	RL 120 0.30	MDL 19 0.0091 0.067	Unit mg/Kg mg/Kg	D	Prepared 06/15/20 08:00 06/15/20 08:00 06/15/20 08:00	Analyzed 06/22/20 15:15 06/22/20 13:50	10
Method: 6010B SEP - Analyte Aluminum Beryllium Cadmium	SEP Metals (ICP) - S Result 37000 0.35 0.17	Qualifier	RL 120 0.30 1.5	MDL 19 0.0091 0.067 0.16	Unit mg/Kg mg/Kg mg/Kg	D	Prepared 06/15/20 08:00 06/15/20 08:00 06/15/20 08:00 06/15/20 08:00	Analyzed 06/22/20 15:15 06/22/20 13:50 06/22/20 16:42	10 1 5

Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	48000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.77		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.21	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	29		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	68000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	900		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.7		0.50	0.17	mg/Kg			06/25/20 11:53	1

3.0

1.0 mg/Kg

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	87000	120	19	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 14:41	10
Beryllium	0.67	0.30	0.0091	mg/Kg	₩	05/29/20 08:00	06/23/20 13:16	1
Cadmium	2.2	0.61	0.027	mg/Kg	₩	05/29/20 08:00	06/23/20 16:21	2
Cobalt	36	30	0.32	mg/Kg	φ.	05/29/20 08:00	06/23/20 14:41	10
Iron	58000	12	10	mg/Kg	₩	05/29/20 08:00	06/23/20 16:21	2
Manganese	770	0.91	0.13	mg/Kg	₩	05/29/20 08:00	06/23/20 13:16	1
Selenium	ND	1.2	0.41	mg/Kg		05/29/20 08:00	06/23/20 16:21	2

6/25/2020

Job ID: 140-19131-1

© 06/15/20 08:00 06/22/20 16:42

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5 Date Collected: 05/14/20 12:05 **Matrix: Solid** Date Received: 05/20/20 09:45 Percent Solids: 69.7

Method: 6010B SEP - SEP	Metals (ICP) - \$	Step 1							
Analyte	• •	Qualifier	RL	MDL	Unit		Prepared	Analyzed	Dil Fa
Aluminum	ND		57	9.2	mg/Kg	Ţ.	06/02/20 08:00	06/16/20 12:57	
Beryllium	ND		1.4	0.44	mg/Kg	÷	06/02/20 08:00	06/16/20 12:57	4
Cadmium	ND		1.4	0.092	mg/Kg	≎	06/02/20 08:00	06/16/20 12:57	4
Cobalt	ND		14	0.26	mg/Kg		06/02/20 08:00	06/16/20 12:57	
Iron	ND		29	17	mg/Kg	÷	06/02/20 08:00	06/16/20 12:57	4
Manganese	0.25	J	4.3	0.18	mg/Kg	☆	06/02/20 08:00	06/16/20 12:57	4
Selenium	ND		2.9		mg/Kg	¢		06/16/20 12:57	4
Mathadi COAOD CED. CED.	Metala (ICD)	24 0							
Method: 6010B SEP - SEP Analyte	, ,	Qualifier	RL	MDL	Unit		Prepared	Analyzed	Dil Fa
Aluminum	9.7	J *	43	6.9	mg/Kg	7	. <u> </u>	06/16/20 14:52	
Beryllium	ND	*	1.1		mg/Kg	÷	06/03/20 08:00	06/16/20 14:52	;
Cadmium	ND		1.1		mg/Kg	÷			;
Cobalt	ND		11		mg/Kg				;
Iron	ND.	*	22		mg/Kg	¢		06/16/20 14:52	,
Manganese	ND ND		3.2		mg/Kg	÷			,
Selenium	ND		2.2		mg/Kg	· · · · · · · · · · · · · · · · · · ·		06/16/20 14:52	
Ocionium	ND		2.2	0.75	mg/rtg	-1	00/03/20 00:00	00/10/20 14.02	`
Method: 6010B SEP - SEP	• •	•				_			
Analyte		Qualifier	RL		Unit		•	Analyzed	Dil Fa
Aluminum	220		14		mg/Kg	÷	00,00,20 00.00		
Beryllium	0.049		0.36		mg/Kg	÷	06/08/20 08:00		
Cadmium		JB*	0.36		mg/Kg	÷	06/08/20 08:00	06/18/20 12:46	
Cobalt	19		3.6	0.065	mg/Kg	÷	06/08/20 08:00	06/18/20 12:46	•
Iron	490		7.2	4.2	mg/Kg	≎	06/08/20 08:00	06/18/20 12:46	•
Manganese	430	В	1.1	0.039	mg/Kg	≎	06/08/20 08:00	06/18/20 12:46	
Selenium	0.27	J	0.72	0.24	mg/Kg	≎	06/08/20 08:00	06/18/20 12:46	
Method: 6010B SEP - SEP	Metals (ICP) - S	Step 4							
Analyte	• •	Qualifier	RL	MDL	Unit	0	Prepared	Analyzed	Dil Fa
Aluminum	3100		14	2.3	mg/Kg	<del>-</del>	06/10/20 08:00	06/18/20 14:40	
Beryllium	0.45		0.36		mg/Kg	÷	06/10/20 08:00	06/18/20 14:40	
Cadmium	ND		0.36		mg/Kg	÷	06/10/20 08:00	06/18/20 14:40	
Cobalt	9.9		3.6	0.076	mg/Kg		06/10/20 08:00	06/18/20 14:40	
Iron	10000		7.2		mg/Kg	¢		06/18/20 14:40	
Manganese	270		1.1		mg/Kg	☆		06/18/20 14:40	
Selenium		B *	0.72		mg/Kg		06/10/20 08:00		
Made at COAOD OED OED	M-4-1- (IOD) (	24 a.a. <b>F</b>							
Method: 6010B SEP - SEP Analyte		Step 5 Qualifier	RL	MDL	Unit	С	Prepared	Analyzed	Dil Fa
Aluminum		J * *1	220		mg/Kg	<del>\</del>	<u> </u>	06/19/20 12:19	
Beryllium	ND		5.4		mg/Kg	≎		06/19/20 12:19	
Cadmium	ND		5.4		mg/Kg	¢	06/12/20 08:00		
Cobalt	ND	*	54		mg/Kg	¢		06/19/20 12:19	
Iron		* *1	110		mg/Kg	¢		06/19/20 12:19	,
			16			¢		06/19/20 12:19	,
Manganese	3.5				mg/Kg				
Selenium	4.3	J	11	3.7	mg/Kg	3,	06/12/20 08:00	00/19/20 12:19	
Method: 6010B SEP - SEP Analyte		Step 6 Qualifier	RL		Unit		Prepared	Analyzed	Dil Fa

Eurofins TestAmerica, Knoxville

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Selenium

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 69.7

Date Received: 05/20/20 09	9:45							Percent Solid	ls: 69.7
Method: 6010B SEP - SEI	P Metals (ICP) -	Step 6 (Cont	tinued)						
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Beryllium	0.15	J	0.36	0.017	mg/Kg	<u>₩</u>	06/12/20 08:00	06/19/20 16:12	1
Cadmium	ND	L	0.36	0.016	mg/Kg	₩	06/12/20 08:00	06/19/20 16:12	1
Cobalt	5.2		3.6	0.066	mg/Kg	₽	06/12/20 08:00	06/19/20 16:12	1
Iron	20000		7.2	4.2	mg/Kg	₩	06/12/20 08:00	06/19/20 16:12	1
Manganese	54		1.1	0.36	mg/Kg	₩	06/12/20 08:00	06/19/20 16:12	1
Selenium	0.69	J	0.72	0.24	mg/Kg	₩	06/12/20 08:00	06/19/20 16:12	1
- Method: 6010B SEP - SEI	P Metals (ICP) - :	Step 7							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	37000		140	23	mg/Kg	<u> </u>	06/15/20 08:00	06/22/20 15:20	10
Beryllium	0.19	J	0.36	0.011	mg/Kg	₩	06/15/20 08:00	06/22/20 13:56	1
Cadmium	0.49		0.36	0.016	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Cobalt	8.7	J	18	0.19	mg/Kg	₩.	06/15/20 08:00	06/22/20 16:47	5
Iron	34000		7.2	5.9	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Manganese	260		1.1	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 13:56	1
Selenium	0.90		0.72	0.24	mg/Kg	₽	06/15/20 08:00	06/22/20 13:56	1
Method: 6010B SEP - SEI	P Metals (ICP) -	Sum of Step	s 1-7						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	57000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.84		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.60		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	43		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	65000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1000		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	7.5		0.50	0.17	mg/Kg			06/25/20 11:53	1
- Method: 6010B - SEP Met	tals (ICP) - Total								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	110000		140	23	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 14:46	10
Beryllium	0.66	J	0.72	0.022	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2
Cadmium	1.7		0.72	0.032	mg/Kg	☼	05/29/20 08:00	06/23/20 16:26	2
Cobalt	58		36	0.37	mg/Kg		05/29/20 08:00	06/23/20 14:46	10
Iron	61000		14	12	mg/Kg	₩	05/29/20 08:00	06/23/20 16:26	2
Manganese	1100		2.2		mg/Kg	₩	05/29/20 08:00	06/23/20 16:26	2
					<del>.</del> <del>.</del>				

© 05/29/20 08:00 06/23/20 16:26

1.4

0.49 mg/Kg

0.94 J

2

Job ID: 140-19131-1

3

5

7

0

10

12

13

Lab Sample ID: 140-19131-6

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Date Collected: 05/14/20 12:15

**Matrix: Solid** Date Received: 05/20/20 09:45 Percent Solids: 69.9

Aluminum	14000		14		mg/Kg	— <del>ĕ</del>	06/12/20 08:00	06/19/20 16:17	DII Fa
Method: 6010B SEP - SE Analyte		Step 6 Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Selenium	ND		11	3.7	mg/Kg	₽	06/12/20 08:00	06/19/20 12:25	;
Manganese	3.8	J *	16		mg/Kg	<del></del>		06/19/20 12:25	
Iron	ND		110		mg/Kg	*		06/19/20 12:25	
Cobalt	ND		54		mg/Kg		06/12/20 08:00		
Cadmium	ND		5.4		mg/Kg		06/12/20 08:00	06/19/20 12:25	
Beryllium	ND	*	5.4		mg/Kg	₩ ₩	06/12/20 08:00	06/19/20 12:25	
Aluminum		J * *1	210		mg/Kg	— <u>∓</u>	06/12/20 08:00	06/19/20 12:25	
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Method: 6010B SEP - SE	EP Metals (ICP) - \$	Step 5							
Selenium	1.6	B *	0.71	0.67	mg/Kg	₽	06/10/20 08:00	06/18/20 14:45	
Manganese	210		1.1		mg/Kg	₩	06/10/20 08:00	06/18/20 14:45	
ron	5500		7.1	4.1	mg/Kg	<b>*</b>	06/10/20 08:00	06/18/20 14:45	
Cobalt	9.9		3.6		mg/Kg	<b>\$</b>	06/10/20 08:00	06/18/20 14:45	
Cadmium	0.022	J	0.36		mg/Kg		06/10/20 08:00	06/18/20 14:45	
Beryllium	0.20	J	0.36			₩	06/10/20 08:00	06/18/20 14:45	
Aluminum	2600		14		mg/Kg	*	06/10/20 08:00	06/18/20 14:45	
Analyte		Qualifier	RL _	MDL		D	Prepared	Analyzed	Dil Fa
Method: 6010B SEP - SE	EP Metals (ICP) - S	Step 4							
Selenium	0.29	J	0.71	0.24	mg/Kg	₽	06/08/20 08:00	06/18/20 12:51	
Manganese	460	В	1.1	0.039	mg/Kg	☼	06/08/20 08:00	06/18/20 12:51	
ron	480		7.1		mg/Kg	₩	06/08/20 08:00	06/18/20 12:51	
Cobalt	21		3.6		mg/Kg	Φ.	06/08/20 08:00	06/18/20 12:51	
Sadmium	0.094	<b>JB</b> *	0.36	0.016	mg/Kg	₩	06/08/20 08:00	06/18/20 12:51	
Beryllium	0.066	J	0.36	0.021	mg/Kg	₩	06/08/20 08:00	06/18/20 12:51	
Juminum	230		14	3.0	mg/Kg	<u>₩</u>	06/08/20 08:00	06/18/20 12:51	
lethod: 6010B SEP - SE nalyte	· · · · · · · · · · · · · · · · · · ·	Step 3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
					0 0				
Selenium	ND		2.1		mg/Kg			06/16/20 14:57	
Manganese	ND		3.2		mg/Kg	₽	06/03/20 08:00	06/16/20 14:57	
ron	ND	*	21		mg/Kg	₩	06/03/20 08:00	06/16/20 14:57	
Cobalt	ND		11		mg/Kg	 \$	06/03/20 08:00	06/16/20 14:57	
Cadmium	ND		1.1		mg/Kg	₽	06/03/20 08:00	06/16/20 14:57	
Beryllium	ND	*	1.1		mg/Kg		06/03/20 08:00	06/16/20 14:57	
Analyte Aluminum	8.2	Qualifier	RL 43	6.9	mg/Kg	_ D <u>₩</u>	Prepared 06/03/20 08:00	Analyzed 06/16/20 14:57	טוו רפ
Method: 6010B SEP - SE	• • •	•	DI	MDL	11m:4	_	Dramarad	A malumad	Dil Fa
Selenium	ND		2.9	0.97	mg/Kg	₽	06/02/20 08:00	06/16/20 13:02	
Manganese	0.67	J	4.3		mg/Kg	₩.	06/02/20 08:00	06/16/20 13:02	
ron	ND		29		mg/Kg	₩	06/02/20 08:00	06/16/20 13:02	
Cobalt	ND		14	0.26	mg/Kg	₩	06/02/20 08:00	06/16/20 13:02	
Cadmium	ND		1.4	0.091	mg/Kg	☼	06/02/20 08:00	06/16/20 13:02	
Beryllium	ND		1.4	0.44	mg/Kg	₩	06/02/20 08:00	06/16/20 13:02	
Numinum	ND		57	9.1	mg/Kg	<u>₩</u>	06/02/20 08:00	06/16/20 13:02	
<b>Analyte</b>	itoouit	Qualifier	RL	MDL			Prepared	Analyzed	Dil Fa

Eurofins TestAmerica, Knoxville

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Iron

Manganese

Selenium

Client Sample ID: BRGWA-6S(2) 48 FT BGS Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15 **Matrix: Solid** Date Received: 05/20/20 09:45 Percent Solids: 69.9

Date Received: 05/20/20 09:4	5							Percent Solid	ls: 69.9
Method: 6010B SEP - SEP N Analyte		Step 6 (Cont	tinued) RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.11		0.36		mg/Kg	— <del>-</del>	06/12/20 08:00		1
Cadmium	ND		0.36		mg/Kg	₩	06/12/20 08:00		1
Cobalt	5.6		3.6		mg/Kg		06/12/20 08:00		1
Iron	20000		7.1		mg/Kg	₩	06/12/20 08:00		1
Manganese	40		1.1		mg/Kg	₩	06/12/20 08:00		1
Selenium	0.59	J	0.71		mg/Kg	\$	06/12/20 08:00		1
Method: 6010B SEP - SEP N	/letals (ICP) -	Step 7							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	29000		140	23	mg/Kg	<u> </u>	06/15/20 08:00	06/22/20 15:25	10
Beryllium	ND		0.36	0.011	mg/Kg	☼	06/15/20 08:00	06/22/20 14:01	1
Cadmium	0.28	J	1.8	0.079	mg/Kg	☼	06/15/20 08:00	06/22/20 16:52	5
Cobalt	16	J	18	0.19	mg/Kg	₽	06/15/20 08:00	06/22/20 16:52	5
Iron	54000		36	29	mg/Kg	☼	06/15/20 08:00	06/22/20 16:52	5
Manganese	500		1.1	0.16	mg/Kg	☼	06/15/20 08:00	06/22/20 14:01	1
Selenium	ND		3.6	1.2	mg/Kg	₩	06/15/20 08:00	06/22/20 16:52	5
Method: 6010B SEP - SEP N	letals (ICP) -	Sum of Step	s 1-7						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	46000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	0.38		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.39		0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	53		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	80000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1200		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.4		0.50	0.17	mg/Kg			06/25/20 11:53	1
Method: 6010B - SEP Metals									
Analyte		Qualifier	RL _		Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	98000		140		mg/Kg	<u></u>	05/29/20 08:00	06/23/20 14:51	10
Beryllium	0.31	J	0.36	0.011	mg/Kg	₩	05/29/20 08:00	06/23/20 13:27	1
Cadmium	0.66	J	3.6	0.16	mg/Kg	₩	05/29/20 08:00	06/23/20 14:51	10
Cobalt	64		36	0.37	mg/Kg	₩	05/29/20 08:00	06/23/20 14:51	10
						- 1			

71

1.1

7.1

59 mg/Kg

0.16 mg/Kg

2.4 mg/Kg

91000

1000

2.5 J

© 05/29/20 08:00 06/23/20 14:51

☼ 05/29/20 08:00 06/23/20 13:27

© 05/29/20 08:00 06/23/20 14:51

Job ID: 140-19131-1

10

1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7 Date Collected: 05/14/20 14:40 **Matrix: Solid** 

Date Received: 05/20/20 09:45 Percent Solids: 67.3

Aluminum	13000		15		mg/Kg	— <del>¤</del>	06/12/20 08:00	06/19/20 16:22	
Method: 6010B SEP - Si	· · ·	Step 6 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Selenium	4.4	J	11	3.9	mg/Kg	₽	06/12/20 08:00	06/19/20 12:30	
Manganese	9.8		17		mg/Kg	<u>.</u> .		06/19/20 12:30	
ron		* *1	110		mg/Kg	₩.	06/12/20 08:00		
Cobalt	ND		56		mg/Kg	<b>*</b>	06/12/20 08:00		
Cadmium	ND		5.6		mg/Kg			06/19/20 12:30	
Beryllium	ND	*	5.6		mg/Kg	<b>#</b>	06/12/20 08:00	06/19/20 12:30	
luminum		* *1	220		mg/Kg	<u>.</u> ₩	06/12/20 08:00	06/19/20 12:30	
lethod: 6010B SEP - SI nalyte	Result	Qualifier	RL _		Unit	D	Prepared	Analyzed	Dil F
			0.74	5.70	9/1/9		33, 13,20 00.00	33, 13, 20 17.00	
elenium		<b>B</b> *	0.74		mg/Kg	· · · · · · · · · · · · · · · ·			
langanese	400		1.1		mg/Kg			06/18/20 14:50	
on	17000		7.4		mg/Kg		06/10/20 08:00	06/18/20 14:50	
obalt	4.7		3.7		mg/Kg		06/10/20 08:00	06/18/20 14:50	
admium	ND		0.37		mg/Kg			06/18/20 14:50	
eryllium	1.6		0.37		mg/Kg	☆	06/10/20 08:00	06/18/20 14:50	
luminum	2300	- uaiiiiei			mg/Kg	— <del>=</del>	Prepared 06/10/20 08:00	Analyzed 06/18/20 14:50	ם ווע
lethod: 6010B SEP - Si nalyte	• • •	Step 4 Qualifier	RL	MDL	Unit	D	Propared	Analyzod	Dil F
elenium	0.39		0.74		mg/Kg	₽		06/18/20 12:57	
anganese	680	В	1.1		mg/Kg	☼		06/18/20 12:57	
on	1100		7.4		mg/Kg	☆	06/08/20 08:00	06/18/20 12:57	
obalt	17	· <del>* . *</del>	3.7		mg/Kg		06/08/20 08:00	06/18/20 12:57	
admium	0.029		0.37		mg/Kg	₩	06/08/20 08:00	06/18/20 12:57	
eryllium	0.35	1	0.37		mg/Kg	₩	06/08/20 08:00	06/18/20 12:57	
luminum	370		15		mg/Kg	— <del>=</del>	06/08/20 08:00	06/18/20 12:57	
ethod: 6010B SEP - Si	· · ·	Step 3 Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil F
elenium	ND		2.2	0.76	mg/Kg	*	06/03/20 06.00	06/16/20 15:02	
langanese elenium	<b>2.7</b> ND	J	3.3		mg/Kg	 	06/03/20 08:00	06/16/20 15:02	
on	ND	*	22		mg/Kg	<b>☆</b>	06/03/20 08:00	06/16/20 15:02	
obalt	ND	*	11		mg/Kg	₩	06/03/20 08:00	06/16/20 15:02	
admium	ND		1.1		mg/Kg	<u>.</u> .	06/03/20 08:00	06/16/20 15:02	
eryllium	ND	*	1.1		mg/Kg	<b>\$</b>	06/03/20 08:00	06/16/20 15:02	
luminum			45	7.1	mg/Kg	<u>.</u> ₩	06/03/20 08:00	06/16/20 15:02	
lethod: 6010B SEP - SI nalyte	· ,	Step 2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
olomani	115		0.0	1.0	mg/11g		00/02/20 00:00	00/10/20 10:07	
elenium	ND		3.0		mg/Kg			06/16/20 13:07	
anganese	11		4.5		mg/Kg		06/02/20 08:00	06/16/20 13:07	
<b>obalt</b> on	<b>0.47</b> ND	J	15 30		mg/Kg mg/Kg	₩	06/02/20 08:00 06/02/20 08:00	06/16/20 13:07 06/16/20 13:07	
admium	ND		1.5		mg/Kg	· · · · · · · · · · · · · · · · · · ·	06/02/20 08:00	06/16/20 13:07	
eryllium	ND		1.5		mg/Kg	₩.	06/02/20 08:00	06/16/20 13:07	
uminum	ND		59		mg/Kg	₩	06/02/20 08:00	06/16/20 13:07	
		Qualifier							

Eurofins TestAmerica, Knoxville

6/25/2020

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Date Collected: 05/14/20 14:40

Date Received: 05/20/20 09:45

Client Sample ID: PZ-52D 18 FT BGS

Lab Sample ID: 140-19131-7

**Matrix: Solid** 

Percent Solids: 67.3

Job ID: 140-19131-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	1.0		0.37	0.018	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 16:22	1
Cadmium	ND	L	0.37	0.016	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Cobalt	4.4	J	7.4	0.14	mg/Kg	₽	06/12/20 08:00	06/19/20 17:10	2
Iron	27000		7.4	4.3	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Manganese	190		1.1	0.37	mg/Kg	☼	06/12/20 08:00	06/19/20 16:22	1
Selenium	0.66	J	0.74	0.25	mg/Kg		06/12/20 08:00	06/19/20 16:22	1

Method: 6010B SEP - S Analyte	SEP Metals (ICP) - Ste Result Qu	•	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	37000	150	24	mg/Kg	<u></u>	06/15/20 08:00	06/22/20 15:30	10
Beryllium	0.96	0.37	0.011	mg/Kg	≎	06/15/20 08:00	06/22/20 14:07	1
Cadmium	0.91	0.37	0.016	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1
Cobalt	7.5 J	37	0.39	mg/Kg	₽	06/15/20 08:00	06/22/20 15:30	10
Iron	36000	7.4	6.1	mg/Kg	☼	06/15/20 08:00	06/22/20 14:07	1
Manganese	280	1.1	0.16	mg/Kg	≎	06/15/20 08:00	06/22/20 14:07	1
Selenium	1.0	0.74	0.25	mg/Kg	₽	06/15/20 08:00	06/22/20 14:07	1

Method: 6010B SEP - 3	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	53000	10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	4.0	0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.94	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	34	2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	80000	5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	1600	0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	8.3	0.50	0.17	mg/Kg			06/25/20 11:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	120000		150	24	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 14:56	10
Beryllium	3.6		0.37	0.011	mg/Kg	☆	05/29/20 08:00	06/23/20 13:33	1
Cadmium	1.9		0.74	0.033	mg/Kg	₩	05/29/20 08:00	06/23/20 16:37	2
Cobalt	46		37	0.39	mg/Kg	ф.	05/29/20 08:00	06/23/20 14:56	10
Iron	71000		15	12	mg/Kg	₩	05/29/20 08:00	06/23/20 16:37	2
Manganese	1700		2.2	0.33	mg/Kg	₩	05/29/20 08:00	06/23/20 16:37	2
Selenium	1.4	J	1.5	0.51	mg/Kg		05/29/20 08:00	06/23/20 16:37	2

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Date Collected: 05/14/20 14:50

Date Received: 05/20/20 09:45

Client Sample ID: PZ-52D 24-25 FT BGS

Lab Sample ID: 140-19131-8

**Matrix: Solid** 

Percent Solids: 76.8

Job ID: 140-19131-1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND	52	8.3	mg/Kg	<u> </u>	06/02/20 08:00	06/16/20 13:12	4
Beryllium	ND	1.3	0.40	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Cadmium	ND	1.3	0.083	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Cobalt	ND	13	0.23	mg/Kg	₩	06/02/20 08:00	06/16/20 13:12	4
Iron	ND	26	15	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Manganese	7.1	3.9	0.16	mg/Kg	☼	06/02/20 08:00	06/16/20 13:12	4
Selenium	ND	2.6	0.89	mg/Kg	ф	06/02/20 08:00	06/16/20 13:12	4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17	J *	39	6.3	mg/Kg	<u> </u>	06/03/20 08:00	06/16/20 15:08	3
Beryllium	ND	*	0.98	0.063	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Cadmium	ND		0.98	0.043	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Cobalt	ND		9.8	0.25	mg/Kg	φ.	06/03/20 08:00	06/16/20 15:08	3
Iron	ND	*	20	11	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Manganese	1.7	J	2.9	1.1	mg/Kg	☼	06/03/20 08:00	06/16/20 15:08	3
Selenium	ND		2.0	0.66	mg/Kg	ф	06/03/20 08:00	06/16/20 15:08	3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	260		13	2.7	mg/Kg	<u> </u>	06/08/20 08:00	06/18/20 13:02	1
Beryllium	0.21	J	0.33	0.020	mg/Kg	₩	06/08/20 08:00	06/18/20 13:02	1
Cadmium	0.025	J B *	0.33	0.014	mg/Kg	₩	06/08/20 08:00	06/18/20 13:02	1
Cobalt	3.3		3.3	0.059	mg/Kg	₽	06/08/20 08:00	06/18/20 13:02	1
Iron	460		6.5	3.8	mg/Kg	₩	06/08/20 08:00	06/18/20 13:02	1
Manganese	170	В	0.98	0.035	mg/Kg	₩	06/08/20 08:00	06/18/20 13:02	1
Selenium	0.30	J	0.65	0.22	mg/Kg	₽	06/08/20 08:00	06/18/20 13:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2200		13	2.1	mg/Kg	<u> </u>	06/10/20 08:00	06/18/20 14:55	1
Beryllium	1.1		0.33	0.021	mg/Kg	₩	06/10/20 08:00	06/18/20 14:55	1
Cadmium	ND		0.33	0.014	mg/Kg	₩	06/10/20 08:00	06/18/20 14:55	1
Cobalt	2.6	J	3.3	0.069	mg/Kg	₩.	06/10/20 08:00	06/18/20 14:55	1
Iron	7100		6.5	3.8	mg/Kg	₩	06/10/20 08:00	06/18/20 14:55	1
Manganese	120		0.98	0.17	mg/Kg	₩	06/10/20 08:00	06/18/20 14:55	1
Selenium	1.3	B *	0.65	0.61	mg/Kg	ф.	06/10/20 08:00	06/18/20 14:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	530	* *1	200	31	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 12:35	5
Beryllium	ND	*	4.9	0.41	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Cadmium	ND		4.9	0.21	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Cobalt	ND	*	49	0.78	mg/Kg	₩.	06/12/20 08:00	06/19/20 12:35	5
Iron	ND	* *1	98	57	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Manganese	ND	*	15	2.4	mg/Kg	☼	06/12/20 08:00	06/19/20 12:35	5
Selenium	ND		9.8	3.4	mg/Kg	<b>\$</b>	06/12/20 08:00	06/19/20 12:35	5

Method: 6010B SEP - SEP Met	als (ICP) - Step 6							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000	13	2.1	mg/Kg	<del>*</del>	06/12/20 08:00	06/19/20 16:27	1

Eurofins TestAmerica, Knoxville

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Manganese

Selenium

Client Sample ID: PZ-52D 24-25 FT BGS Lab Sample ID: 140-19131-8

Date Collected: 05/14/20 14:50 **Matrix: Solid** 

Date Received: 05/20/20 09:45 Percent Solids: 76.8

Method: 6010B SEP - S Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.53		0.33	0.016	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 16:27	1
Cadmium	ND		0.33	0.014	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	1
Cobalt	3.0	J	3.3	0.060	mg/Kg		06/12/20 08:00	06/19/20 16:27	· · · · · · .
Iron	9400		6.5	3.8	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	
Manganese	95		0.98	0.33	mg/Kg	☼	06/12/20 08:00	06/19/20 16:27	
Selenium	ND		0.65	0.22	mg/Kg	₩	06/12/20 08:00	06/19/20 16:27	· · · · · · · · · · · ·
Method: 6010B SEP - S	EP Metals (ICP) - S	Step 7							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	47000		130	21	mg/Kg	₩	06/15/20 08:00	06/22/20 15:50	10
Beryllium	1.4		0.33	0.0098	mg/Kg	₩	06/15/20 08:00	06/22/20 14:12	
Cadmium	0.14	J	0.33	0.014	mg/Kg	₩	06/15/20 08:00	06/22/20 14:12	
Cobalt	3.5		3.3	0.034	mg/Kg	₩.	06/15/20 08:00	06/22/20 14:12	
Iron	14000		6.5	5.3	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	•
Manganese	310		0.98	0.14	mg/Kg	☼	06/15/20 08:00	06/22/20 14:12	•
Selenium	ND		0.65	0.22	mg/Kg		06/15/20 08:00	06/22/20 14:12	• • • • • • • • •
Method: 6010B SEP - S	EP Metals (ICP) - 9	Sum of Steps	s 1-7						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	64000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	3.2		0.25	0.0075	mg/Kg			06/25/20 11:53	•
Cadmium	0.17	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	12		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	31000		5.0	4.1	mg/Kg			06/25/20 11:53	
Manganese	710		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	1.6		0.50	0.17	mg/Kg			06/25/20 11:53	
Method: 6010B - SEP N	letals (ICP) - Total								
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	86000		130		mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 15:17	10
Beryllium	2.7		0.33	0.0098	mg/Kg	₩	05/29/20 08:00	06/23/20 13:38	•
Cadmium	0.55		0.33	0.014	mg/Kg	₩	05/29/20 08:00	06/23/20 13:38	
Cobalt	12		6.5	0.068	mg/Kg		05/29/20 08:00	06/23/20 16:58	2
Iron	24000		6.5	5.3	mg/Kg	₩	05/29/20 08:00	06/23/20 13:38	1

0.98

0.65

**580** ND 0.14 mg/Kg

0.22 mg/Kg

☼ 05/29/20 08:00 06/23/20 13:38

© 05/29/20 08:00 06/23/20 13:38

Job ID: 140-19131-1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: 140-19131-9

Client Sample ID: BRGWC-50(2) 59 FT BGS Date Collected: 05/15/20 09:00

**Matrix: Solid** 

Job ID: 140-19131-1

Analyte

Aluminum

lethod: 6010B SEP - SE nalyte	· ,	Step 1 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
luminum	ND		46		mg/Kg	— <del>-</del>	06/02/20 08:00		
eryllium	ND		1.1		mg/Kg	☼		06/16/20 13:18	
admium	0.11	1	1.1		mg/Kg	₩		06/16/20 13:18	
obalt	1.6		11		mg/Kg			06/16/20 13:18	
on	ND	•	23		mg/Kg	₽		06/16/20 13:18	
langanese	160		3.4		mg/Kg	₽		06/16/20 13:18	
elenium	ND		2.3		mg/Kg			06/16/20 13:18	
lethod: 6010B SEP - SE	P Metals (ICP) - \$	Step 2							
nalyte	· /	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
luminum	29	J *	34	5.5	mg/Kg	<u> </u>	06/03/20 08:00	06/16/20 15:13	
eryllium	ND	*	0.86	0.055	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	
admium	0.084	J	0.86	0.038	mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	
obalt	1.1		8.6	0.22	mg/Kg		06/03/20 08:00	06/16/20 15:13	
on	27	*	17		mg/Kg	₽	06/03/20 08:00	06/16/20 15:13	
langanese	36		2.6		mg/Kg	☼	06/03/20 08:00	06/16/20 15:13	
elenium	ND		1.7	0.58	mg/Kg		06/03/20 08:00	06/16/20 15:13	
lethod: 6010B SEP - SE	P Metals (ICP) - \$	Step 3							
nalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
luminum	260		11	2.4	mg/Kg	₩	06/08/20 08:00	06/18/20 13:07	
eryllium	0.20	J	0.29	0.017	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	
admium	0.10	J B *	0.29	0.013	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	
obalt	2.6	J	2.9	0.052	mg/Kg	₽	06/08/20 08:00	06/18/20 13:07	
on	1500		5.7	3.3	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	
langanese	67	В	0.86	0.031	mg/Kg	☼	06/08/20 08:00	06/18/20 13:07	
elenium	0.23	J	0.57	0.19	mg/Kg	₩	06/08/20 08:00	06/18/20 13:07	
lethod: 6010B SEP - SE	P Metals (ICP) - S	Step 4							
nalyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil F
luminum	1300		11	1.8	mg/Kg	₩	06/10/20 08:00	06/18/20 15:00	
eryllium	0.32		0.29	0.018	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	
admium	0.36		0.29	0.013	mg/Kg	₩	06/10/20 08:00	06/18/20 15:00	
obalt	1.5	J	2.9	0.061	mg/Kg	₽	06/10/20 08:00	06/18/20 15:00	
on	5300		5.7	3.3	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	
langanese	52		0.86	0.15	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	
elenium	1.1	B *	0.57	0.54	mg/Kg	☼	06/10/20 08:00	06/18/20 15:00	
lethod: 6010B SEP - SE	P Metals (ICP) - \$	Step 5							
nalyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil
luminum	200	* *1	170	27	mg/Kg	<u> </u>	06/12/20 08:00	06/19/20 12:41	
lummum	ND	*	4.3	0.36	mg/Kg	₩	06/12/20 08:00	06/19/20 12:41	
eryllium	ND					≎	06/12/20 08:00	00/40/00 40:44	
	ND		4.3	0.18	mg/Kg	~	00/12/20 00:00	06/19/20 12:41	
eryllium		*	4.3		mg/Kg mg/Kg	<del>.</del>		06/19/20 12:41	
eryllium admium	ND ND	* *1		0.69			06/12/20 08:00		
eryllium admium obalt	ND ND		43	0.69 50	mg/Kg		06/12/20 08:00 06/12/20 08:00	06/19/20 12:41	

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Analyzed

Prepared

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RL

11

MDL Unit

1.8 mg/Kg

Result Qualifier

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWC-50(2) 59 FT BGS Lab Sample ID: 140-19131-9

Date Collected: 05/15/20 09:00 **Matrix: Solid** Date Received: 05/20/20 09:45 Percent Solids: 87.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.23	J	0.29	0.014	mg/Kg	₩	06/12/20 08:00	06/19/20 16:32	1
Cadmium	ND		0.29	0.013	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Cobalt	4.5	J	14	0.26	mg/Kg	₽	06/12/20 08:00	06/19/20 17:15	5
Iron	16000		5.7	3.3	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Manganese	370		0.86	0.29	mg/Kg	☼	06/12/20 08:00	06/19/20 16:32	1
Selenium	0.52	J	0.57	0.19	mg/Kg	₽	06/12/20 08:00	06/19/20 16:32	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	48000	110	18	mg/Kg	<u> </u>	06/15/20 08:00	06/22/20 15:55	10
Beryllium	1.6	0.29	0.0086	mg/Kg	₩	06/15/20 08:00	06/22/20 14:18	1
Cadmium	0.047 J	0.29	0.013	mg/Kg	₩	06/15/20 08:00	06/22/20 14:18	1
Cobalt	0.31 J	2.9	0.030	mg/Kg	₩.	06/15/20 08:00	06/22/20 14:18	1
Iron	2700	5.7	4.7	mg/Kg	₩	06/15/20 08:00	06/22/20 14:18	1
Manganese	63	0.86	0.13	mg/Kg	₩	06/15/20 08:00	06/22/20 14:18	1
Selenium	ND	0.57	0.19	mg/Kg		06/15/20 08:00	06/22/20 14:18	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	62000	10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	2.3	0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.70	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	12	2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	25000	5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	750	0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	1.8	0.50	0.17	mg/Kg			06/25/20 11:53	1

Method: 6010B - SEP I Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	78000	110	18	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 15:22	10
Beryllium	1.9	0.29	0.0086	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Cadmium	0.72	0.29	0.013	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Cobalt	11 J	14	0.15	mg/Kg	φ.	05/29/20 08:00	06/23/20 17:03	5
Iron	18000	5.7	4.7	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Manganese	540	0.86	0.13	mg/Kg	☼	05/29/20 08:00	06/23/20 13:44	1
Selenium	ND	0.57	0.19	mg/Kg	<del>.</del>	05/29/20 08:00	06/23/20 13:44	1

Job ID: 140-19131-1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS **Lab Sample ID: 140-19131-10** 

Date Collected: 05/15/20 09:20 **Matrix: Solid** Date Received: 05/20/20 09:45

Percent Solids: 99.8

Analyte		Qualifier	RL _	MDL		_ D	Prepared	Analyzed	Dil Fac
Aluminum	ND		40	6.4	mg/Kg	<u></u>	06/02/20 08:00	06/16/20 13:23	4
Beryllium	ND		1.0	0.31	mg/Kg	₩	06/02/20 08:00	06/16/20 13:23	4
Cadmium	ND		1.0	0.064	mg/Kg	≎	06/02/20 08:00	06/16/20 13:23	4
Cobalt	ND		10	0.18	mg/Kg	☆	06/02/20 08:00	06/16/20 13:23	4
Iron	ND		20	12	mg/Kg	≎	06/02/20 08:00	06/16/20 13:23	4
Manganese	0.70	J	3.0	0.12	mg/Kg	☆	06/02/20 08:00	06/16/20 13:23	4
Selenium	ND		2.0		mg/Kg	<del>\</del>	06/02/20 08:00	06/16/20 13:23	4
Method: 6010B SEP - SE	EP Metals (ICP) - 9	Step 2							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum		J *	30	4.8	mg/Kg	— <del>☆</del>	06/03/20 08:00	06/16/20 15:18	
Beryllium	ND	*	0.75		mg/Kg	≎	06/03/20 08:00	06/16/20 15:18	(
Cadmium	ND		0.75		mg/Kg	₩	06/03/20 08:00	06/16/20 15:18	;
Cobalt	ND		7.5		mg/Kg	 \$	06/03/20 08:00	06/16/20 15:18	
	58	*	7.5 15		mg/Kg	₩	06/03/20 08:00	06/16/20 15:18	3
lron Managana					0 0	<i>₩</i>		06/16/20 15:18	
Manganese	5.0		2.3		mg/Kg		06/03/20 08:00		
Selenium	ND		1.5	0.51	mg/Kg	☼	06/03/20 08:00	06/16/20 15:18	;
Method: 6010B SEP - SE			D.	MDI	114	_	Barrana	A I	D!! F-
Analyte		Qualifier	RL	MDL		_ D	Prepared	Analyzed	Dil Fa
Aluminum	110		10	2.1	mg/Kg	<u>₩</u>	06/08/20 08:00	06/18/20 13:12	
Beryllium	ND		0.25	0.015	mg/Kg	₩	06/08/20 08:00	06/18/20 13:12	
Cadmium	0.028	J B *	0.25	0.011	mg/Kg	☆	06/08/20 08:00	06/18/20 13:12	
Cobalt	ND		2.5	0.045	mg/Kg	₽	06/08/20 08:00	06/18/20 13:12	
Iron	300		5.0	2.9	mg/Kg	≎	06/08/20 08:00	06/18/20 13:12	•
Manganese	8.1	В	0.75	0.027	mg/Kg	₩	06/08/20 08:00	06/18/20 13:12	•
Selenium	0.18	J	0.50	0.17	mg/Kg	₩	06/08/20 08:00	06/18/20 13:12	
Method: 6010B SEP - SE	EP Metals (ICP) - S	Step 4							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	900		10	1.6	mg/Kg	₩	06/10/20 08:00	06/18/20 15:05	
Beryllium	ND		0.25	0.016	mg/Kg	₩	06/10/20 08:00	06/18/20 15:05	
Cadmium	ND		0.25	0.011	mg/Kg	≎	06/10/20 08:00	06/18/20 15:05	
Cobalt	0.30		2.5	0.053	mg/Kg		06/10/20 08:00	06/18/20 15:05	
Iron	2100		5.0		mg/Kg	₩	06/10/20 08:00	06/18/20 15:05	
Manganese	60		0.75		mg/Kg	₩		06/18/20 15:05	
manganese			0.70	0.10					
Selenium	0.70	B *	0.50	0.47	mg/Kg		06/10/20 08:00	00/10/20 13.03	1
Selenium			0.50	0.47	mg/Kg		06/10/20 08:00	00/10/20 13:03	
	EP Metals (ICP) - S		0.50		mg/Kg Unit	D	Prepared		Dil Fac
Selenium Method: 6010B SEP - SE	EP Metals (ICP) - S Result	Step 5		MDL				Analyzed 06/19/20 12:46	Dil Fac
Selenium Method: 6010B SEP - SE Analyte Aluminum	EP Metals (ICP) - S Result	Step 5 Qualifier  7 * *1	RL	MDL 24	Unit	D	Prepared	Analyzed	Dil Fac
Selenium Method: 6010B SEP - SE Analyte Aluminum Beryllium	EP Metals (ICP) - 9 Result 64	Step 5 Qualifier  7 * *1	RL	MDL 24 0.32	Unit mg/Kg	D \$\overline{\pi}\$	Prepared 06/12/20 08:00	Analyzed 06/19/20 12:46	Dil Fa
Selenium  Method: 6010B SEP - SE Analyte Aluminum Beryllium Cadmium	EP Metals (ICP) - 9 Result 64 ND	Step 5 Qualifier  7 * *1	RL 150 3.8 3.8	MDL 24 0.32 0.16	Unit mg/Kg mg/Kg mg/Kg	D □ □ □ □ □	Prepared 06/12/20 08:00 06/12/20 08:00	Analyzed 06/19/20 12:46 06/19/20 12:46 06/19/20 12:46	Dil Fac
Selenium  Method: 6010B SEP - SE Analyte Aluminum Beryllium Cadmium Cobalt	EP Metals (ICP) - Sesult 64 ND ND ND	Step 5 Qualifier J * *1	RL 150 3.8 3.8 38	MDL 24 0.32 0.16 0.60	Unit mg/Kg mg/Kg mg/Kg mg/Kg	— <del>D</del>	Prepared 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00	Analyzed  06/19/20 12:46 06/19/20 12:46 06/19/20 12:46 06/19/20 12:46	Dil Fa
Selenium  Method: 6010B SEP - SE Analyte Aluminum Beryllium Cadmium Cobalt	EP Metals (ICP) - Result 64 ND ND ND ND	Step 5 Qualifier J * *1  *	RL 150 3.8 3.8 38 75	MDL 24 0.32 0.16 0.60 44	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	— <del>D</del>	Prepared 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00	Analyzed 06/19/20 12:46 06/19/20 12:46 06/19/20 12:46 06/19/20 12:46 06/19/20 12:46	Dil Fa
Selenium  Method: 6010B SEP - SE Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese	EP Metals (ICP) - 3 Result 64 ND ND ND ND ND ND ND 3.0	Step 5 Qualifier J * *1	RL 150 3.8 3.8 3.8 75	MDL 24 0.32 0.16 0.60 44 1.9	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	— <del>D</del>	Prepared 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00	Analyzed  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46	Dil Fa
Selenium Method: 6010B SEP - SE Analyte	EP Metals (ICP) - Result 64 ND ND ND ND	Step 5 Qualifier J * *1  *	RL 150 3.8 3.8 38 75	MDL 24 0.32 0.16 0.60 44 1.9	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	— <del>D</del>	Prepared 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00	Analyzed  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46	Dil Fac
Selenium  Method: 6010B SEP - SE Analyte Aluminum Beryllium Cadmium Cobalt Iron Manganese	EP Metals (ICP) - Sesult  Result  64  ND  ND  ND  ND  ND  ND  Solution  ND  Solution  ND  ND  Solution  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	Step 5 Qualifier J**1  *  *  *  *  *  *  *  *  *  *  *  *	RL 150 3.8 3.8 3.8 75	MDL 24 0.32 0.16 0.60 44 1.9	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	— <del>D</del>	Prepared 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00 06/12/20 08:00	Analyzed  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46  06/19/20 12:46	

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6/25/2020

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Date Collected: 05/15/20 09:20

Matrix: Solid

Date Received: 05/20/20 09:45

Percent Solids: 99.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Beryllium	ND		0.25	0.012	mg/Kg	<u>₩</u>	06/12/20 08:00	06/19/20 16:38	-
Cadmium	ND		1.3	0.055	mg/Kg	₩	06/12/20 08:00	06/19/20 17:21	
Cobalt	8.9	J	13	0.23	mg/Kg	₽	06/12/20 08:00	06/19/20 17:21	
Iron	39000		25	15	mg/Kg	₩	06/12/20 08:00	06/19/20 17:21	
Manganese	930		0.75	0.25	mg/Kg	₩	06/12/20 08:00	06/19/20 16:38	
Selenium	1.3	J	2.5	0.85	mg/Kg	₩	06/12/20 08:00	06/19/20 17:21	,
Method: 6010B SEP - S	SEP Metals (ICP) - 9	Step 7							
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	32000		100	16	mg/Kg	<u> </u>	06/15/20 08:00	06/22/20 16:00	10
Beryllium	0.94		0.25	0.0075	mg/Kg	₩	06/15/20 08:00	06/22/20 14:23	
Cadmium	0.12	J	0.25	0.011	mg/Kg	₩	06/15/20 08:00	06/22/20 14:23	
Cobalt	1.2	J	13	0.13	mg/Kg	ф.	06/15/20 08:00	06/22/20 16:57	
Iron	6900		5.0	4.1	mg/Kg	₩	06/15/20 08:00	06/22/20 14:23	
Manganese	220		0.75	0.11	mg/Kg	₩	06/15/20 08:00	06/22/20 14:23	
Selenium	ND		0.50	0.17	mg/Kg	\$	06/15/20 08:00	06/22/20 14:23	
Method: 6010B SEP - S	SEP Metals (ICP) - 9	Sum of Step	s 1-7						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	52000		10	1.6	mg/Kg			06/25/20 11:53	
Beryllium	0.94		0.25	0.0075	mg/Kg			06/25/20 11:53	
Cadmium	0.15	J	0.25	0.011	mg/Kg			06/25/20 11:53	
Cobalt	10		2.5	0.023	mg/Kg			06/25/20 11:53	
Iron	49000		5.0	4.1	mg/Kg			06/25/20 11:53	
Manganese	1200		0.75	0.052	mg/Kg			06/25/20 11:53	
Selenium	2.2		0.50	0.17	mg/Kg			06/25/20 11:53	

Method: 6010B - SEP I	Metals (ICP) - Total							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	70000	100	16	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 15:27	10
Beryllium	0.73	0.50	0.015	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Cadmium	1.4	0.50	0.022	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Cobalt	12 J	25	0.26	mg/Kg	₽	05/29/20 08:00	06/23/20 15:27	10
Iron	43000	10	8.2	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Manganese	1300	1.5	0.22	mg/Kg	☼	05/29/20 08:00	06/23/20 17:08	2
Selenium	0.50 J	1.0	0.34	mg/Kg	₽	05/29/20 08:00	06/23/20 17:08	2

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Job ID: 140-19131-1

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11

Date Collected: 05/16/20 16:15

Date Received: 05/20/20 09:45

Matrix: Solid
Percent Solids: 73.6

Method: 6010B SEP - SEP Metals (			D.	RAD!	l lm!4	_	Duencuci	A mal:!	D:: E-
Analyte		Qualifier	RL	MDL		— <del>D</del>	Prepared	Analyzed	Dil Fa
Aluminum	31	J	54		mg/Kg		06/02/20 08:00	06/16/20 13:28	4
Beryllium	ND		1.4		mg/Kg	ψ.	06/02/20 08:00	06/16/20 13:28	4
Cadmium	ND		1.4		mg/Kg	T.	06/02/20 08:00	06/16/20 13:28	
Cobalt	0.43	J	14		mg/Kg	₩	06/02/20 08:00	06/16/20 13:28	2
Iron	ND		27		mg/Kg	<b>*</b>	06/02/20 08:00	06/16/20 13:28	2
Manganese	5.5		4.1		mg/Kg		06/02/20 08:00	06/16/20 13:28	
Selenium	ND		2.7	0.92	mg/Kg	₽	06/02/20 08:00	06/16/20 13:28	2
Method: 6010B SEP - SEP Metals (		•	D.	MDI	1114	_	Burner	A	D!! E-
Analyte		Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil Fa
Aluminum	17	J *	41		mg/Kg	<u> </u>	06/03/20 08:00	06/16/20 15:24	;
Beryllium	ND	*	1.0		0 0	₩	06/03/20 08:00	06/16/20 15:24	;
Cadmium	ND		1.0		mg/Kg		06/03/20 08:00	06/16/20 15:24	
Cobalt	ND		10		mg/Kg	<b>*</b>	06/03/20 08:00	06/16/20 15:24	3
Iron	ND	*	20		mg/Kg	<b>*</b>	06/03/20 08:00	06/16/20 15:24	3
Manganese	ND		3.1		mg/Kg	<b>*</b>	06/03/20 08:00	06/16/20 15:24	;
Selenium	ND		2.0	0.69	mg/Kg	₩	06/03/20 08:00	06/16/20 15:24	;
Method: 6010B SEP - SEP Metals (									
Analyte		Qualifier	RL	MDL		_ D	Prepared	Analyzed	Dil Fa
Aluminum	190		14		mg/Kg	**	06/08/20 08:00	06/18/20 13:18	•
Beryllium	0.13	J	0.34	0.020	0 0	₩	06/08/20 08:00	06/18/20 13:18	•
Cadmium	0.041	JB*	0.34	0.015	mg/Kg	₩	06/08/20 08:00	06/18/20 13:18	•
Cobalt	17		3.4	0.061	mg/Kg	₽	06/08/20 08:00	06/18/20 13:18	•
Iron	640		6.8	3.9	mg/Kg	₩	06/08/20 08:00	06/18/20 13:18	•
Manganese	480	В	1.0	0.037	mg/Kg	₩	06/08/20 08:00	06/18/20 13:18	•
Selenium	0.30	J	0.68	0.23	mg/Kg	₽	06/08/20 08:00	06/18/20 13:18	,
Method: 6010B SEP - SEP Metals (	•	•							
Analyte		Qualifier	RL	MDL		_ D	Prepared	Analyzed	Dil Fac
Aluminum	2100		14		mg/Kg	<b>*</b>	06/10/20 08:00	06/18/20 15:10	•
Beryllium	0.57		0.34		mg/Kg	₩	06/10/20 08:00	06/18/20 15:10	•
Cadmium	ND		0.34		mg/Kg	<b>*</b>	06/10/20 08:00	06/18/20 15:10	
Cobalt	3.5		3.4		mg/Kg	₩	06/10/20 08:00	06/18/20 15:10	•
Iron	6200		6.8	3.9	mg/Kg	₩	06/10/20 08:00	06/18/20 15:10	•
Manganese	200		1.0	0.18	mg/Kg	₩	06/10/20 08:00	06/18/20 15:10	
Selenium	1.4	B *	0.68	0.64	mg/Kg		06/10/20 08:00	06/18/20 15:10	
Method: 6010B SEP - SEP Metals (									
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
Aluminum		* *1	200		mg/Kg	— ☆	06/12/20 08:00		į
Beryllium	ND	*	5.1		mg/Kg	☼	06/12/20 08:00		į
Cadmium	ND		5.1		mg/Kg	☼		06/19/20 12:51	
Cobalt	ND	*	51		mg/Kg	<del>.</del>		06/19/20 12:51	
Iron	ND	* *1	100		mg/Kg	₩	06/12/20 08:00	06/19/20 12:51	Ę
Manganese	ND	*	15	2.5	mg/Kg	₩	06/12/20 08:00	06/19/20 12:51	ţ
Selenium	ND		10	3.5	mg/Kg		06/12/20 08:00	06/19/20 12:51	
Method: 6010B SEP - SEP Metals (I Analyte		Step 6 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
· ······· , ···	Loouit		14		mg/Kg		06/12/20 08:00	-	a

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## **Client Sample Results**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: 140-19131-11

**Matrix: Solid** 

Percent Solids: 73.6

Job ID: 140-19131-1

Client Sample ID: PZ-53D 30 FT BGS	Lab Sample ID: 140
Date Collected: 05/16/20 16:15	
Date Received: 05/20/20 09:45	Parcent

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.39	0.34	0.016	mg/Kg	<u>₩</u>	06/12/20 08:00	06/19/20 16:43	1
Cadmium	ND	0.34	0.015	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Cobalt	5.1	3.4	0.063	mg/Kg	₩	06/12/20 08:00	06/19/20 16:43	1
Iron	14000	6.8	3.9	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Manganese	210	1.0	0.34	mg/Kg	☼	06/12/20 08:00	06/19/20 16:43	1
Selenium	0.39 J	0.68	0.23	mg/Kg	<b></b>	06/12/20 08:00	06/19/20 16:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	43000		140	22	mg/Kg	<u> </u>	06/15/20 08:00	06/22/20 16:06	10
Beryllium	0.51		0.34	0.010	mg/Kg	₩	06/15/20 08:00	06/22/20 14:29	1
Cadmium	0.12	J	0.34	0.015	mg/Kg	₩	06/15/20 08:00	06/22/20 14:29	1
Cobalt	0.91	J	3.4	0.035	mg/Kg	₩.	06/15/20 08:00	06/22/20 14:29	1
Iron	8500		6.8	5.6	mg/Kg	₩	06/15/20 08:00	06/22/20 14:29	1
Manganese	48		1.0	0.15	mg/Kg	₩	06/15/20 08:00	06/22/20 14:29	1
Selenium	ND		0.68	0.23	mg/Kg		06/15/20 08:00	06/22/20 14:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	58000		10	1.6	mg/Kg			06/25/20 11:53	1
Beryllium	1.6		0.25	0.0075	mg/Kg			06/25/20 11:53	1
Cadmium	0.16	J	0.25	0.011	mg/Kg			06/25/20 11:53	1
Cobalt	26		2.5	0.023	mg/Kg			06/25/20 11:53	1
Iron	29000		5.0	4.1	mg/Kg			06/25/20 11:53	1
Manganese	940		0.75	0.052	mg/Kg			06/25/20 11:53	1
Selenium	2.1		0.50	0.17	mg/Kg			06/25/20 11:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100000		140	22	mg/Kg	<u> </u>	05/29/20 08:00	06/23/20 15:32	10
Beryllium	2.0		0.34	0.010	mg/Kg	₩	05/29/20 08:00	06/23/20 13:55	1
Cadmium	0.44	J	0.68	0.030	mg/Kg	₩	05/29/20 08:00	06/23/20 17:14	2
Cobalt	41		34	0.35	mg/Kg	ф.	05/29/20 08:00	06/23/20 15:32	10
Iron	36000		14	11	mg/Kg	₩	05/29/20 08:00	06/23/20 17:14	2
Manganese	1200		1.0	0.15	mg/Kg	₩	05/29/20 08:00	06/23/20 13:55	1
Selenium	0.62	J	1.4	0.46	mg/Kg		05/29/20 08:00	06/23/20 17:14	2

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-53D 36 FT BGS

Lab Sample ID: 140-19131-12 Date Collected: 05/16/20 16:25 **Matrix: Solid** 

Date Received: 05/20/20 09:45 Percent Solids: 82 0

ate Received: 05/20/2	20 09:45							Percent Solic	ls: 82.
Method: 6010B SEP	- SEP Metals (ICP) - S	Step 1							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	ND		49		mg/Kg	<u>~</u>	·		
Beryllium	ND		1.2		mg/Kg	☆		06/16/20 13:33	
Cadmium	ND		1.2		mg/Kg	₩	00.02.20 00.00	06/16/20 13:33	
Cobalt	ND		12		mg/Kg			06/16/20 13:33	
Iron	ND ND		24		mg/Kg	₽	00,02,20 00.00		
	0.89		3.7		mg/Kg	 \$	06/02/20 08:00		
Manganese Selenium	0.69 ND		2.4		mg/Kg			06/16/20 13:33	
ocienium.	ND		2.7	0.00	mg/rtg		00/02/20 00:00	00/10/20 10:00	
	- SEP Metals (ICP) - S	•				_	_		
Analyte		Qualifier	RL		Unit	D	<u> </u>	Analyzed	Dil Fa
Aluminum		J *	37		mg/Kg	₩	00/00/20 00:00	06/16/20 15:29	
Beryllium	0.14	J *	0.91		mg/Kg	☼	06/03/20 08:00	06/16/20 15:29	
Cadmium	ND		0.91		mg/Kg	₩	06/03/20 08:00	06/16/20 15:29	
Cobalt	ND		9.1		mg/Kg	₽	06/03/20 08:00	06/16/20 15:29	
ron	ND	*	18	11	mg/Kg	☆	06/03/20 08:00	06/16/20 15:29	
Manganese	ND		2.7	1.0	mg/Kg	₽	06/03/20 08:00	06/16/20 15:29	
Selenium	0.70	J	1.8	0.62	mg/Kg	Φ.	06/03/20 08:00	06/16/20 15:29	
Mothod: 6010B SED	- SEP Metals (ICP) - S	Stop 2							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Aluminum	140		12	2.6	mg/Kg	₽	06/08/20 08:00	06/18/20 13:23	
Beryllium	0.23	J	0.30	0.018	mg/Kg	₽	06/08/20 08:00	06/18/20 13:23	
Cadmium	0.060	JB*	0.30		mg/Kg	₩	06/08/20 08:00	06/18/20 13:23	
Cobalt	1.0		3.0		mg/Kg		06/08/20 08:00	06/18/20 13:23	
ron	70		6.1		mg/Kg	₽	06/08/20 08:00	06/18/20 13:23	
Manganese	74	В	0.91		mg/Kg	₽			
Selenium	0.25		0.61		mg/Kg			06/18/20 13:23	
Method: 6010B SEP   Analyte	- SEP Metals (ICP) - S	Step 4 Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil F
		Qualifier	12		mg/Kg	— <del>¤</del>	·	06/18/20 15:15	———
Aluminum	2000						00/10/20 00:00		
Beryllium	0.42		0.30		mg/Kg	÷	06/10/20 08:00	06/18/20 15:15	
Cadmium	0.035		0.30		mg/Kg		06/10/20 08:00	06/18/20 15:15	
Cobalt	0.63	J	3.0		mg/Kg	1,2	06/10/20 08:00	06/18/20 15:15	
ron	1800		6.1	3.5	mg/Kg	Đ.	06/10/20 08:00	06/18/20 15:15	
Manganese	56		0.91		mg/Kg			06/18/20 15:15	
Selenium	0.91	B *	0.61	0.57	mg/Kg	<del>.</del>	06/10/20 08:00	06/18/20 15:15	
Method: 6010B SEP	- SEP Metals (ICP) -	Step 5							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Aluminum	240	* *1	180	29	mg/Kg	<del></del>	06/12/20 08:00	06/19/20 12:57	
Beryllium	ND	*	4.6	0.38	mg/Kg	₩	06/12/20 08:00	06/19/20 12:57	
Cadmium	ND		4.6	0.20	mg/Kg	₩	06/12/20 08:00	06/19/20 12:57	
Cobalt	ND	*	46		mg/Kg		06/12/20 08:00	06/19/20 12:57	
ron	ND	* *1	91		mg/Kg	₩		06/19/20 12:57	
/langanese	ND		14		mg/Kg	₽		06/19/20 12:57	
Selenium	ND		9.1		mg/Kg			06/19/20 12:57	
· <del>· · · · ·</del>	110		• • • • • • • • • • • • • • • • • • • •	J. <b>L</b>					
Method: 6010B SEP	- SEP Metals (ICP) - S	Step 6 Qualifier	RL		Unit	D	Prepared	Analyzed	Dil F

Eurofins TestAmerica, Knoxville

6/25/2020

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## **Client Sample Results**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Cobalt

Manganese Selenium

Lab Sample ID: 140-19131-12

Client Sample ID: PZ-53D 36 FT BGS Date Collected: 05/16/20 16:25 **Matrix: Solid** Date Received: 05/20/20 09:45

Percent Solids: 82.0

Job ID: 140-19131-1

Beryllium         0.70         0.30         0.015 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Cadmium         ND         0.30         0.013 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Cobalt         6.9         6.1         0.11 mg/Kg         ™ 06/12/20 08:00         06/19/20 17:26           Iron         20000         6.1         3.5 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Manganese         290         0.91         0.30 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Selenium         0.48 J         0.61         0.21 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7	Dil F
Beryllium         0.70         0.30         0.015 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Cadmium         ND         0.30         0.013 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Cobalt         6.9         6.1         0.11 mg/Kg         ™ 06/12/20 08:00         06/19/20 17:26           Iron         20000         6.1         3.5 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Manganese         290         0.91         0.30 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Selenium         0.48 J         0.61         0.21 mg/Kg         ™ 06/12/20 08:00         06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7         R         MDL Unit         D         Prepared         Analyzed           Aluminum         48000         120         20 mg/Kg         ™ 06/15/20 08:00         06/22/20 16:11           Beryllium         0.42         0.30         0.0091 mg/Kg         ™ 06/15/20 08:00         06/22/20 14:34           Cadmium         0.23 J         0.30         0.013 mg/Kg         ™ 06/15/20 08:00         06/22/20 14:34           Cobalt         0.27 J         15         0.16 mg/Kg         ™ 06/15/20 08:00         06/22/20 14:34	ווט
Cadmium         ND         0.30         0.013 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Cobalt         6.9         6.1         0.11 mg/Kg         □ 06/12/20 08:00         06/19/20 17:26           Iron         20000         6.1         3.5 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Manganese         290         0.91         0.30 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Selenium         0.48 J         0.61         0.21 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7         Result Qualifier         RL         MDL Unit         D         Prepared         Analyzed           Aluminum         48000         120         20 mg/Kg         □ 06/15/20 08:00         06/22/20 16:11         Description         O6/15/20 08:00         06/22/20 14:34           Cadmium         0.42         0.30         0.013 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Cobalt         0.27 J         15         0.16 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34	
Cobalt         6.9         6.1         0.11         mg/Kg         □ 06/12/20 08:00         06/19/20 17:26           Iron         20000         6.1         3.5         mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Manganese         290         0.91         0.30         mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Selenium         0.48         J         0.61         0.21         mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7         Result Qualifier         RL         MDL Unit         D         Prepared Prepar	
Iron         20000         6.1         3.5 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Manganese         290         0.91         0.30 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Selenium         0.48 J         0.61         0.21 mg/Kg         □ 06/12/20 08:00         06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7         R         MDL Unit         D         Prepared         Analyzed           Aluminum         48000         120         20 mg/Kg         □ 06/15/20 08:00         06/22/20 16:11           Beryllium         0.42         0.30         0.0091 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Cadmium         0.23 J         0.30         0.013 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Cobalt         0.27 J         15         0.16 mg/Kg         □ 06/15/20 08:00         06/22/20 17:02           Iron         5000         6.1         5.0 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13 mg/Kg         □ 06/15/20 08:00         06/22/20 14:34	
Manganese         290         0.91         0.30 mg/Kg         ☼ 06/12/20 08:00         06/19/20 16:49           Selenium         0.48 J         0.61         0.21 mg/Kg         ☼ 06/12/20 08:00         06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7         Analyte         Result Qualifier         RL         MDL Unit         D Prepared         Analyzed           Aluminum         48000         120         20 mg/Kg         ☼ 06/15/20 08:00         06/22/20 16:11           Beryllium         0.42         0.30         0.0091 mg/Kg         ☼ 06/15/20 08:00         06/22/20 14:34           Cadmium         0.23 J         0.30         0.013 mg/Kg         ※ 06/15/20 08:00         06/22/20 14:34           Cobalt         0.27 J         15         0.16 mg/Kg         ※ 06/15/20 08:00         06/22/20 17:02           Iron         5000         6.1         5.0 mg/Kg         ※ 06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13 mg/Kg         ※ 06/15/20 08:00         06/22/20 14:34	
Selenium         0.48 J         0.61         0.21 mg/Kg              □ 06/12/20 08:00 06/19/20 16:49           Method: 6010B SEP - SEP Metals (ICP) - Step 7         Result Qualifier         RL         MDL Unit         D mg/Kg         Prepared D6/15/20 08:00 06/22/20 16:11           Aluminum         48000         120         20 mg/Kg         □ 06/15/20 08:00 06/22/20 16:11           Beryllium         0.42         0.30 0.0091 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34           Cadmium         0.23 J         0.30 0.013 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34           Cobalt         0.27 J         15 0.16 mg/Kg         □ 06/15/20 08:00 06/22/20 17:02           Iron         5000         6.1 5.0 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34           Manganese         55         0.91 0.13 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34	
Method: 6010B SEP - SEP Metals (ICP) - Step 7           Analyte         Result Qualifier         RL Description         MDL Unit Description         Description         Prepared Prepared Prepared Prepared Description         Analyzed Description           Beryllium Cadmium Description         0.42 0.30 0.0091 mg/Kg 0.0013 mg/Kg 0.06/15/20 08:00 06/22/20 14:34         0.6/15/20 08:00 06/22/20 14:34           Cobalt Cobalt Description         0.27 J 15 0.16 mg/Kg 0.06/15/20 08:00 06/22/20 17:02         06/15/20 08:00 06/22/20 17:02           Iron Sound Sound Description         5000 6.1 5.0 mg/Kg 0.06/15/20 08:00 06/22/20 14:34           Manganese 55 0.91 0.13 mg/Kg 0.06/15/20 08:00 06/22/20 14:34	
Analyte         Result Aluminum         Qualifier         RL Plant         MDL Unit Managanese         D Prepared Manalyzed         Analyzed Manalyzed           Aluminum         48000         120         20         mg/Kg         □ 06/15/20 08:00         06/22/20 16:11           Beryllium         0.42         0.30         0.0091         mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Cadmium         0.23         J         0.30         0.013         mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Cobalt         0.27         J         15         0.16         mg/Kg         □ 06/15/20 08:00         06/22/20 17:02           Iron         5000         6.1         5.0         mg/Kg         □ 06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13         mg/Kg         □ 06/15/20 08:00         06/22/20 14:34	
Aluminum         48000         120         20 mg/Kg         mg/Kg         06/15/20 08:00         06/22/20 16:11           Beryllium         0.42         0.30         0.0091 mg/Kg         06/15/20 08:00         06/22/20 14:34           Cadmium         0.23 J         0.30         0.013 mg/Kg         06/15/20 08:00         06/22/20 14:34           Cobalt         0.27 J         15         0.16 mg/Kg         06/15/20 08:00         06/22/20 17:02           Iron         5000         6.1         5.0 mg/Kg         06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13 mg/Kg         06/15/20 08:00         06/22/20 14:34	
Beryllium         0.42         0.30         0.091 mg/Kg              □ 06/15/20 08:00 06/22/20 14:34           Cadmium         0.23 J         0.30 0.013 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34           Cobalt         0.27 J         15 0.16 mg/Kg         □ 06/15/20 08:00 06/22/20 17:02           Iron         5000         6.1 5.0 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34           Manganese         55 0.91 0.13 mg/Kg         □ 06/15/20 08:00 06/22/20 14:34	Dil F
Cadmium         0.23 J         0.30 O.013 mg/Kg         © 06/15/20 08:00 06/22/20 14:34           Cobalt Iron         5000 G.1         6.1 S.0 mg/Kg         © 06/15/20 08:00 06/22/20 17:02         06/22/20 17:02           Manganese         55 O.91 O.13 mg/Kg         © 06/15/20 08:00 06/22/20 14:34         06/22/20 14:34	
Cobalt         0.27 J         15         0.16 mg/Kg         © 06/15/20 08:00         06/22/20 17:02           Iron         5000         6.1         5.0 mg/Kg         © 06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13 mg/Kg         © 06/15/20 08:00         06/22/20 14:34	
Iron         5000         6.1         5.0 mg/Kg         © 06/15/20 08:00         06/22/20 14:34           Manganese         55         0.91         0.13 mg/Kg         © 06/15/20 08:00         06/22/20 14:34	
Manganese 55 0.91 0.13 mg/Kg ★ 06/15/20 08:00 06/22/20 14:34	
Selenium ND 0.61 0.21 mg/Kg * 06/15/20 08:00 06/22/20 14:34	
Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7	
·	Dil F
Aluminum 68000 10 1.6 mg/Kg 06/25/20 11:53	
<b>Beryllium</b> 1.9 0.25 0.0075 mg/Kg 06/25/20 11:53	
<b>Cadmium</b> 0.33 0.25 0.011 mg/Kg 06/25/20 11:53	
Cobalt 8.8 2.5 0.023 mg/Kg 06/25/20 11:53	
Iron 27000 5.0 4.1 mg/Kg 06/25/20 11:53	
Manganese 480 0.75 0.052 mg/Kg 06/25/20 11:53	
Selenium         2.4         0.50         0.17 mg/Kg         06/25/20 11:53	
: Method: 6010B - SEP Metals (ICP) - Total	
	Dil F
Aluminum 80000 120 20 mg/Kg © 05/29/20 08:00 06/23/20 15:37	
Beryllium 1.7 0.30 0.0091 mg/Kg	
Cadmium 0.67 0.30 0.013 mg/Kg   □ 05/29/20 08:00 06/23/20 14:01	

15

6.1

0.91

0.61

0.16 mg/Kg

5.0 mg/Kg

0.13 mg/Kg

0.21 mg/Kg

9.6 J

24000

460

ND

© 05/29/20 08:00 06/23/20 17:19

☼ 05/29/20 08:00 06/23/20 14:01

© 05/29/20 08:00 06/23/20 14:01

© 05/29/20 08:00 06/23/20 14:01

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

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

**Prep: 3010A** 

SEP: Exchangeable

Analyte	RL	MDL	Units
Aluminum		1.6	mg/Kg
Beryllium	0.25	0.077	mg/Kg
Cadmium	0.25	0.016	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.031	mg/Kg
Selenium	0.50	0.17	mg/Kg

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

Prep: 3010A SEP: Carbonate

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.016	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.063	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.28	mg/Kg
Selenium	0.50	0.17	mg/Kg

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

Prep: 3010A

**SEP: Non-Crystalline** 

Analyte	RL	MDL	Units
Aluminum	10	2.1	mg/Kg
Beryllium	0.25	0.015	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.027	mg/Kg
Selenium	0.50	0.17	mg/Kg

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

**Prep: 3010A** 

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Aluminum		1.6	mg/Kg
Beryllium	0.25	0.016	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.053	mg/Kg
Iron	5.0	2.9	mg/Kg
Manganese	0.75	0.13	mg/Kg
Selenium	0.50	0.47	mg/Kg

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

**Prep: 3010A** 

**SEP: Organic-Bound** 

Analyte	RL	MDL	Units	
Aluminum	30	4.7	mg/Kg	
Beryllium	0.75	0.063	mg/Kg	

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Client: Golder Associates Inc. Job ID: 140-19131-1

Project/Site: SCS Site, Plant Branch

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

Prep: 3010A

**SEP: Organic-Bound** 

Analyte	RL	MDL	Units
Cadmium	0.75	0.032	mg/Kg
Cobalt	7.5	0.12	mg/Kg
Iron	15	8.8	mg/Kg
Manganese	2.3	0.37	mg/Kg
Selenium	1.5	0.52	mg/Kg

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

SEP: Acid/Sulfide

Analyte	RL	MDL	Units	
Aluminum		1.6	mg/Kg	
Beryllium	0.25	0.012	mg/Kg	
Cadmium	0.25	0.011	mg/Kg	
Cobalt	2.5	0.046	mg/Kg	
Iron	5.0	2.9	mg/Kg	
Manganese	0.75	0.25	mg/Kg	
Selenium	0.50	0.17	mg/Kg	

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

**Prep: Residual** 

Analyte	RL	MDL	Units
Aluminum		1.6	mg/Kg
Beryllium	0.25	0.0075	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.026	mg/Kg
Iron	5.0	4.1	mg/Kg
Manganese	0.75	0.11	mg/Kg
Selenium	0.50	0.17	mg/Kg

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

Analyte	RL	MDL	Units	
Aluminum		1.6	mg/Kg	
Beryllium	0.25	0.0075	mg/Kg	
Cadmium	0.25	0.011	mg/Kg	
Cobalt	2.5	0.023	mg/Kg	
Iron	5.0	4.1	mg/Kg	
Manganese	0.75	0.052	mg/Kg	
Selenium	0.50	0.17	mg/Kg	

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

**Prep: Total** 

Analyte	RL	MDL	Units	
Aluminum	10	1.6	mg/Kg	_
Beryllium	0.25	0.0075	mg/Kg	
Cadmium	0.25	0.011	mg/Kg	
Cobalt	2.5	0.026	mg/Kg	
Iron	5.0	4.1	mg/Kg	
Manganese	0.75	0.11	mg/Kg	
Selenium	0.50	0.17	mg/Kg	

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Client: Golder Associates Inc. Job ID: 140-19131-1

Project/Site: SCS Site, Plant Branch

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

Lab Sample ID: MB 140-39918/15-A **Matrix: Solid** 

**Analysis Batch: 40512** 

**Client Sample ID: Method Blank Prep Type: Total/NA** 

Prep Batch: 39918

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Beryllium	ND		0.25	0.0075	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Cadmium	ND		0.25	0.011	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Cobalt	ND		2.5	0.026	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Iron	ND		5.0	4.1	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Manganese	ND		0.75	0.11	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Selenium	ND		0.50	0.17	mg/Kg		05/29/20 08:00	06/23/20 12:12	1
Manganese	ND		0.75	0.11	mg/Kg		05/29/20 08:00	06/23/20 12:12	1

MB MB

Lab Sample ID: LCS 140-39918/16-A

**Matrix: Solid** 

**Analysis Batch: 40512** 

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

Prep Batch: 39918

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	100	103		mg/Kg		103	75 - 125	
Beryllium	2.50	2.51		mg/Kg		100	75 <sub>-</sub> 125	
Cadmium	2.50	2.63		mg/Kg		105	75 <sub>-</sub> 125	
Cobalt	5.00	5.37		mg/Kg		107	75 <sub>-</sub> 125	
Iron	50.0	52.3		mg/Kg		105	75 <sub>-</sub> 125	
Manganese	5.00	5.34		mg/Kg		107	75 - 125	
Selenium	7.50	7.60		mg/Kg		101	75 - 125	

Lab Sample ID: LCSD 140-39918/17-A

Matrix: Solid

Analysis Batch: 40512

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 39918

Alialysis Datcii. 40312							Lieb	aton. v	טופפנ
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	100	102		mg/Kg		102	75 - 125	1	30
Beryllium	2.50	2.48		mg/Kg		99	75 - 125	1	30
Cadmium	2.50	2.62		mg/Kg		105	75 - 125	1	30
Cobalt	5.00	5.33		mg/Kg		107	75 - 125	1	30
Iron	50.0	51.3		mg/Kg		103	75 - 125	2	30
Manganese	5.00	5.29		mg/Kg		106	75 - 125	1	30
Selenium	7.50	7.53		mg/Kg		100	75 - 125	1	30

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

Lab Sample ID: MB 140-40011/15-B ^4

**Matrix: Solid** 

**Analysis Batch: 40383** 

Client	Sample	ID: Me	thod B	llank
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**Prep Type: Step 1** 

Prep Batch: 40023

	MB N	MB							
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		40	6.4	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Beryllium	ND		1.0	0.31	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Cadmium	ND		1.0	0.064	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Cobalt	ND		10	0.18	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Iron	ND		20	12	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Manganese	ND		3.0	0.12	mg/Kg		06/02/20 08:00	06/16/20 11:55	4
Selenium	ND		2.0	0.68	mg/Kg		06/02/20 08:00	06/16/20 11:55	4

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-40011/16-B ^5

**Matrix: Solid** 

**Analysis Batch: 40383** 

Client Sample ID	): Lab Control Sample
	Prep Type: Step 1
	Data Datala 40000

Prep Batch: 40023

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	100	100		mg/Kg		100	75 - 125	
Beryllium	2.50	2.49		mg/Kg		100	75 - 125	
Cadmium	2.50	2.42		mg/Kg		97	75 - 125	
Cobalt	5.00	4.76	J	mg/Kg		95	75 - 125	
Iron	50.0	49.3		mg/Kg		99	75 - 125	
Manganese	5.00	4.92		mg/Kg		98	75 - 125	
Selenium	7.50	7.25		mg/Kg		97	75 - 125	

Lab Sample ID: LCSD 140-40011/17-B ^5

**Matrix: Solid** 

**Analysis Batch: 40383** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Step 1** 

Prep Batch: 40023

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	100	102		mg/Kg		102	75 - 125	2	30
Beryllium	2.50	2.63		mg/Kg		105	75 - 125	6	30
Cadmium	2.50	2.55		mg/Kg		102	75 - 125	5	30
Cobalt	5.00	5.03	J	mg/Kg		101	75 - 125	5	30
Iron	50.0	51.3		mg/Kg		103	75 - 125	4	30
Manganese	5.00	5.18		mg/Kg		104	75 - 125	5	30
Selenium	7.50	7.87		mg/Kg		105	75 - 125	8	30

Lab Sample ID: MB 140-40024/15-B ^3

**Matrix: Solid** 

**Analysis Batch: 40383** 

**Client Sample ID: Method Blank** Prep Type: Step 2

Prep Batch: 40062

	MB	MB						-	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		30	4.8	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Beryllium	ND		0.75	0.048	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Cadmium	ND		0.75	0.033	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Cobalt	ND		7.5	0.19	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Iron	ND		15	8.7	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Manganese	ND		2.3	0.84	mg/Kg		06/03/20 08:00	06/16/20 13:48	3
Selenium	ND		1.5	0.51	ma/Ka		06/03/20 08:00	06/16/20 13:48	3

Lab Sample ID: LCS 140-40024/16-B ^5

**Matrix: Solid** 

Analysis Batch: 40383

**Client Sample ID: Lab Control Sample** Prep Type: Step 2

Prep Batch: 40062

Alialysis Dalcii. 40303								Prep Bat	CII. 40062
		Spike	LCS	LCS				%Rec.	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Aluminum	100	ND	*	mg/Kg		-1	75 - 125	
	Beryllium	2.50	1.28	J *	mg/Kg		51	75 <sub>-</sub> 125	
	Cadmium	2.50	2.35		mg/Kg		94	75 - 125	
	Cobalt	5.00	4.53	J	mg/Kg		91	75 - 125	
	Iron	50.0	ND	*	mg/Kg		5	75 <sub>-</sub> 125	
	Manganese	5.00	4.69		mg/Kg		94	75 - 125	
	Selenium	7.50	6.68		mg/Kg		89	75 - 125	

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

MB MB

ND

ND

0.0820 J

ND

ND

0.0490 J

ND

Result Qualifier

Lab Sample ID: LCSD 140-40024/17-B ^5

Matrix: Solid

**Analysis Batch: 40383** 

Client Sample ID: Lab Control Sample Dup Prep Type: Step 2

Prep Type: Step 2 Prep Batch: 40062

7 many old Battom 10000							op Datom 1000		
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	100	ND	*	mg/Kg		-1	75 - 125	19	30
Beryllium	2.50	1.33	*	mg/Kg		53	75 - 125	4	30
Cadmium	2.50	2.43		mg/Kg		97	75 - 125	3	30
Cobalt	5.00	4.67	J	mg/Kg		93	75 - 125	3	30
Iron	50.0	ND	*	mg/Kg		7	75 - 125	25	30
Manganese	5.00	4.85		mg/Kg		97	75 - 125	3	30
Selenium	7.50	6.51		mg/Kg		87	75 - 125	3	30

RL

10

0.25

0.25

2.5

5.0

0.75

0.50

MDL Unit

2.1 mg/Kg

0.015 mg/Kg

0.011 mg/Kg

0.045 mg/Kg

0.027 mg/Kg

0.17 mg/Kg

2.9 mg/Kg

Lab Sample ID: MB 140-40065/15-B

**Matrix: Solid** 

Analyte

Aluminum

Beryllium

Cadmium

Manganese

Selenium

Cobalt

Iron

**Analysis Batch: 40441** 

Client Sample ID: Method Blank Prep Type: Step 3

Prep Batch: 40096

 Prepared
 Analyzed
 Dil Fac

 06/08/20 08:00
 06/18/20 11:44
 1

 06/08/20 08:00
 06/18/20 11:44
 1

 06/08/20 08:00
 06/18/20 11:44
 1

 06/08/20 08:00
 06/18/20 11:44
 1

 06/08/20 08:00
 06/18/20 11:44
 1

 06/08/20 11:44
 1
 1

Lab Sample ID: LCS 140-40065/16-B

Matrix: Solid

**Analysis Batch: 40441** 

Client Sample ID: Lab Control Sample

06/08/20 08:00 06/18/20 11:44

06/08/20 08:00 06/18/20 11:44

Prep Type: Step 3 Prep Batch: 40096

7 maryoto Batom 10111	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	100	91.6		mg/Kg		92	75 - 125	
Beryllium	2.50	2.52		mg/Kg		101	75 - 125	
Cadmium	2.50	1.31	*	mg/Kg		52	75 - 125	
Cobalt	5.00	4.55		mg/Kg		91	75 - 125	
Iron	50.0	49.4		mg/Kg		99	75 - 125	
Manganese	5.00	4.74		mg/Kg		95	75 - 125	
Selenium	7.50	7.72		mg/Kg		103	75 - 125	

Lab Sample ID: LCSD 140-40065/17-B

**Matrix: Solid** 

**Analysis Batch: 40441** 

Client Sample ID: Lab Control Sample Dup Prep Type: Step 3

Prep Batch: 40096

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	100	95.6		mg/Kg	_	96	75 - 125	4	30
Beryllium	2.50	2.60		mg/Kg		104	75 - 125	3	30
Cadmium	2.50	1.37	*	mg/Kg		55	75 - 125	4	30
Cobalt	5.00	4.74		mg/Kg		95	75 - 125	4	30
Iron	50.0	51.1		mg/Kg		102	75 - 125	3	30
Manganese	5.00	4.91		mg/Kg		98	75 - 125	3	30
Selenium	7.50	8.04		mg/Kg		107	75 - 125	4	30

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Client: Golder Associates Inc.

MB MB

Job ID: 140-19131-1 Project/Site: SCS Site, Plant Branch

### Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-40100/15-B

**Matrix: Solid Analysis Batch: 40441** 

**Client Sample ID: Method Blank Prep Type: Step 4** 

Prep Batch: 40214

Analyte	Result Qualifier	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		1.6	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Beryllium	ND	0.25	0.016	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Cadmium	ND	0.25	0.011	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Cobalt	ND	2.5	0.053	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Iron	ND	5.0	2.9	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Manganese	ND	0.75	0.13	mg/Kg		06/10/20 08:00	06/18/20 13:39	1
Selenium	0.953	0.50	0.47	mg/Kg		06/10/20 08:00	06/18/20 13:39	1

Lab Sample ID: LCS 140-40100/16-B

**Matrix: Solid** 

**Analysis Batch: 40441** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Step 4

Prep Batch: 40214

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Aluminum 100 99.1 99 75 - 125 mg/Kg Beryllium 2.50 2.62 mg/Kg 105 75 - 125 Cadmium 2.50 2.70 mg/Kg 108 75 - 125 Cobalt 5.00 105 5.26 mg/Kg 75 - 125 50.0 50.9 102 Iron mg/Kg 75 - 125 5.00 5.14 103 Manganese mg/Kg 75 - 125 Selenium 7.50 0.825 mg/Kg 11 75 - 125

Lab Sample ID: LCSD 140-40100/17-B

Matrix: Solid

Analysis Batch: 40441

Client Sample ID: Lab Control Sample Dup

Prep Type: Step 4

Prep Batch: 40214

RPD
Limit
30
30
30
30
30
30
30
1 28

Lab Sample ID: MB 140-40215/15-B ^5

**Matrix: Solid** 

**Analysis Batch: 40453** 

**Client Sample ID: Method Blank** 

Prep Type: Step 5

Prep Batch: 40276

-	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		150	24	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Beryllium	ND		3.8	0.32	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Cadmium	ND		3.8	0.16	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Cobalt	ND		38	0.60	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Iron	ND		75	44	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Manganese	ND		11	1.9	mg/Kg		06/12/20 08:00	06/19/20 11:16	5
Selenium	ND		7.5	2.6	mg/Kg		06/12/20 08:00	06/19/20 11:16	5

6/25/2020

mg/Kg

mg/Kg

23

104

75 - 125

75 - 125

Prep Batch: 40277

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

### Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCS 140-40215/16-B ^5

Matrix: Solid

Client Sample ID: Lab Control Sample

Prep Type: Step 5

**Analysis Batch: 40453** Prep Batch: 40276 LCS LCS Spike %Rec. Analyte Added Result Qualifier %Rec Unit Limits 300 ND mg/Kg 75 - 125 Aluminum 6 Beryllium 7.50 3.83 mg/Kg 51 75 - 125 75 - 125 Cadmium 7.50 7.94 mg/Kg 106 Cobalt 15.0 1.41 J\* mg/Kg 9 75 - 125Iron 150 ND mg/Kg 3 75 - 125

15.0

22.5

Lab Sample ID: LCSD 140-40215/17-B ^5

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Step 5

3.49 J\*

23.4

Matrix: Solid Analysis Batch: 40453

Manganese

Selenium

Prep Batch: 40276 LCSD LCSD Spike %Rec. **RPD** Analyte Added Result Qualifier %Rec Limits RPD Unit Limit ND \*\*1 Aluminum 300 4 75 - 125 32 30 mg/Kg Beryllium 7.50 3.99 mg/Kg 53 75 - 1254 30 Cadmium 7.50 8.24 mg/Kg 110 75 - 1254

30 Cobalt 15.0 1.58 J\* mg/Kg 11 75 - 125 12 30 Iron 150 ND \* \*1 mg/Kg 4 75 - 125 34 30 15.0 29 Manganese 4.36 J\* mg/Kg 75 - 125 22 30 75 - 125 Selenium 22.5 24.8 mg/Kg 110 30

Lab Sample ID: MB 140-40277/15-A Client Sample ID: Method Blank
Matrix: Solid Prep Type: Step 6

Analysis Batch: 40453

Manganese

Selenium

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 1.6 mg/Kg Aluminum  $\overline{\mathsf{ND}}$ 10 06/12/20 08:00 06/19/20 13:12 Beryllium ND 0.25 0.012 mg/Kg 06/12/20 08:00 06/19/20 13:12 Cadmium ND 0.25 0.011 mg/Kg 06/12/20 08:00 06/19/20 13:12 ND 06/12/20 08:00 06/19/20 13:12 Cobalt 2.5 0.046 mg/Kg Iron ND 5.0 2.9 mg/Kg 06/12/20 08:00 06/19/20 13:12

Lab Sample ID: LCS 140-40277/16-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Step 6

Analysis Batch: 40453

0.75

0.50

0.25 mg/Kg

0.17 mg/Kg

ND

ND

Allalysis Batcii. 40455	Spike	LCS	LCS				%Rec.	tcii. 40277
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	100	101		mg/Kg		101	75 - 125	
Beryllium	2.50	2.63		mg/Kg		105	75 - 125	
Cadmium	2.50	2.71		mg/Kg		108	75 - 125	
Cobalt	5.00	5.22		mg/Kg		104	75 - 125	
Iron	50.0	50.8		mg/Kg		102	75 - 125	
Manganese	5.00	5.20		mg/Kg		104	75 - 125	
Selenium	7.50	7.90		mg/Kg		105	75 - 125	

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6/25/2020

06/12/20 08:00 06/19/20 13:12

06/12/20 08:00 06/19/20 13:12

Client: Golder Associates Inc.

Job ID: 140-19131-1 Project/Site: SCS Site, Plant Branch

### Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: LCSD 140-40277/17-A

**Matrix: Solid** 

Analysis Batch: 40453

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Step 6** Prep Batch: 40277

Analysis batch. 40400								i iep b	Daton. 40211		
	-	Spike	LCSD	LCSD				%Rec.		RPD	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
	Aluminum	100	100		mg/Kg		100	75 - 125	1	30	
	Beryllium	2.50	2.61		mg/Kg		105	75 - 125	1	30	
	Cadmium	2.50	2.70		mg/Kg		108	75 - 125	0	30	
	Cobalt	5.00	5.20		mg/Kg		104	75 - 125	0	30	
	Iron	50.0	50.5		mg/Kg		101	75 - 125	1	30	
	Manganese	5.00	5.16		mg/Kg		103	75 - 125	1	30	
	Selenium	7.50	7.92		mg/Kg		106	75 - 125	0	30	

Lab Sample ID: MB 140-40294/15-A

**Matrix: Solid** 

**Analysis Batch: 40487** 

**Client Sample ID: Method Blank Prep Type: Step 7** 

Prep Batch: 40294

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		06/15/20 08:00	06/22/20 12:47	1
Beryllium	ND		0.25	0.0075	mg/Kg		06/15/20 08:00	06/22/20 12:47	1
Cadmium	ND		0.25	0.011	mg/Kg		06/15/20 08:00	06/22/20 12:47	1
Cobalt	ND		2.5	0.026	mg/Kg		06/15/20 08:00	06/22/20 12:47	1
Iron	ND		5.0	4.1	mg/Kg		06/15/20 08:00	06/22/20 12:47	1
Manganese	ND		0.75	0.11	mg/Kg		06/15/20 08:00	06/22/20 12:47	1
Selenium	ND		0.50	0.17	mg/Kg		06/15/20 08:00	06/22/20 12:47	1

Lab Sample ID: LCS 140-40294/16-A

**Matrix: Solid** 

Analysis Batch: 40487

**Client Sample ID: Lab Control Sample Prep Type: Step 7** 

Prep Batch: 40294

Alialysis Dalcii. 40401							Frep Do	11CH. 40254
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aluminum	100	103		mg/Kg		103	75 - 125	
Beryllium	2.50	2.47		mg/Kg		99	75 - 125	
Cadmium	2.50	2.46		mg/Kg		98	75 - 125	
Cobalt	5.00	5.06		mg/Kg		101	75 - 125	
Iron	50.0	53.3		mg/Kg		107	75 - 125	
Manganese	5.00	5.35		mg/Kg		107	75 - 125	
Selenium	7.50	6.95		ma/Ka		93	75 - 125	

Lab Sample ID: LCSD 140-40294/17-A

**Matrix: Solid** 

Analysis Batch: 40487

**Client Sample ID: Lab Control Sample Dup Prep Type: Step 7** 

Prep Batch: 40294

Analysis Dalch: 40407							Prep =	alcn: 4	10294
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	100	103		mg/Kg		103	75 - 125	0	30
Beryllium	2.50	2.47		mg/Kg		99	75 - 125	0	30
Cadmium	2.50	2.45		mg/Kg		98	75 - 125	0	30
Cobalt	5.00	5.03		mg/Kg		101	75 - 125	1	30
Iron	50.0	53.3		mg/Kg		107	75 - 125	0	30
Manganese	5.00	5.35		mg/Kg		107	75 - 125	0	30
Selenium	7.50	6.96		mg/Kg		93	75 - 125	0	30

6/25/2020

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

### **Metals**

Prep Batch: 39918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	Total	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	Total	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	Total	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	Total	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	Total	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	Total	
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	Total	
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	Total	
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	Total	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	Total	
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	Total	
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	Total	
MB 140-39918/15-A	Method Blank	Total/NA	Solid	Total	
LCS 140-39918/16-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-39918/17-A	Lab Control Sample Dup	Total/NA	Solid	Total	

#### **SEP Batch: 40011**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 1	Solid	Exchangeable	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 1	Solid	Exchangeable	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 1	Solid	Exchangeable	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 1	Solid	Exchangeable	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 1	Solid	Exchangeable	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 1	Solid	Exchangeable	
140-19131-7	PZ-52D 18 FT BGS	Step 1	Solid	Exchangeable	
140-19131-8	PZ-52D 24-25 FT BGS	Step 1	Solid	Exchangeable	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 1	Solid	Exchangeable	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 1	Solid	Exchangeable	
140-19131-11	PZ-53D 30 FT BGS	Step 1	Solid	Exchangeable	
140-19131-12	PZ-53D 36 FT BGS	Step 1	Solid	Exchangeable	
MB 140-40011/15-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-40011/16-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-40011/17-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	

#### Prep Batch: 40023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 1	Solid	3010A	40011
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 1	Solid	3010A	40011
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 1	Solid	3010A	40011
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 1	Solid	3010A	40011
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 1	Solid	3010A	40011
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 1	Solid	3010A	40011
140-19131-7	PZ-52D 18 FT BGS	Step 1	Solid	3010A	40011
140-19131-8	PZ-52D 24-25 FT BGS	Step 1	Solid	3010A	40011
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 1	Solid	3010A	40011
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 1	Solid	3010A	40011
140-19131-11	PZ-53D 30 FT BGS	Step 1	Solid	3010A	40011
140-19131-12	PZ-53D 36 FT BGS	Step 1	Solid	3010A	40011
MB 140-40011/15-B ^4	Method Blank	Step 1	Solid	3010A	40011
LCS 140-40011/16-B ^5	Lab Control Sample	Step 1	Solid	3010A	40011
LCSD 140-40011/17-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	40011

Eurofins TestAmerica, Knoxville

Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

### **Metals**

### **SEP Batch: 40024**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 2	Solid	Carbonate	_
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 2	Solid	Carbonate	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 2	Solid	Carbonate	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 2	Solid	Carbonate	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 2	Solid	Carbonate	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 2	Solid	Carbonate	
140-19131-7	PZ-52D 18 FT BGS	Step 2	Solid	Carbonate	
140-19131-8	PZ-52D 24-25 FT BGS	Step 2	Solid	Carbonate	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 2	Solid	Carbonate	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 2	Solid	Carbonate	
140-19131-11	PZ-53D 30 FT BGS	Step 2	Solid	Carbonate	
140-19131-12	PZ-53D 36 FT BGS	Step 2	Solid	Carbonate	
MB 140-40024/15-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-40024/16-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-40024/17-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	

#### Prep Batch: 40062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 2	Solid	3010A	40024
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 2	Solid	3010A	40024
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 2	Solid	3010A	40024
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 2	Solid	3010A	40024
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 2	Solid	3010A	40024
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 2	Solid	3010A	40024
140-19131-7	PZ-52D 18 FT BGS	Step 2	Solid	3010A	40024
140-19131-8	PZ-52D 24-25 FT BGS	Step 2	Solid	3010A	40024
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 2	Solid	3010A	40024
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 2	Solid	3010A	40024
140-19131-11	PZ-53D 30 FT BGS	Step 2	Solid	3010A	40024
140-19131-12	PZ-53D 36 FT BGS	Step 2	Solid	3010A	40024
MB 140-40024/15-B ^3	Method Blank	Step 2	Solid	3010A	40024
LCS 140-40024/16-B ^5	Lab Control Sample	Step 2	Solid	3010A	40024
LCSD 140-40024/17-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	40024

#### **SEP Batch: 40065**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-7	PZ-52D 18 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-8	PZ-52D 24-25 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-11	PZ-53D 30 FT BGS	Step 3	Solid	Non-Crystalline	
140-19131-12	PZ-53D 36 FT BGS	Step 3	Solid	Non-Crystalline	
MB 140-40065/15-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-40065/16-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-40065/17-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

### **Metals**

### Prep Batch: 40096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 3	Solid	3010A	40065
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 3	Solid	3010A	40065
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 3	Solid	3010A	40065
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 3	Solid	3010A	40065
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 3	Solid	3010A	40065
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 3	Solid	3010A	40065
140-19131-7	PZ-52D 18 FT BGS	Step 3	Solid	3010A	40065
140-19131-8	PZ-52D 24-25 FT BGS	Step 3	Solid	3010A	40065
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 3	Solid	3010A	40065
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 3	Solid	3010A	40065
140-19131-11	PZ-53D 30 FT BGS	Step 3	Solid	3010A	40065
140-19131-12	PZ-53D 36 FT BGS	Step 3	Solid	3010A	40065
MB 140-40065/15-B	Method Blank	Step 3	Solid	3010A	40065
LCS 140-40065/16-B	Lab Control Sample	Step 3	Solid	3010A	40065
LCSD 140-40065/17-B	Lab Control Sample Dup	Step 3	Solid	3010A	40065

#### **SEP Batch: 40100**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 4	Solid	Metal Hydroxide	<u> </u>
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-7	PZ-52D 18 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-8	PZ-52D 24-25 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-11	PZ-53D 30 FT BGS	Step 4	Solid	Metal Hydroxide	
140-19131-12	PZ-53D 36 FT BGS	Step 4	Solid	Metal Hydroxide	
MB 140-40100/15-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-40100/16-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-40100/17-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	

#### Prep Batch: 40214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 4	Solid	3010A	40100
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 4	Solid	3010A	40100
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 4	Solid	3010A	40100
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 4	Solid	3010A	40100
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 4	Solid	3010A	40100
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 4	Solid	3010A	40100
140-19131-7	PZ-52D 18 FT BGS	Step 4	Solid	3010A	40100
140-19131-8	PZ-52D 24-25 FT BGS	Step 4	Solid	3010A	40100
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 4	Solid	3010A	40100
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 4	Solid	3010A	40100
140-19131-11	PZ-53D 30 FT BGS	Step 4	Solid	3010A	40100
140-19131-12	PZ-53D 36 FT BGS	Step 4	Solid	3010A	40100
MB 140-40100/15-B	Method Blank	Step 4	Solid	3010A	40100
LCS 140-40100/16-B	Lab Control Sample	Step 4	Solid	3010A	40100
LCSD 140-40100/17-B	Lab Control Sample Dup	Step 4	Solid	3010A	40100

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Client: Golder Associates Inc.

Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

Metals

**SEP Batch: 40215** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-7	PZ-52D 18 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-8	PZ-52D 24-25 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-11	PZ-53D 30 FT BGS	Step 5	Solid	Organic-Bound	
140-19131-12	PZ-53D 36 FT BGS	Step 5	Solid	Organic-Bound	
MB 140-40215/15-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-40215/16-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-40215/17-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	

Prep Batch: 40276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 5	Solid	3010A	40215
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 5	Solid	3010A	40215
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 5	Solid	3010A	40215
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 5	Solid	3010A	40215
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 5	Solid	3010A	40215
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 5	Solid	3010A	40215
140-19131-7	PZ-52D 18 FT BGS	Step 5	Solid	3010A	40215
140-19131-8	PZ-52D 24-25 FT BGS	Step 5	Solid	3010A	40215
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 5	Solid	3010A	40215
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 5	Solid	3010A	40215
140-19131-11	PZ-53D 30 FT BGS	Step 5	Solid	3010A	40215
140-19131-12	PZ-53D 36 FT BGS	Step 5	Solid	3010A	40215
MB 140-40215/15-B ^5	Method Blank	Step 5	Solid	3010A	40215
LCS 140-40215/16-B ^5	Lab Control Sample	Step 5	Solid	3010A	40215
LCSD 140-40215/17-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	40215

**SEP Batch: 40277** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 6	Solid	Acid/Sulfide	-
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-7	PZ-52D 18 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-8	PZ-52D 24-25 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-11	PZ-53D 30 FT BGS	Step 6	Solid	Acid/Sulfide	
140-19131-12	PZ-53D 36 FT BGS	Step 6	Solid	Acid/Sulfide	
MB 140-40277/15-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-40277/16-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-40277/17-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	

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Client: Golder Associates Inc.

Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

### Metals

### Prep Batch: 40294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	Residual	_
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	Residual	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	Residual	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	Residual	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	Residual	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	Residual	
140-19131-7	PZ-52D 18 FT BGS	Step 7	Solid	Residual	
140-19131-8	PZ-52D 24-25 FT BGS	Step 7	Solid	Residual	
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 7	Solid	Residual	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	Residual	
140-19131-11	PZ-53D 30 FT BGS	Step 7	Solid	Residual	
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	Residual	
MB 140-40294/15-A	Method Blank	Step 7	Solid	Residual	
LCS 140-40294/16-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-40294/17-A	Lab Control Sample Dup	Step 7	Solid	Residual	

### **Analysis Batch: 40383**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-7	PZ-52D 18 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-7	PZ-52D 18 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-8	PZ-52D 24-25 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-8	PZ-52D 24-25 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-11	PZ-53D 30 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-11	PZ-53D 30 FT BGS	Step 2	Solid	6010B SEP	40062
140-19131-12	PZ-53D 36 FT BGS	Step 1	Solid	6010B SEP	40023
140-19131-12	PZ-53D 36 FT BGS	Step 2	Solid	6010B SEP	40062
MB 140-40011/15-B ^4	Method Blank	Step 1	Solid	6010B SEP	40023
MB 140-40024/15-B ^3	Method Blank	Step 2	Solid	6010B SEP	40062
LCS 140-40011/16-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	40023
LCS 140-40024/16-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	40062
LCSD 140-40011/17-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	40023
LCSD 140-40024/17-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	40062

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Client: Golder Associates Inc.

Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

### Metals

### Analysis Batch: 40441

140-19131-1   BRGWA-2S(2) 39 FT BGS   Step 4   Solid   6010B SEP   4021-140-19131-2   BRGWA-2S(2) 43 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-2   BRGWA-2S(2) 43 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-3   BRGWA-SS(2) 38 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-3   BRGWA-SS(2) 38 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-4   BRGWA-SS(2) 32 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-4   BRGWA-SS(2) 32 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-5   BRGWA-SS(2) 32 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-5   BRGWA-SS(2) 42 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-5   BRGWA-SS(2) 42 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-6   BRGWA-SS(2) 42 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-6   BRGWA-SS(2) 48 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-6   BRGWA-SS(2) 48 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-7   PZ-52D 18 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-7   PZ-52D 18 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-7   PZ-52D 18 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-8   PZ-52D 24-25 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-9   BRGWC-SO(2) 59 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-9   BRGWC-SO(2) 59 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-9   BRGWC-SO(2) 59 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-10   BRGWC-SO(2) 63-63.5 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-10   BRGWC-SO(2) 63-63.5 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-11   PZ-53D 30 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-11   PZ-53D 30 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-11   PZ-53D 30 FT BGS   Step 3   Solid   6010B SEP   4021-140-19131-11   PZ-53D 30 FT BGS   Step 4   Solid   6010B SEP   4021-140-19131-11   PZ-53D 30 FT BGS   Step 4   Solid   6010B SEP   4021-140-19131-11   PZ-53D 30 FT BGS   Step 4   Solid   6010B SEP   4021-140-19131-12   PZ-53D 36 FT BGS   Step 4   Solid   6010B	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-2   BRGWA-2S(2) 43 FT BGS   Step 3   Solid   6010B SEP   40091	140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-2 BRGWA-2S(2) 43 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-3 BRGWA-SS(2) 38 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-3 BRGWA-SS(2) 38 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-4 BRGWA-SS(2) 32 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-4 BRGWA-SS(2) 32 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-5 BRGWA-6S(2) 42 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-5 BRGWA-6S(2) 42 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-6 BRGWA-6S(2) 42 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-6 BRGWA-6S(2) 42 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-6 BRGWA-6S(2) 48 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-7 PZ-52D 18 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-7 PZ-52D 18 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-8 PZ-52D 24-25 FT BGS Step 3 Solid 6010B SEP 40091 140-19131-8 PZ-52D 24-25 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-9 BRGWC-50(2) 59 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-10 BRGWC-50(2) 63-63.5 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-11 PZ-53D 30 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 40091 140-40065/16-B Lab Control Sample Step 4 So	140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-3         BRGWA-5S(2) 38 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-3         BRGWA-5S(2) 38 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-4         BRGWA-5S(2) 32 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-4         BRGWA-5S(2) 32 FT BGS         Step 4         Solid         6010B SEP         40091           140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-6         BRGWA-6S(2) 42 FT BGS         Step 4         Solid         6010B SEP         40091           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         40091           140-19131-7         PZ-52D 18 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-8         PZ-52D 24-25 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-1	140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-3 BRGWA-5S(2) 38 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-4 BRGWA-5S(2) 32 FT BGS Step 3 Solid 6010B SEP 4009- 140-19131-4 BRGWA-5S(2) 32 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-5 BRGWA-6S(2) 42 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-5 BRGWA-6S(2) 42 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-6 BRGWA-6S(2) 48 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-6 BRGWA-6S(2) 48 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-7 PZ-52D 18 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-7 PZ-52D 18 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-7 PZ-52D 18 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-8 PZ-52D 24-25 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-8 PZ-52D 24-25 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-9 BRGWC-50(2) 59 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-9 BRGWC-50(2) 59 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-10 BRGWC-50(2) 63-63.5 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-10 BRGWC-50(2) 63-63.5 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-11 PZ-53D 30 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-11 PZ-53D 30 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-11 PZ-53D 30 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 3 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid 6010B SEP 4021- 140-19131-12 PZ-53D 36 FT BGS Step 4 Solid	140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-4         BRGWA-5S(2) 32 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-4         BRGWA-6S(2) 32 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-5           140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-6           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 3         Solid         6010B SEP         4021-140-19131-6           140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-7           140-19131-7         PZ-52D 18 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-7           140-19131-8         PZ-52D 24-25 FT BGS         Step 3         Solid         6010B SEP         4021-140-19131-8           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-9           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-10           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid	140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-4         BRGWA-5S(2) 32 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-5           140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-5           140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-6           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 3         Solid         6010B SEP         4021-140-19131-7           140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-7           140-19131-8         PZ-52D 18 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-8           140-19131-8         PZ-52D 24-25 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-9           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-9           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-10           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-11           140-19131-11         PZ-53D 30 FT BGS         Step 3	140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 4         Solid         6010B SEP         40091           140-19131-7         PZ-52D 18 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-7         PZ-52D 24-25 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-8         PZ-52D 24-25 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-1	140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-5         BRGWA-6S(2) 42 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-6           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-6           140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-7           140-19131-7         PZ-52D 18 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-8           140-19131-8         PZ-52D 24-25 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-8           140-19131-9         PZ-52D 24-25 FT BGS         Step 3         Solid         6010B SEP         4001-140-19131-9           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-9           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-10           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-11           140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 3 <t< td=""><td>140-19131-4</td><td>BRGWA-5S(2) 32 FT BGS</td><td>Step 4</td><td>Solid</td><td>6010B SEP</td><td>40214</td></t<>	140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-6         BRGWA-6S(2) 48 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-7         PZ-52D 18 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-8         PZ-52D 24-25 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-8         PZ-52D 24-25 FT BGS         Step 4         Solid         6010B SEP         40091           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 3         Solid         6010B SEP         40091           140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         4021-           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         4021-           140-19131-12 <td>140-19131-5</td> <td>BRGWA-6S(2) 42 FT BGS</td> <td>Step 3</td> <td>Solid</td> <td>6010B SEP</td> <td>40096</td>	140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-6       BRGWA-6S(2) 48 FT BGS       Step 4       Solid       6010B SEP       4021-140-19131-7         140-19131-7       PZ-52D 18 FT BGS       Step 3       Solid       6010B SEP       4009-140-19131-7         140-19131-8       PZ-52D 24-25 FT BGS       Step 4       Solid       6010B SEP       4009-140-19131-8         140-19131-8       PZ-52D 24-25 FT BGS       Step 3       Solid       6010B SEP       4009-140-19131-8         140-19131-9       BRGWC-50(2) 59 FT BGS       Step 3       Solid       6010B SEP       4009-140-19131-9         140-19131-9       BRGWC-50(2) 59 FT BGS       Step 3       Solid       6010B SEP       4009-140-19131-10         140-19131-10       BRGWC-50(2) 63-63.5 FT BGS       Step 3       Solid       6010B SEP       4009-140-19131-10         140-19131-11       PZ-53D 30 FT BGS       Step 4       Solid       6010B SEP       4009-140-19131-11         140-19131-11       PZ-53D 30 FT BGS       Step 3       Solid       6010B SEP       4001-19131-11         140-19131-12       PZ-53D 36 FT BGS       Step 4       Solid       6010B SEP       4001-19131-12         140-19131-12       PZ-53D 36 FT BGS       Step 3       Solid       6010B SEP       40021-19131-12         140-19131-12 <t< td=""><td>140-19131-5</td><td>BRGWA-6S(2) 42 FT BGS</td><td>Step 4</td><td>Solid</td><td>6010B SEP</td><td>40214</td></t<>	140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-7       PZ-52D 18 FT BGS       Step 3       Solid       6010B SEP       40091         140-19131-7       PZ-52D 18 FT BGS       Step 4       Solid       6010B SEP       40214         140-19131-8       PZ-52D 24-25 FT BGS       Step 3       Solid       6010B SEP       40091         140-19131-8       PZ-52D 24-25 FT BGS       Step 4       Solid       6010B SEP       40214         140-19131-9       BRGWC-50(2) 59 FT BGS       Step 3       Solid       6010B SEP       40091         140-19131-9       BRGWC-50(2) 59 FT BGS       Step 4       Solid       6010B SEP       40091         140-19131-9       BRGWC-50(2) 63-63.5 FT BGS       Step 4       Solid       6010B SEP       40214         140-19131-10       BRGWC-50(2) 63-63.5 FT BGS       Step 3       Solid       6010B SEP       40091         140-19131-11       PZ-53D 30 FT BGS       Step 4       Solid       6010B SEP       40091         140-19131-12       PZ-53D 30 FT BGS       Step 3       Solid       6010B SEP       40091         140-19131-12       PZ-53D 36 FT BGS       Step 3       Solid       6010B SEP       40091         140-19131-12       PZ-53D 36 FT BGS       Step 3       Solid       6010B SEP       40091	140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-7         PZ-52D 18 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-8           140-19131-8         PZ-52D 24-25 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-8           140-19131-8         PZ-52D 24-25 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-9           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-9           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-10           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-11           140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-11           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 4	140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-8   PZ-52D 24-25 FT BGS   Step 3   Solid   6010B SEP   40090     140-19131-8   PZ-52D 24-25 FT BGS   Step 4   Solid   6010B SEP   40210     140-19131-9   BRGWC-50(2) 59 FT BGS   Step 3   Solid   6010B SEP   40090     140-19131-9   BRGWC-50(2) 59 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-10   BRGWC-50(2) 63-63.5 FT BGS   Step 3   Solid   6010B SEP   40090     140-19131-10   BRGWC-50(2) 63-63.5 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-11   PZ-53D 30 FT BGS   Step 3   Solid   6010B SEP   40090     140-19131-11   PZ-53D 30 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-12   PZ-53D 36 FT BGS   Step 3   Solid   6010B SEP   40090     140-19131-12   PZ-53D 36 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-12   PZ-53D 36 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-12   PZ-53D 36 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-12   PZ-53D 36 FT BGS   Step 4   Solid   6010B SEP   40090     140-19131-12   PZ-53D 36 FT BGS   Step 4   Solid   6010B SEP   40090     140-40065/15-B   Method Blank   Step 4   Solid   6010B SEP   40090     140-40100/15-B   Method Blank   Step 4   Solid   6010B SEP   40090     140-40065/16-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 4   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 4   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     140-40065/17-B   Lab Control Sample   Step 3   Solid   6010B SEP   40090     1	140-19131-7	PZ-52D 18 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-8         PZ-52D 24-25 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-9           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-19           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-10           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 3         Solid         6010B SEP         4021-140-19131-10           140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         4021-140-19131-11           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         4021-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         4009-140-19131-12           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         4009-140-19131-12           140-40065/15-B         Method Blank         Step 3         Solid         6010B SEP         4009-140-1912-1912-1912-1912-1912-1912-1912-191	140-19131-7	PZ-52D 18 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-9         BRGWC-50(2) 59 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-9         BRGWC-50(2) 59 FT BGS         Step 4         Solid         6010B SEP         40210           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         40210           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         40210           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         40210           MB 140-40065/15-B         Method Blank         Step 3         Solid         6010B SEP         40210           MB 140-40100/15-B         Method Blank         Step 4         Solid         6010B SEP         40210           LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40210           LCS 1	140-19131-8	PZ-52D 24-25 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-9         BRGWC-50(2) 59 FT BGS         Step 4         Solid         6010B SEP         40214           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 3         Solid         6010B SEP         40096           140-19131-10         BRGWC-50(2) 63-63.5 FT BGS         Step 4         Solid         6010B SEP         40214           140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         40096           140-19131-11         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         40214           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         40096           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         40214           MB 140-40065/15-B         Method Blank         Step 3         Solid         6010B SEP         40214           MB 140-40100/15-B         Method Blank         Step 4         Solid         6010B SEP         40214           LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40214           LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         40214           L	140-19131-8	PZ-52D 24-25 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-10       BRGWC-50(2) 63-63.5 FT BGS       Step 3       Solid       6010B SEP       40090         140-19131-10       BRGWC-50(2) 63-63.5 FT BGS       Step 4       Solid       6010B SEP       40214         140-19131-11       PZ-53D 30 FT BGS       Step 3       Solid       6010B SEP       40090         140-19131-11       PZ-53D 30 FT BGS       Step 4       Solid       6010B SEP       40214         140-19131-12       PZ-53D 36 FT BGS       Step 3       Solid       6010B SEP       40090         140-19131-12       PZ-53D 36 FT BGS       Step 4       Solid       6010B SEP       40214         MB 140-40065/15-B       Method Blank       Step 3       Solid       6010B SEP       40214         MB 140-40100/15-B       Method Blank       Step 4       Solid       6010B SEP       40214         LCS 140-40065/16-B       Lab Control Sample       Step 3       Solid       6010B SEP       40214         LCS 140-40100/16-B       Lab Control Sample       Step 4       Solid       6010B SEP       40214         LCSD 140-40065/17-B       Lab Control Sample Dup       Step 3       Solid       6010B SEP       40214	140-19131-9	BRGWC-50(2) 59 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-10       BRGWC-50(2) 63-63.5 FT BGS       Step 4       Solid       6010B SEP       4021-140-19131-11         140-19131-11       PZ-53D 30 FT BGS       Step 3       Solid       6010B SEP       40090-140-19131-11         140-19131-12       PZ-53D 36 FT BGS       Step 3       Solid       6010B SEP       40090-140-19131-12         140-19131-12       PZ-53D 36 FT BGS       Step 4       Solid       6010B SEP       4021-140-19131-12         MB 140-40065/15-B       Method Blank       Step 3       Solid       6010B SEP       40090-140-140-140-140-140-140-140-140-140-14	140-19131-9	BRGWC-50(2) 59 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-11         PZ-53D 30 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         40214           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         40214           MB 140-40065/15-B         Method Blank         Step 3         Solid         6010B SEP         40090           MB 140-40100/15-B         Method Blank         Step 4         Solid         6010B SEP         40214           LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40090           LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         40214           LCSD 140-40065/17-B         Lab Control Sample Dup         Step 3         Solid         6010B SEP         40214	140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-11         PZ-53D 30 FT BGS         Step 4         Solid         6010B SEP         40214           140-19131-12         PZ-53D 36 FT BGS         Step 3         Solid         6010B SEP         40090           140-19131-12         PZ-53D 36 FT BGS         Step 4         Solid         6010B SEP         40214           MB 140-40065/15-B         Method Blank         Step 3         Solid         6010B SEP         40090           MB 140-40100/15-B         Method Blank         Step 4         Solid         6010B SEP         40214           LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40090           LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         40214           LCSD 140-40065/17-B         Lab Control Sample Dup         Step 3         Solid         6010B SEP         40214	140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 4	Solid	6010B SEP	40214
140-19131-12       PZ-53D 36 FT BGS       Step 3       Solid       6010B SEP       40090         140-19131-12       PZ-53D 36 FT BGS       Step 4       Solid       6010B SEP       40210         MB 140-40065/15-B       Method Blank       Step 3       Solid       6010B SEP       40090         MB 140-40100/15-B       Method Blank       Step 4       Solid       6010B SEP       40210         LCS 140-40065/16-B       Lab Control Sample       Step 3       Solid       6010B SEP       40090         LCS 140-40100/16-B       Lab Control Sample       Step 4       Solid       6010B SEP       40210         LCSD 140-40065/17-B       Lab Control Sample Dup       Step 3       Solid       6010B SEP       40090	140-19131-11	PZ-53D 30 FT BGS	Step 3	Solid	6010B SEP	40096
140-19131-12       PZ-53D 36 FT BGS       Step 4       Solid       6010B SEP       40214         MB 140-40065/15-B       Method Blank       Step 3       Solid       6010B SEP       40096         MB 140-40100/15-B       Method Blank       Step 4       Solid       6010B SEP       40214         LCS 140-40065/16-B       Lab Control Sample       Step 3       Solid       6010B SEP       40096         LCS 140-40100/16-B       Lab Control Sample       Step 4       Solid       6010B SEP       40214         LCSD 140-40065/17-B       Lab Control Sample Dup       Step 3       Solid       6010B SEP       40096	140-19131-11	PZ-53D 30 FT BGS	Step 4	Solid	6010B SEP	40214
MB 140-40065/15-B         Method Blank         Step 3         Solid         6010B SEP         40090           MB 140-40100/15-B         Method Blank         Step 4         Solid         6010B SEP         40214           LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40090           LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         40214           LCSD 140-40065/17-B         Lab Control Sample Dup         Step 3         Solid         6010B SEP         40090	140-19131-12	PZ-53D 36 FT BGS	Step 3	Solid	6010B SEP	40096
MB 140-40100/15-B         Method Blank         Step 4         Solid         6010B SEP         40214           LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40090           LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         40214           LCSD 140-40065/17-B         Lab Control Sample Dup         Step 3         Solid         6010B SEP         40090	140-19131-12	PZ-53D 36 FT BGS	Step 4	Solid	6010B SEP	40214
LCS 140-40065/16-B         Lab Control Sample         Step 3         Solid         6010B SEP         40090           LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         40210           LCSD 140-40065/17-B         Lab Control Sample Dup         Step 3         Solid         6010B SEP         40090	MB 140-40065/15-B	Method Blank	Step 3	Solid	6010B SEP	40096
LCS 140-40100/16-B         Lab Control Sample         Step 4         Solid         6010B SEP         4021-           LCSD 140-40065/17-B         Lab Control Sample Dup         Step 3         Solid         6010B SEP         40090	MB 140-40100/15-B	Method Blank	Step 4	Solid	6010B SEP	40214
LCSD 140-40065/17-B Lab Control Sample Dup Step 3 Solid 6010B SEP 40090	LCS 140-40065/16-B	Lab Control Sample	Step 3	Solid	6010B SEP	40096
·	LCS 140-40100/16-B	Lab Control Sample	Step 4	Solid	6010B SEP	40214
LCSD 140-40100/17-B Lab Control Sample Dup Step 4 Solid 6010B SEP 4021	LCSD 140-40065/17-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	40096
	LCSD 140-40100/17-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	40214

### **Analysis Batch: 40453**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-7	PZ-52D 18 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-7	PZ-52D 18 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-7	PZ-52D 18 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-8	PZ-52D 24-25 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-8	PZ-52D 24-25 FT BGS	Step 6	Solid	6010B SEP	40277

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Client: Golder Associates Inc.

Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

## **Metals (Continued)**

### **Analysis Batch: 40453 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-11	PZ-53D 30 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-11	PZ-53D 30 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-12	PZ-53D 36 FT BGS	Step 5	Solid	6010B SEP	40276
140-19131-12	PZ-53D 36 FT BGS	Step 6	Solid	6010B SEP	40277
140-19131-12	PZ-53D 36 FT BGS	Step 6	Solid	6010B SEP	40277
MB 140-40215/15-B ^5	Method Blank	Step 5	Solid	6010B SEP	40276
MB 140-40277/15-A	Method Blank	Step 6	Solid	6010B SEP	40277
LCS 140-40215/16-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	40276
LCS 140-40277/16-A	Lab Control Sample	Step 6	Solid	6010B SEP	40277
LCSD 140-40215/17-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	40276
LCSD 140-40277/17-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	40277

#### **Analysis Batch: 40487**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-1	BRGWA-2S(2) 39 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-2	BRGWA-2S(2) 43 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-3	BRGWA-5S(2) 38 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-4	BRGWA-5S(2) 32 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-5	BRGWA-6S(2) 42 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-6	BRGWA-6S(2) 48 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-7	PZ-52D 18 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-7	PZ-52D 18 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-8	PZ-52D 24-25 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-8	PZ-52D 24-25 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-9	BRGWC-50(2) 59 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-11	PZ-53D 30 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-11	PZ-53D 30 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	6010B SEP	40294
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	6010B SEP	40294

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch Job ID: 140-19131-1

## **Metals (Continued)**

### **Analysis Batch: 40487 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-12	PZ-53D 36 FT BGS	Step 7	Solid	6010B SEP	40294
MB 140-40294/15-A	Method Blank	Step 7	Solid	6010B SEP	40294
LCS 140-40294/16-A	Lab Control Sample	Step 7	Solid	6010B SEP	40294
LCSD 140-40294/17-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	40294

### **Analysis Batch: 40512**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	3991
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	3991
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	3991
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	6010B	3991
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	6010B	3991
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	6010B	3991
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	6010B	3991
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	6010B	3991
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	6010B	3991
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	6010B	3991
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	6010B	3991
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	6010B	3991
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	6010B	3991
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	6010B	3991
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	6010B	3991
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	6010B	3991
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	6010B	3991
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	6010B	3991
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	6010B	3991
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	6010B	3991
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	6010B	3991
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	6010B	3991
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	6010B	3991
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	6010B	3991
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	6010B	3991
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	6010B	3991
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	6010B	3991
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	6010B	3991
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	6010B	3991
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	6010B	3991
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	6010B	3991
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	6010B	3991
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	6010B	3991
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	6010B	3991
MB 140-39918/15-A	Method Blank	Total/NA	Solid	6010B	3991
LCS 140-39918/16-A	Lab Control Sample	Total/NA	Solid	6010B	3991
LCSD 140-39918/17-A	Lab Control Sample Dup	Total/NA	Solid	6010B	3991

### **Analysis Batch: 40572**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	

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Client: Golder Associates Inc.
Project/Site: SCS Site, Plant Branch

Job ID: 140-19131-1

## **Metals (Continued)**

### **Analysis Batch: 40572 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-5	BRGWA-6S(2) 42 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-7	PZ-52D 18 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-8	PZ-52D 24-25 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-9	BRGWC-50(2) 59 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-11	PZ-53D 30 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	
140-19131-12	PZ-53D 36 FT BGS	Sum of Steps 1-7	Solid	6010B SEP	

## **General Chemistry**

### **Analysis Batch: 40042**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-19131-1	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	Moisture	
140-19131-2	BRGWA-2S(2) 43 FT BGS	Total/NA	Solid	Moisture	
140-19131-3	BRGWA-5S(2) 38 FT BGS	Total/NA	Solid	Moisture	
140-19131-4	BRGWA-5S(2) 32 FT BGS	Total/NA	Solid	Moisture	
140-19131-5	BRGWA-6S(2) 42 FT BGS	Total/NA	Solid	Moisture	
140-19131-6	BRGWA-6S(2) 48 FT BGS	Total/NA	Solid	Moisture	
140-19131-7	PZ-52D 18 FT BGS	Total/NA	Solid	Moisture	
140-19131-8	PZ-52D 24-25 FT BGS	Total/NA	Solid	Moisture	
140-19131-9	BRGWC-50(2) 59 FT BGS	Total/NA	Solid	Moisture	
140-19131-10	BRGWC-50(2) 63-63.5 FT BGS	Total/NA	Solid	Moisture	
140-19131-11	PZ-53D 30 FT BGS	Total/NA	Solid	Moisture	
140-19131-12	PZ-53D 36 FT BGS	Total/NA	Solid	Moisture	
140-19131-1 DU	BRGWA-2S(2) 39 FT BGS	Total/NA	Solid	Moisture	

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### **Lab Chronicle**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-2S(2) 39 FT BGS Lab Sample ID: 140-19131-1

Date Collected: 05/13/20 14:30 Date Received: 05/20/20 09:45 **Matrix: Solid** 

Job ID: 140-19131-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			40572	06/25/20 11:53	DKW	TAL KNX
	Instrument	ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
	Instrument	ID: NOEQUIP								

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1 Date Collected: 05/13/20 14:30 **Matrix: Solid** 

Date Received: 05/20/20 09:45 Percent Solids: 71.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KN
Total/NA	Analysis Instrumen	6010B at ID: DUO		1			40512	06/23/20 12:43	KNC	TAL KN
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KN
Total/NA	Analysis Instrumen	6010B at ID: DUO		10			40512	06/23/20 14:27	KNC	TAL KN
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KN
Total/NA	Analysis Instrumen	6010B at ID: DUO		2			40512	06/23/20 16:04	KNC	TAL KN
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KN
Total/NA	Analysis Instrumen	6010B at ID: DUO		20			40512	06/23/20 17:24	KNC	TAL KN
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KN
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KN
Step 1	Analysis Instrumen	6010B SEP at ID: DUO		4			40383	06/16/20 12:21	KNC	TAL KN
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KN
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KN
Step 2	Analysis Instrumen	6010B SEP at ID: DUO		3			40383	06/16/20 14:15	KNC	TAL KN
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KN
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KN
Step 3	Analysis Instrumen	6010B SEP at ID: DUO		1			40441	06/18/20 12:10	KNC	TAL KN
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KN
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KN
Step 4	Analysis Instrumen	6010B SEP at ID: DUO		1			40441	06/18/20 14:04	KNC	TAL KN
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KN
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00		TAL KN
Step 5	Analysis Instrumen	6010B SEP at ID: DUO		5			40453	06/19/20 11:43	KNC	TAL KN
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KN
Step 6	Analysis Instrumen	6010B SEP at ID: DUO		1	-		40453	06/19/20 13:38	KNC	TAL KN

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6/25/2020

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Lab Sample ID: 140-19131-1 Date Collected: 05/13/20 14:30 Matrix: Solid Date Received: 05/20/20 09:45

Percent Solids: 71.0

Batch Batch Dil Initial Final Batch Prepared Factor Method Amount Number **Prep Type** Type Run **Amount** or Analyzed Analyst Lab 40277 Step 6 SEP Acid/Sulfide 5.000 g 250 mL 06/12/20 08:00 **KNC** TAL KNX Step 6 Analysis 6010B SEP 2 40453 06/19/20 16:54 KNC TAL KNX Instrument ID: DUO Step 7 Prep Residual 1.000 g 50 mL 40294 06/15/20 08:00 KNC TAL KNX Step 7 Analysis 6010B SEP 1 40487 06/22/20 13:18 KNC TAL KNX Instrument ID: DUO Step 7 Prep Residual 1.000 g 50 mL 40294 06/15/20 08:00 KNC TAL KNX Analysis 6010B SEP 40487 06/22/20 15:00 KNC TAL KNX Step 7 10 Instrument ID: DUO 06/15/20 08:00 KNC TAL KNX Step 7 Prep Residual 1.000 g 50 mL 40294 Analysis 6010B SEP 40487 TAL KNX Step 7 5 06/22/20 16:27 KNC Instrument ID: DUO

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Date Collected: 05/13/20 14:40

Lab Sample ID: 140-19131-2

**Matrix: Solid** 

Date Received: 05/20/20 09:45

Batch Batch Dil Initial Final Batch **Prepared Prep Type** Type Method Run Factor **Amount Amount** Number or Analyzed **Analyst** Lab Sum of Steps 1-7 40572 06/25/20 11:53 DKW TAL KNX Analysis 6010B SEP Instrument ID: NOEQUIP 06/02/20 08:02 BKD Total/NA Analysis 40042 TAL KNX Moisture Instrument ID: NOEQUIP

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Date Collected: 05/13/20 14:40

Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-2 Matrix: Solid Percent Solids: 75.0

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B nt ID: DUO		1			40512	06/23/20 12:49	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B nt ID: DUO		10	-		40512	06/23/20 14:32	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B nt ID: DUO		20			40512	06/23/20 17:29	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumen	6010B SEP nt ID: DUO		4			40383	06/16/20 12:26	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumen	6010B SEP nt ID: DUO		3			40383	06/16/20 14:20	KNC	TAL KNX

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-2S(2) 43 FT BGS

Date Collected: 05/13/20 14:40 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-2

Matrix: Solid

Percent Solids: 75.0

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 12:15	KNC	TAL KNX
	Instrumer	nt ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 14:10	KNC	TAL KNX
	Instrumer	nt ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:48	KNC	TAL KNX
	Instrumer	nt ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:43	KNC	TAL KNX
	Instrumer	nt ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 13:23	KNC	TAL KNX
	Instrumer	nt ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 15:05	KNC	TAL KNX
	Instrumer	nt ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:32	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Date Collected: 05/14/20 07:40 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-3

Matrix: Solid

Prep Type Sum of Steps 1-7	,	Batch Method 6010B SEP It ID: NOEQUIP	Run	Dil Factor	Initial Amount	Final Amount	Batch Number 40572	Prepared or Analyzed 06/25/20 11:53	Analyst DKW	Lab TAL KNX
Total/NA	Analysis Instrumen	Moisture at ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: BRGWA-5S(2) 38 FT BGS

Date Collected: 05/14/20 07:40

Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-3

Matrix: Solid

Percent Solids: 84.1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		1			40512	06/23/20 12:54	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		10			40512	06/23/20 14:37	KNC	TAL KNX

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Lab Sample ID: 140-19131-3

**Matrix: Solid** Percent Solids: 84.1

## Client Sample ID: BRGWA-5S(2) 38 FT BGS

Date Collected: 05/14/20 07:40 Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B at ID: DUO		2			40512	06/23/20 16:15	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumen	6010B SEP at ID: DUO		4			40383	06/16/20 12:31	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumen	6010B SEP at ID: DUO		3			40383	06/16/20 14:25	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumen	6010B SEP at ID: DUO		1			40441	06/18/20 12:20	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumen	6010B SEP at ID: DUO		1			40441	06/18/20 14:15	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumen	6010B SEP at ID: DUO		5			40453	06/19/20 11:53	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumen	6010B SEP it ID: DUO		1			40453	06/19/20 13:48	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumen	6010B SEP it ID: DUO		1			40487	06/22/20 13:29	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP at ID: DUO		10	ŭ		40487	06/22/20 15:10		TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP at ID: DUO		5	ŭ		40487	06/22/20 16:37	KNC	TAL KNX

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Date Collected: 05/14/20 07:50

Date Received: 05/20/20 09:45

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis Instrumer	6010B SEP at ID: NOEQUIP		1			40572	06/25/20 11:53	DKW	TAL KNX
Total/NA	Analysis Instrumer	Moisture at ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

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Lab Sample ID: 140-19131-4

**Matrix: Solid** 

### **Lab Chronicle**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: 140-19131-4

Matrix: Solid

Percent Solids: 82.3

Job ID: 140-19131-1

Client Sample ID: BRGWA-5S(2) 32 FT BGS

Date Collected: 05/14/20 07:50 Date Received: 05/20/20 09:45

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B t ID: DUO		1			40512	06/23/20 13:16	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B t ID: DUO		10	_		40512	06/23/20 14:41	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B t ID: DUO		2	-		40512	06/23/20 16:21	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumen	6010B SEP t ID: DUO		4			40383	06/16/20 12:36	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumen	6010B SEP t ID: DUO		3			40383	06/16/20 14:31	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumen	6010B SEP t ID: DUO		1			40441	06/18/20 12:26	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumen	6010B SEP t ID: DUO		1			40441	06/18/20 14:20	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumen	6010B SEP t ID: DUO		5			40453	06/19/20 11:58	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP t ID: DUO		1	· ·		40453	06/19/20 13:53	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP t ID: DUO		1	3 3 3		40487	06/22/20 13:50		TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumen	6010B SEP t ID: DUO		10			40487	06/22/20 15:15	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumen	6010B SEP t ID: DUO		5	-		40487	06/22/20 16:42	KNC	TAL KNX

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### **Lab Chronicle**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-6S(2) 42 FT BGS Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05

**Matrix: Solid** 

Job ID: 140-19131-1

Date Received: 05/20/20 09:45

Prep Type Sum of Steps 1-7	Batch Type Analysis	Batch Method 6010B SEP	Run	Dil Factor	Initial Amount	Final Amount	Batch Number 40572	Prepared or Analyzed 06/25/20 11:53	Analyst DKW	Lab TAL KNX
Total/NA	Analysis	t ID: NOEQUIP  Moisture t ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Lab Sample ID: 140-19131-5

Date Collected: 05/14/20 12:05 Date Received: 05/20/20 09:45

**Matrix: Solid** Percent Solids: 69.7

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	-	Lab
Total/NA	Prep	Total		40	1.000 g	50 mL	39918	05/29/20 08:00		TAL KNX
Total/NA	Analysis Instrumer	6010B at ID: DUO		10			40512	06/23/20 14:46	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B at ID: DUO		2			40512	06/23/20 16:26	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumer	6010B SEP at ID: DUO		4			40383	06/16/20 12:57	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumer	6010B SEP at ID: DUO		3			40383	06/16/20 14:52	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumer	6010B SEP at ID: DUO		1			40441	06/18/20 12:46	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumer	6010B SEP at ID: DUO		1			40441	06/18/20 14:40	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumer	6010B SEP at ID: DUO		5			40453	06/19/20 12:19	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP at ID: DUO		1			40453	06/19/20 16:12	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumer	6010B SEP at ID: DUO		1			40487	06/22/20 13:56	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumer	6010B SEP at ID: DUO		10			40487	06/22/20 15:20	KNC	TAL KNX

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Date Received: 05/20/20 09:45

Date Collected: 05/14/20 12:15

Date Received: 05/20/20 09:45

Client Sample ID: BRGWA-6S(2) 42 FT BGS

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Date Collected: 05/14/20 12:05

Lab Sample ID: 140-19131-5

Matrix: Solid

Percent Solids: 69.7

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:47	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Lab Sample ID: 140-19131-6

Matrix: Solid

Prep Type Sum of Steps 1-7	Batch Type Analysis Instrument	Batch Method 6010B SEP t ID: NOEQUIP	Run	Pactor 1	Initial Amount	Final Amount	Batch Number 40572	Prepared or Analyzed 06/25/20 11:53	Analyst DKW	Lab TAL KNX
Total/NA	Analysis Instrumen	Moisture t ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: BRGWA-6S(2) 48 FT BGS Lab Sample ID: 140-19131-6

Date Collected: 05/14/20 12:15 Matrix: Solid Date Received: 05/20/20 09:45 Percent Solids: 69.9

Dil Batch Batch Initial Final Batch **Prepared Prep Type** Method Run **Factor Amount** Amount Number or Analyzed Type Analyst Lab Total/NA Total 39918 05/29/20 08:00 TAL KNX Prep 1.000 g 50 mL KNC 6010B Total/NA Analysis 1 40512 06/23/20 13:27 KNC TAL KNX Instrument ID: DUO Total/NA Total 1.000 g 39918 05/29/20 08:00 KNC TAL KNX Prep 50 mL 06/23/20 14:51 KNC Total/NA 6010B 40512 TAL KNX Analysis 10 Instrument ID: DUO Step 1 SEP Exchangeable 5.000 g 25 mL 40011 06/01/20 08:01 KNC TAL KNX Step 1 Prep 3010A 5 mL 50 mL 40023 06/02/20 08:00 KNC TAL KNX 6010B SEP Step 1 Analysis 4 40383 06/16/20 13:02 KNC TAL KNX Instrument ID: DUO SEP Step 2 Carbonate 5.000 g 25 mL 40024 06/02/20 08:00 KNC TAL KNX Step 2 Prep 3010A 5 mL 50 mL 40062 06/03/20 08:00 KNC TAL KNX 6010B SEP 3 40383 Step 2 Analysis 06/16/20 14:57 KNC TAL KNX Instrument ID: DUO Step 3 SEP Non-Crystalline 5.000 g 25 mL 40065 06/03/20 08:00 KNC TAL KNX 3010A 5 mL 50 mL 40096 06/08/20 08:00 KNC TAL KNX Step 3 Prep Step 3 Analysis 6010B SEP 1 40441 06/18/20 12:51 KNC TAL KNX Instrument ID: DUO Step 4 SEP Metal Hydroxide 5.000 g 25 mL 40100 06/08/20 08:00 KNC TAL KNX 40214 TAL KNX Step 4 Prep 3010A 5 mL 50 mL 06/10/20 08:00 KNC Step 4 Analysis 6010B SEP 40441 06/18/20 14:45 KNC TAL KNX Instrument ID: DUO 06/10/20 08:00 KNC Step 5 SEP Organic-Bound 5.000 g 75 mL 40215 TAL KNX Step 5 3010A 5 mL 50 mL 40276 Prep 06/12/20 08:00 KNC TAL KNX Step 5 Analysis 6010B SEP 5 40453 06/19/20 12:25 KNC TAL KNX Instrument ID: DUO

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWA-6S(2) 48 FT BGS

Date Collected: 05/14/20 12:15 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-6

Matrix: Solid

Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	<u> </u>	Acid/Sulfide			5.000 a	250 mL	40277	06/12/20 08:00		TAL KNX
Step 6	Analysis Instrumen	6010B SEP t ID: DUO		1	3		40453	06/19/20 16:17	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumen	6010B SEP t ID: DUO		1			40487	06/22/20 14:01	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumen	6010B SEP t ID: DUO		10			40487	06/22/20 15:25	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumen	6010B SEP t ID: DUO		5			40487	06/22/20 16:52	KNC	TAL KNX

Client Sample ID: PZ-52D 18 FT BGS

Date Collected: 05/14/20 14:40

Date Received: 05/20/20 09:45

**Lab Sample ID: 140-19131-7** 

Lab Sample ID: 140-19131-7

Matrix: Solid

**Matrix: Solid** 

Percent Solids: 67.3

Prep Type Sum of Steps 1-7	Batch Type Analysis	Batch Method 6010B SEP	Run	Factor	Initial Amount	Final Amount	Batch Number 40572	Prepared or Analyzed 06/25/20 11:53	Analyst DKW	Lab TAL KNX
Total/NA	Analysis	Moisture  t ID: NOEQUIP  Moisture  t ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: PZ-52D 18 FT BGS

Date Collected: 05/14/20 14:40

Date Received: 05/20/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 13:33	KNC	TAL KNX
	Instrumen	t ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 14:56	KNC	TAL KNX
	Instrumen	t ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			40512	06/23/20 16:37	KNC	TAL KNX
	Instrumen	t ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:07	KNC	TAL KNX
	Instrumen	t ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			40383	06/16/20 15:02	KNC	TAL KNX
	Instrumen	it ID: DUO								

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-52D 18 FT BGS

Date Collected: 05/14/20 14:40 Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-7

Matrix: Solid

Percent Solids: 67.3

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 12:57	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 14:50	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumer	6010B SEP nt ID: DUO		5			40453	06/19/20 12:30	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP nt ID: DUO		1			40453	06/19/20 16:22	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP at ID: DUO		2			40453	06/19/20 17:10	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumer	6010B SEP nt ID: DUO		1			40487	06/22/20 14:07	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumer	6010B SEP		10	-		40487	06/22/20 15:30	KNC	TAL KNX

Client Sample ID: PZ-52D 24-25 FT BGS

Date Collected: 05/14/20 14:50

Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-8

Matrix: Solid

Prep Type Sum of Steps 1-7	Batch Type Analysis Instrumen	Batch Method 6010B SEP t ID: NOEQUIP	Run	Dil Factor	Initial Amount	Final Amount	Batch Number 40572	Prepared or Analyzed 06/25/20 11:53	Analyst DKW	Lab TAL KNX
Total/NA	Analysis Instrumen	Moisture t ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: PZ-52D 24-25 FT BGS

Date Collected: 05/14/20 14:50

Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-8
Matrix: Solid
Percent Solids: 76.8

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumen	6010B et ID: DUO		1			40512	06/23/20 13:38	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:17	KNC	TAL KNX
	Instrumen	t ID: DUO								

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-52D 24-25 FT BGS

Date Collected: 05/14/20 14:50 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-8

Matrix: Solid

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total	Kuii	-actor	1.000 g	50 mL	39918	05/29/20 08:00		TAL KNX
Total/NA	Analysis	6010B nt ID: DUO		2	1.000 g	30 IIIL	40512	06/23/20 16:58		TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumer	6010B SEP nt ID: DUO		4			40383	06/16/20 13:12	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumer	6010B SEP nt ID: DUO		3			40383	06/16/20 15:08	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 13:02	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 14:55	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumer	6010B SEP nt ID: DUO		5			40453	06/19/20 12:35	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP nt ID: DUO		1	-		40453	06/19/20 16:27	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumer	6010B SEP nt ID: DUO		1	-		40487	06/22/20 14:12	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP nt ID: DUO		10	ŭ		40487	06/22/20 15:50	KNC	TAL KNX

Client Sample ID: BRGWC-50(2) 59 FT BGS

Date Collected: 05/15/20 09:00 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-9 Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis Instrument	6010B SEP ID: NOEQUIP		1			40572	06/25/20 11:53	DKW	TAL KNX
Total/NA	Analysis Instrument	Moisture ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

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### **Lab Chronicle**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: 140-19131-9

Matrix: Solid

Percent Solids: 87.3

Job ID: 140-19131-1

Client Sample ID: BRGWC-50(2) 59 FT BGS

Date Collected: 05/15/20 09:00 Date Received: 05/20/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B at ID: DUO		1			40512	06/23/20 13:44	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		10			40512	06/23/20 15:22	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		5			40512	06/23/20 17:03	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumer	6010B SEP nt ID: DUO		4			40383	06/16/20 13:18	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumer	6010B SEP nt ID: DUO		3			40383	06/16/20 15:13	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 13:07	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 15:00	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumer	6010B SEP nt ID: DUO		5			40453	06/19/20 12:41	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP nt ID: DUO		1			40453	06/19/20 16:32	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP nt ID: DUO		5			40453	06/19/20 17:15	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrumer	6010B SEP at ID: DUO		1	-		40487	06/22/20 14:18	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP at ID: DUO		10	-		40487	06/22/20 15:55		TAL KNX

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Lab Sample ID: 140-19131-10 Date Collected: 05/15/20 09:20

**Matrix: Solid** 

Date Received: 05/20/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis Instrument	6010B SEP ID: NOEQUIP		1			40572	06/25/20 11:53	DKW	TAL KNX
Total/NA	Analysis Instrument	Moisture ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS Lab Sample ID: 140-19131-10

Date Collected: 05/15/20 09:20 **Matrix: Solid** Date Received: 05/20/20 09:45 Percent Solids: 99.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B at ID: DUO		10			40512	06/23/20 15:27	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		2			40512	06/23/20 17:08	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumer	6010B SEP at ID: DUO		4			40383	06/16/20 13:23	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumer	6010B SEP nt ID: DUO		3			40383	06/16/20 15:18	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 13:12	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 15:05	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrumer	6010B SEP nt ID: DUO		5			40453	06/19/20 12:46	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP nt ID: DUO		1	-		40453	06/19/20 16:38	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrumer	6010B SEP nt ID: DUO		5	-		40453	06/19/20 17:21	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1	ŭ		40487	06/22/20 14:23	KNC	TAL KNX

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6/25/2020

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: 140-19131-10

**Matrix: Solid** 

Percent Solids: 99.8

Job ID: 140-19131-1

## Client Sample ID: BRGWC-50(2) 63-63.5 FT BGS

Batch

Date Collected: 05/15/20 09:20 Date Received: 05/20/20 09:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 16:00	KNC	TAL KNX
	Instrumer	it ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			40487	06/22/20 16:57	KNC	TAL KNX
	Instrumer	it ID: DUO								

Client Sample ID: PZ-53D 30 FT BGS

Batch

Date Collected: 05/16/20 16:15 Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-11 **Matrix: Solid** 

Batch Prepared Number or Analyzed Analyst Lab 06/25/20 11:53 DKW TAL KNX

Method **Prep Type** Amount **Amount** Type Run **Factor** Sum of Steps 1-7 Analysis 6010B SEP 40572 Instrument ID: NOEQUIP Total/NA Analysis Moisture 40042 06/02/20 08:02 BKD TAL KNX Instrument ID: NOEQUIP

Initial

Final

Dil

Client Sample ID: PZ-53D 30 FT BGS

Lab Sample ID: 140-19131-11 Date Collected: 05/16/20 16:15 **Matrix: Solid** Date Received: 05/20/20 09:45 Percent Solids: 73.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		1	-		40512	06/23/20 13:55	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		10			40512	06/23/20 15:32	KNC	TAL KNX
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis Instrumer	6010B nt ID: DUO		2	-		40512	06/23/20 17:14	KNC	TAL KNX
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis Instrumer	6010B SEP nt ID: DUO		4			40383	06/16/20 13:28	KNC	TAL KNX
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis Instrumer	6010B SEP nt ID: DUO		3			40383	06/16/20 15:24	KNC	TAL KNX
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrumer	6010B SEP nt ID: DUO		1			40441	06/18/20 13:18	KNC	TAL KNX

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-53D 30 FT BGS

Date Collected: 05/16/20 16:15 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-11

**Matrix: Solid** 

Percent Solids: 73.6

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 15:10	KNC	TAL KNX
	Instrumer	it ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 12:51	KNC	TAL KNX
	Instrumer	it ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 16:43	KNC	TAL KNX
	Instrumer	it ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 14:29	KNC	TAL KNX
	Instrumer	t ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			40487	06/22/20 16:06	KNC	TAL KNX
	Instrumer	it ID: DUO								

Client Sample ID: PZ-53D 36 FT BGS

Date Collected: 05/16/20 16:25 Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-12

**Matrix: Solid** 

Prep Type Sum of Steps 1-7	Batch Type Analysis Instrumen	Batch Method 6010B SEP t ID: NOEQUIP	Run	Factor 1	Initial Amount	Final Amount	Batch Number 40572	Prepared or Analyzed 06/25/20 11:53	Analyst DKW	Lab TAL KNX
Total/NA	Analysis Instrumen	Moisture t ID: NOEQUIP		1			40042	06/02/20 08:02	BKD	TAL KNX

Client Sample ID: PZ-53D 36 FT BGS

Date Collected: 05/16/20 16:25 Date Received: 05/20/20 09:45

Lab Sample ID: 140-19131-12 **Matrix: Solid** 

Percent Solids: 82.0

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 14:01	KNC	TAL KNX
	Instrumer	t ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			40512	06/23/20 15:37	KNC	TAL KNX
	Instrumer	it ID: DUO								
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			40512	06/23/20 17:19	KNC	TAL KNX
	Instrumer	it ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 13:33	KNC	TAL KNX
	Instrumer	t ID: DUO								

Eurofins TestAmerica, Knoxville

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Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: PZ-53D 36 FT BGS

Date Collected: 05/16/20 16:25 Date Received: 05/20/20 09:45 Lab Sample ID: 140-19131-12

**Matrix: Solid** 

Percent Solids: 82.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate	Kun	ractor		25 mL	40024	06/02/20 08:00	•	TAL KNX
•	Prep	3010A			5.000 g 5 mL	25 IIIL 50 mL	40024	06/03/20 08:00		TAL KNX
Step 2 Step 2	Analysis	6010B SEP		3	3 IIIL	50 IIIL	40062	06/03/20 08:00		TAL KNX
Step 2	Instrument			3			40363	00/10/20 15.29	KINC	TAL KINA
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis Instrument	6010B SEP ID: DUO		1			40441	06/18/20 13:23	KNC	TAL KNX
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis Instrument	6010B SEP ID: DUO		1			40441	06/18/20 15:15	KNC	TAL KNX
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis Instrument	6010B SEP ID: DUO		5			40453	06/19/20 12:57	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrument	6010B SEP ID: DUO		1			40453	06/19/20 16:49	KNC	TAL KNX
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis Instrument	6010B SEP ID: DUO		2			40453	06/19/20 17:26	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrument	6010B SEP ID: DUO		1			40487	06/22/20 14:34	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrument	6010B SEP ID: DUO		10			40487	06/22/20 16:11	KNC	TAL KNX
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis Instrument	6010B SEP ID: DUO		5			40487	06/22/20 17:02	KNC	TAL KNX

**Client Sample ID: Method Blank** 

Date Collected: N/A Date Received: N/A

Lab Sample ID: MB 140-39918/15-A

**Matrix: Solid** 

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	39918	05/29/20 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			40512	06/23/20 12:12	KNC	TAL KNX
	Instrumer	nt ID: DUO								

10

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40011/15-B ^4 Date Collected: N/A **Matrix: Solid** 

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			40383	06/16/20 11:55	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40024/15-B ^3 Date Collected: N/A Matrix: Solid

Date Received: N/A

Batch Batch Dil Initial Final **Batch** Prepared Method Number Analyst **Prep Type** Type **Factor Amount Amount** or Analyzed Run Lab Step 2 SEP Carbonate 40024 06/02/20 08:00 KNC TAL KNX 5.000 g 25 mL Step 2 Prep 3010A 5 mL 50 mL 40062 06/03/20 08:00 KNC TAL KNX 3 40383 Step 2 Analysis 6010B SEP 06/16/20 13:48 KNC TAL KNX Instrument ID: DUO

**Client Sample ID: Method Blank** 

Lab Sample ID: MB 140-40065/15-B Date Collected: N/A

**Matrix: Solid** 

Date Received: N/A

Batch Batch Dil Initial Final Batch Prepared Factor **Prep Type** Type Method Run **Amount** Amount Number or Analyzed Analyst Lab SEP 40065 Step 3 Non-Crystalline 5.000 g 25 mL 06/03/20 08:00 KNC TAL KNX 40096 Step 3 Prep 3010A 5 mL 50 mL 06/08/20 08:00 KNC TAL KNX Step 3 Analysis 6010B SEP 1 40441 06/18/20 11:44 KNC TAL KNX Instrument ID: DUO

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40100/15-B

Date Collected: N/A

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 13:39	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Client Sample ID: Method Blank

Lab Sample ID: MB 140-40215/15-B ^5 Date Collected: N/A Matrix: Solid

Date Received: N/A

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:16	KNC	TAL KNX
	Instrumer	nt ID: DUO								

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**Matrix: Solid** 

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: MB 140-40277/15-A

Client Sample ID: Method Blank

Date Collected: N/A

Lab Sample ID

**Matrix: Solid** 

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:12	KNC	TAL KNX
	Instrument	ID: DUO								

**Client Sample ID: Method Blank** 

Lab Sample ID: MB 140-40294/15-A

Date Collected: N/A
Date Received: N/A

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 12:47	KNC	TAL KNX
	Instrumen	it ID: DUO								

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 140-39918/16-A

Matrix: Solid

**Matrix: Solid** 

Date Collected: N/A Date Received: N/A

Batch Batch Dil Initial Final Batch Prepared Method Number **Prep Type** Type **Factor Amount** Amount or Analyzed Run Analyst Lab

Prep Total/NA Total 39918 05/29/20 08:00 KNC TAL KNX 1.000 g 50 mL Total/NA 06/23/20 12:17 KNC TAL KNX Analysis 6010B 40512 1 Instrument ID: DUO

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 140-40011/16-B ^5

Date Collected: N/A

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	40011	06/01/20 08:01	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	40023	06/02/20 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			40383	06/16/20 12:00	KNC	TAL KNX
	Instrumer	nt ID: DUO								

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 140-40024/16-B ^5

Matrix: Solid

Date Collected: N/A Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	40024	06/02/20 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	40062	06/03/20 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			40383	06/16/20 13:54	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Job ID: 140-19131-1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

**Client Sample ID: Lab Control Sample** Date Collected: N/A

Lab Sample ID: LCS 140-40065/16-B

**Matrix: Solid** 

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 11:49	KNC	TAL KNX
	Instrumer	nt ID: DUO								

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 140-40100/16-B

Matrix: Solid

Date Collected: N/A Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 13:44	KNC	TAL KNX
	Instrumer	t ID: DUO								

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 140-40215/16-B ^5

Matrix: Solid

Date Collected: N/A

Date Received: N/A

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound		-	5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:21	KNC	TAL KNX
	Instrumer	nt ID: DUO								

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 140-40277/16-A

**Matrix: Solid** 

Date Collected: N/A

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:17	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-40294/16-A

**Matrix: Solid** 

Date Collected: N/A Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 12:52	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Initial

Amount

1.000 g

2

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Lab Sample ID: LCSD 140-39918/17-A

05/29/20 08:00 KNC

06/23/20 12:22 KNC

Client Sample ID: Lab Control Sample Dup Date Collected: N/A

Batch

Type

Prep

Analysis

Matrix: Solid

Job ID: 140-19131-1

TAL KNX

TAL KNX

Date Received: N/A

**Prep Type** 

Total/NA

Total/NA

Final	Batch	Prepared			
Amount	Number	or Analyzed	Analyst	Lab	

39918

40512

50 mL

Instrument ID: DUO

Client Sample ID: Lab Control Sample Dup

Batch

Total

6010B

Method

Lab Sample ID: LCSD 140-40011/17-B ^5

Date Collected: N/A Matrix: Solid
Date Received: N/A

Dil

1

**Factor** 

Run

Batch Ratch Dil Initial Final Batch Prepared **Prep Type** Type Method Run Factor **Amount** Amount Number or Analyzed Analyst SEP 40011 Step 1 Exchangeable 5.000 g 25 mL 06/01/20 08:01 KNC TAL KNX Prep 3010A 5 mL 50 mL 40023 TAL KNX Step 1 06/02/20 08:00 KNC 6010B SEP Analysis 5 40383 06/16/20 12:05 KNC TAL KNX Step 1 Instrument ID: DUO

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40024/17-B ^5

Date Collected: N/A Date Received: N/A

Matrix: Solid

Batch Dil Initial Final Batch Batch Prepared **Prep Type** Type Method Run Factor **Amount** Amount Number or Analyzed **Analyst** Lab Step 2 SEP 25 mL Carbonate 5.000 g 40024 06/02/20 08:00 KNC TAL KNX Step 2 40062 Prep 3010A 5 mL 50 mL 06/03/20 08:00 KNC TAL KNX 6010B SEP Step 2 Analysis 5 40383 06/16/20 13:59 KNC TAL KNX Instrument ID: DUO

**Client Sample ID: Lab Control Sample Dup** 

Lab Sample ID: LCSD 140-40065/17-B
Matrix: Solid

Date Collected: N/A
Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	40065	06/03/20 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	40096	06/08/20 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			40441	06/18/20 11:54	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40100/17-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	40100	06/08/20 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	40214	06/10/20 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			40441	06/18/20 13:49	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Job ID: 140-19131-1

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Client Sample ID: Lab Control Sample Dup Date Collected: N/A

Lab Sample ID: LCSD 140-40215/17-B ^5

**Matrix: Solid** 

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	40215	06/10/20 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	40276	06/12/20 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			40453	06/19/20 11:27	KNC	TAL KNX
	Instrumer	nt ID: DUO								

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40277/17-A

**Date Collected: N/A** Date Received: N/A

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	40277	06/12/20 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			40453	06/19/20 13:22	KNC	TAL KNX
	Instrumen	t ID: DUO								

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-40294/17-A

Date Collected: N/A **Matrix: Solid** Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	40294	06/15/20 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			40487	06/22/20 12:57	KNC	TAL KNX
	Instrument	· ID· DI IO								

Client Sample ID: BRGWA-2S(2) 39 FT BGS

Date Collected: 05/13/20 14:30

Date Received: 05/20/20 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			40042	06/02/20 08:02	BKD	TAL KNX
	Instrumer	t ID: NOEQUIP								

#### **Laboratory References:**

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

Eurofins TestAmerica, Knoxville

Lab Sample ID: 140-19131-1 DU

**Matrix: Solid** 

### **Accreditation/Certification Summary**

Client: Golder Associates Inc.

Job ID: 140-19131-1

Project/Site: SCS Site, Plant Branch

Moisture

#### **Laboratory: Eurofins TestAmerica, Knoxville**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		ogram	Identification Number	Expiration Date
Oregon	NE	ELAP	TNI0189	01-02-21
The following analyte the agency does not o	•	ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
Analysis Method	Prep Method	Matrix	Analyte	
6010B	Total	Solid	Aluminum	
6010B	Total	Solid	Beryllium	
6010B	Total	Solid	Cadmium	
6010B	Total	Solid	Cobalt	
6010B	Total	Solid	Iron	
6010B	Total	Solid	Manganese	
6010B	Total	Solid	Selenium	
6010B SEP		Solid	Aluminum	
6010B SEP		Solid	Beryllium	
6010B SEP		Solid	Cadmium	
6010B SEP		Solid	Cobalt	
6010B SEP		Solid	Iron	
6010B SEP		Solid	Manganese	
6010B SEP		Solid	Selenium	
6010B SEP	3010A	Solid	Aluminum	
6010B SEP	3010A	Solid	Beryllium	
6010B SEP	3010A	Solid	Cadmium	
6010B SEP	3010A	Solid	Cobalt	
6010B SEP	3010A	Solid	Iron	
6010B SEP	3010A	Solid	Manganese	
6010B SEP	3010A	Solid	Selenium	
6010B SEP	Acid/Sulfide	Solid	Aluminum	
6010B SEP	Acid/Sulfide	Solid	Beryllium	
6010B SEP	Acid/Sulfide	Solid	Cadmium	
6010B SEP	Acid/Sulfide	Solid	Cobalt	
6010B SEP	Acid/Sulfide	Solid	Iron	
6010B SEP	Acid/Sulfide	Solid	Manganese	
6010B SEP	Acid/Sulfide	Solid	Selenium	
6010B SEP	Residual	Solid	Aluminum	
6010B SEP	Residual	Solid	Beryllium	
6010B SEP	Residual	Solid	Cadmium	
6010B SEP	Residual	Solid	Cobalt	
6010B SEP	Residual	Solid	Iron	
6010B SEP	Residual	Solid	Manganese	
6010B SEP	Residual	Solid	Selenium	

Eurofins TestAmerica, Knoxville

Percent Moisture

Solid

3

\_\_\_\_\_

9

11

12

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### **Method Summary**

Client: Golder Associates Inc. Project/Site: SCS Site, Plant Branch

Method **Method Description** Protocol Laboratory TAL KNX 6010B SEP Metals (ICP) - Total SW846 6010B SEP SEP Metals (ICP) SW846 TAL KNX TAL KNX Moisture Percent Moisture **EPA** 3010A Preparation, Total Metals SW846 TAL KNX Acid/Sulfide Sequential Extraction Procedure, Acid/Sulfide Fraction TAL-KNOX TAL KNX Carbonate Sequential Extraction Procedure, Carbonate Fraction TAL-KNOX TAL KNX Exchangeable Sequential Extraction Procedure, Exchangeable Fraction TAL-KNOX TAL KNX Sequential Extraction Procedure, Metal Hydroxide Fraction Metal Hydroxide TAL-KNOX TAL KNX Non-Crystalline Sequential Extraction Procedure, Non-crystalline Materials TAL-KNOX TAL KNX Organic-Bound Sequential Extraction Procedure, Organic Bound Fraction TAL-KNOX TAL KNX Residual Sequential Extraction Procedure, Residual Fraction TAL-KNOX TAL KNX Total Preparation, Total Material TAL-KNOX TAL KNX

#### **Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

#### **Laboratory References:**

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

Job ID: 140-19131-1

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Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

×

1 x 4 oz jar

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Preservation Used: 1= lce, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification

PZ-53D 36 ft bgs

PZ-53D 30 ft bgs

z z

z z

1 x 4 oz jar

16:15 16:25

5/16/2020

1 x 4 oz jar

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant	☐ Poison B	□ Unknown	☐ Return to Client ☐ Disposal by Lab	Lab Archive for	Months
Special Instructions/QC Requirements & Comments:					
Custody Seals Intact: D Yes D No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:	Therm ID No.:
Relinquished by: Shannon George	Company: Golder	5/18/20 20 1/300	Received by: Jude Waguespack	Company: Golder	Date/Time: 05/78/20 1800
Relinquished by: Waguespack	Company: Golder	09/25 65/1 9/720	Received by: FED EX	Company:	Date/Time: ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company.	Date/Time: 'S-28-31 O9:45
			01	Form No. C	Form No. CA-C-WI-002, Rev. 4.33, dated 5/4/2020

Page	71	of	72

FAX PSEZY GHAD & 200 PB

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12:05 12:15 14:40 14:50

5/14/2020

BRGWA-6S(2) 42 ft bgs BRGWA-6S(2) 48 ft bgs

5/14/2020 5/14/2020 5/14/2020 5/15/2020 5/15/2020 5/16/2020

1 x 4 oz jar 1 x 4 oz jar 1 x 4 oz jar 1 x 4 oz jar

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1 x 4 oz jar 1 x 4 oz jar

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07:40 07:50

1 x 4 oz jar N N 1 x 4 oz jar N N 1 x 4 oz jar N N

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14:30 14:40

5/13/2020

BRGWA-2S(2) 39 ft bgs BRGWA-2S(2) 43 ft bgs BRGWA-5S(2) 38 ft bgs BRGWA-5S(2) 32 ft bgs

9 0

Sample Identification

5/13/2020 5/14/2020 5/14/2020

# of Cont.

Matrix

Type (C=Comp, G=Grab)

Sample

Sample Date

Time

×

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> 00:60 09:20

> > 3RGWC-50(2) 63-63.5 ft bgs

BRGWC-50(2) 59 ft bgs

PZ-52D 24-25 ft bgs

PZ-52D 18 ft bgs

z z z z

RECEMBLY AT N. D.S.

CUSTINA SEALC

MA Staltal

Sample Specific Notes:

Environment Testing

& eurofins

COC No: 140-8035-2549

or Lab Use Only

Nalk-in Client:

ab Sampling:

Job / SDG No.:

6010B\_SEP\_ - SEP Metals

Perform MS / MSD (Y / N)

Filtered Sample (Y / N )

FALS Project #:

Carrier: FedEx

Date:

Site Contact: Shannon George Lab Contact: Ryan Henry

C: WORKING DAYS

CALENDAR DAYS

5170 Peachtree Road, Building 100, Suite 300

Atlanta, GA 30341

770-496-1893

Golder Associates Inc.

Client Contact

TAT if different from Below

2 weeks 1 week 2 days 1 day

0 0 0 0

PO# 161010255418 /14005864

Project Name: PLANT BRANCH

200

Analysis Turnaround Time

Project Manager: Brian Steele

Email: bsteele@golder.com

Tel/Fax: 470-512-3923

140-19131 Chain of Custody

Chain of Custod

Eurofins TestAmerica, Knoxville

5815 Middlebrook Pike

Knoxville, TN 37921-5947 phone 865.291.3000 fax 865.584.4315

Page 1 of 1

Review Items	Yes No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	\		☐ Containers, Broken	9
2. Were ambient air containers received intact?			☐ Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	\		O Yes	
4. Is the cooler temperature within limits? (> freezing temp of water to 6 °C VOST 10°C)			☐ Cooler Out of Temp, Client	
Thermometer ID: 54.8			Cooler Out of Temp, Same Day	
Correction factor: <b>6.</b> ()  S. Were all of the sample containers received intact?	\		Receipt	
6. Were samples received in appropriate containers?			☐ Containers, Improper; Client Contacted: Proceed/Cancel	
7. Do sample container labels match COC?			□ COC & Samples Do Not Match	
(IDs, Dates, Times)			☐ COC Incorrect/Incomplete☐ COC Not Received	
8. Were all of the samples listed on the COC received?				
	` .		☐ Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	\		COC; No Date/Time; Client	
			Contacted	Labeling Verified by: Date:
10. Was the sampler identified on the COC?	\		Sampler Not Listed on COC	;
11. Is the client and project name/# identified?	/		☐ COC Incorrect/Incomplete	pH test strip lot number:
12. Are tests/parameters listed for each sample?	//		☐ COC No tests on COC	
13. Is the matrix of the samples noted?	//		☐ COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)			☐ COC Incorrect/Incomplete	Box 16A: pH Box 18A: Residual Preservation Chlorine
15. Were samples received within holding time?			☐ Holding Time - Receipt	
16. Were samples received with correct chemical			☐ pH Adjusted, pH Included	Lot Number:
preservative (excluding Encore)?		<u> </u>	(See box 16A)	Exp Date:
			☐ Incorrect Preservative	Analyst:
17. Were VOA samples received without headspace?		\	☐ Headspace (VOA only)	Late:
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			☐ Residual Chlorine	Time:
19. For 1613B water samples is pH<9?		\ <u></u>	☐ If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	-		☐ Project missing info	
Project #: 1400XVy PM Instructions:				
Sample Receiving Associate:		_ Date	Date: Sいかいか	QA026R32.doc, 062719

Loc: 140 19131

Log In Number:

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



a member of The GEL Group INC



gel.com

February 10, 2023

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

Re: Branch CCR Groundwater Compliance APE Work Orders: 608815,608614,608422 and 608418

Dear Joju Abraham:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 25, 2023, January 26, 2023 and January 27, 2023. 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: GPC82177-0006

Enclosures



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## Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608614 GEL Work Order: 608614

#### The Qualifiers in this report are defined as follows:

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

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

Page 2 of 130 SDG: 608815

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# Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608422 GEL Work Order: 608422

#### The Qualifiers in this report are defined as follows:

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

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

Page 3 of 130 SDG: 608815

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## Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608815 GEL Work Order: 608815

#### The Qualifiers in this report are defined as follows:

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

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

Page 4 of 130 SDG: 608815

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## Certificate of Analysis Report for

GPCC001 Georgia Power Company Client SDG: 608418 GEL Work Order: 608418

#### The Qualifiers in this report are defined as follows:

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

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

Page 5 of 130 SDG: 608815

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-04

Sample ID: 608422001

Matrix: WG

Collect Date: 24-JAN-23 12:00 Receive Date: 25-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liqu	iid "As Recei	ived"									
Fluoride		0.204	0.0330	0.100	mg/L		1	HXC1	01/25/23	1827 2374002	1
Chloride		28.7	2.68	8.00	mg/L		40	HXC1	01/26/23	0210 2374002	2
Sulfate		375	5.32	16.0	mg/L		40				
Nitrate-N	U	ND	0.0660	0.200	mg/L		2	HXC1	01/26/23	0241 2374002	3
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu	ary, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/27/23	1057 2374419	4
Metals Analysis-ICP-M	S										
SW846 3005A/6020B ".		"									
Calcium		116	0.800	2.00	mg/L	1.00	10	SKJ	02/02/23	1226 2374301	5
Manganese		2.63	0.0100	0.0500	mg/L	1.00					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00		SKJ	02/01/23	1941 2374301	6
Barium		0.0375	0.000670	0.00400	mg/L	1.00					
Cadmium	J	0.000505	0.000300	0.00100	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.0577	0.000300	0.00100	mg/L	1.00	1				
Iron	U	ND	0.0330	0.100	mg/L	1.00	1				
Potassium		14.3	0.0800	0.300	mg/L	1.00	1				
Selenium	J	0.00468	0.00150	0.00500	mg/L	1.00	1				
Sodium		36.5	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00		SKJ	02/03/23	1550 2374301	7
Beryllium		0.00236	0.000200	0.000500	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Lithium		0.0120	0.00300	0.0100	mg/L	1.00					
Magnesium		15.2	0.0100	0.0300	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00			00/00/00	1104 0071001	0
Boron		1.17	0.0520	0.150	mg/L	1.00	10	SKJ	02/03/23	1436 2374301	8
Solids Analysis											
SM2540C Dissolved So	olids "As Rec	eived"									
Total Dissolved Solids		611	2.38	10.0	mg/L			CH6	01/31/23	1235 2376170	9
Spectrometric Analysis											
SM 4500-S(2-) D Sulfid	de "As Recei	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	JW2	01/30/23	1543 2374521	10

Page 6 of 130 SDG: 608815

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## Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-04 Project: GPCC00101 Sample ID: 608422001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Analy	ysis									
SM 2320B Total Alkal	inity "As Rec	eived"								
Alkalinity, Total as CaCO3	J	3.40	1.45	4.00	mg/L		MS3	01/28/23	1258 2375518	11
Bicarbonate alkalinity (CaCo	O3) J	3.40	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO	3) U	ND	1.45	4.00	mg/L					
The following Prep Me	ethods were po	erformed:								
Method	Description	n		Analyst	Date		Time ]	Prep Batch	ı	
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23		0815	2374300		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23		1222	2374418		

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 4500-S (2-) D	
11	SM 2320B	

#### **Notes:**

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Page 7 of 130 SDG: 608815

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

### Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-07

Sample ID: 608422002

Matrix: WQ

Collect Date: 24-JAN-23 14:00 Receive Date: 25-JAN-23 Collector: Client

Parameter **Oualifier** DL RL Units PF DF Analyst Date Time Batch Method Result Ion Chromatography EPA 300.0 Anions Liquid "As Received" Chloride ND 0.0670 0.200 mg/L HXC1 01/25/23 1858 2374002 1 ND Fluoride U 0.0330 0.100 mg/L 1 Nitrate-N U ND 0.0330 0.100 mg/L 1 Sulfate U ND 0.133 0.400mg/L1 Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury 0.0000670 0.000200 mg/L 1.00 1 JP2 01/27/23 1059 2374419 2 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received" Antimony ND 0.00100 0.00300 mg/L 1.00 1 SKJ 02/01/23 1944 2374301 3 Barium U ND 0.0006700.00400mg/L 1.00 1 U 0.000300 0.00100 Cadmium ND mg/L 1.00 1 Calcium U ND 0.0800 0.200 mg/L1.00 1 Chromium U ND 0.00300 0.0100 mg/L1.00 1 mg/L Cobalt U ND 0.000300 0.001001.00 1 U 0.100 1.00 Iron ND 0.0330 mg/L U ND 0.00100 0.00500mg/L 1.00 1 Manganese U Potassium ND 0.08000.300 mg/L 1.00 1 U ND 0.00150 0.00500 1.00 Selenium mg/L 1 U 0.250 ND mg/L1.00 1 Sodium 0.0800 mg/L Thallium U ND 0.000600 0.002001.00 1 0.00500 02/03/23 1456 2374301 Arsenic U ND 0.00200 mg/L 1.00 1 SKJ U ND 0.000200 0.000500 1.00 Beryllium mg/L 1 Boron U ND 0.00520 0.0150 mg/L1.00 1 U ND 0.002001.00 Lead 0.000500 mg/L 1 U 1.00 Lithium ND 0.00300 0.0100 mg/L1 Magnesium U ND 0.0100 0.0300 1.00 1 mg/L 0.00100 Molybdenum ND 0.000200mg/L 1.00 Solids Analysis SM2540C Dissolved Solids "As Received" Total Dissolved Solids ND 2.38 10.0 CH6 01/31/23 1235 2376170 5 mg/L Spectrometric Analysis SM 4500-S(2-) D Sulfide "As Received" 0.0330 Total Sulfide ND 0.100 mg/L JW2 01/30/23 1543 2374521

Page 8 of 130 SDG: 608815

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## Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-07 Project: GPCC00101 Sample ID: 608422002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Anal	ysis									
SM 2320B Total Alkal	linity "As Rec	eived"								
Alkalinity, Total as CaCO3	J	2.20	1.45	4.00	mg/L		MS3	01/28/23	1301 2375518	7
Bicarbonate alkalinity (CaC	O3) J	2.20	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO	3) U	ND	1.45	4.00	mg/L					
The following Prep Me	ethods were pe	erformed:								
Method	Description	n		Analyst	Date		Time F	rep Batch		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23		1222 2	374418		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23		0815 2	374300		
The following Analyti	ical Methods v	were performed:								
Method	Description				F	Analy	st Commen	its		

Method	Description
1	EPA 300.0
2	SW846 7470A
3	SW846 3005A/6020B
4	SW846 3005A/6020B
5	SM 2540C
6	SM 4500-S (2-) D
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

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Sample ID: 608815001

Matrix: WG

Collect Date: 26-JAN-23 11:20 Receive Date: 27-JAN-23 Collector: Client

Field Data   Client collected Field pH "As Received"   S56	Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Perrous Iron "As Reciver   Field Perrous Iron "As Reciver   Field Perrous Iron   Role   Role	Field Data											
Field Perrous Iron "As Reciver   Field Perrous Iron "As Reciver   Field Perrous Iron   Role   Role	Client collected Field	d pH "As Recei	ved"									
Field Ferrous Iron		1				SU			EOS1	01/26/23	1120 2375357	1
Field Ferrous Iron	GEL Field Ferrous Ir	on "As Receive	ed"									
Chloride						mg/L			EOS1	01/26/23	1120 2375357	2
Page	Ion Chromatography					Ü						
Chloride			ived"									
Fluoride		14010 11511000		0.0670	0.200	mg/L		1	JLD1	01/27/23	1640 2375453	3
Nitrate-N		U				_		1				
Sulfate   75.3   1.33   4.00   mg/L   1.00	Nitrate-N	J	0.0655	0.0330	0.100	-		1				
Mercury	Sulfate			1.33	4.00	_		10	JLD1	01/27/23	2238 2375453	4
Mercury   ND   ND   N.0000670   N.000200   mg/L   ND   N.00131/23   N.00   N.00131/23   N.00   N.00131/23   N.00   N.00131/23   N.001	Mercury Analysis-CV	VAA										
Mercury   ND   ND   ND   ND   ND   ND   ND   N	7470 Cold Vapor Me	ercury, Liquid ".	As Received"									
Metals Analysis-ICP-MS           SW846 3005A/6020B "As Received"           Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         01/31/23         2345         2375511         6           Arsenic         J         0.00388         0.000200         0.00400         mg/L         1.00         1         SKJ         01/31/23         2345         2375511         6           Cadmium         0.0525         0.000670         0.00400         mg/L         1.00         1         -	_			0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1050 2375754	5
Namion	•					J						
Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         01/31/23         2345         2375511         6           Arsenic         J         0.00388         0.00200         0.00500         mg/L         1.00         1         L         C         2345         2375511         6           Barium         0.0525         0.00670         0.00400         mg/L         1.00         1         L	•		"									
Arsenic         J         0.00388         0.00200         0.00500         mg/L         1.00         1           Barium         0.0525         0.000670         0.00400         mg/L         1.00         1           Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         16.8         0.0800         0.200         mg/L         1.00         1           Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00330         0.0100         mg/L         1.00         1           Iron         U         ND         0.00330         0.100         mg/L         1.00         1           Lead         U         ND         0.00330         0.100         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00800         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.0500         mg/L				0.00100	0.00300	mg/L	1.00	1	SKJ	01/31/23	2345 2375511	6
Barium         0.0525         0.000670         0.00400         mg/L         1.00         1           Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         16.8         0.0800         0.200         mg/L         1.00         1           Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00300         0.0100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Lead         U         ND         0.00330         0.100         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         mg/L         1.00         1           Sodium         I         I         ND         0.00800         0.0250 <td< td=""><td>•</td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td>0 - 7 - 7 - 7</td><td></td><td></td></td<>	•					_				0 - 7 - 7 - 7		
Cadmium         U         ND         0.000300         0.00100         mg/L         1.00         1           Calcium         16.8         0.0800         0.200         mg/L         1.00         1           Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00300         0.0100         mg/L         1.00         1           Iron         U         ND         0.00330         0.100         mg/L         1.00         1           Lead         U         ND         0.00350         0.00200         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         J         ND         0.00800         0.250         mg/L         1.00         1           Beryllium         J         0.00422         0.000500						_		1				
Chromium         0.0153         0.00300         0.0100         mg/L         1.00         1           Cobalt         U         ND         0.00300         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           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7	Cadmium	U	ND	0.000300	0.00100		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           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1	Calcium		16.8	0.0800	0.200	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           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.00100	Chromium		0.0153	0.00300	0.0100	mg/L	1.00	1				
Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00	Cobalt	U		0.000300	0.00100		1.00	1				
Manganese         J         0.00207         0.00100         0.00500         mg/L         1.00         1           Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	Iron	U				mg/L		1				
Potassium         4.41         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1         Image: Imag	Lead	U				_		1				
Selenium         J         0.00215         0.00150         0.00500         mg/L         1.00         1           Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1         Image: Control of the	_	J				-						
Sodium         11.7         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.00500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1         Image in the control of the c												
Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Beryllium         J         0.000422         0.000200         0.000500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1		J										
Beryllium         J         0.000422         0.000200         0.000500         mg/L         1.00         1         SKJ         02/01/23         1324         2375511         7           Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1						_						
Boron         J         0.0104         0.00520         0.0150         mg/L         1.00         1           Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1						-			CITI	02/01/22	1004 0075511	-
Lithium         U         ND         0.00300         0.0100         mg/L         1.00         1           Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	•					_			SKJ	02/01/23	1324 23/5511	1
Magnesium         9.68         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1						_						
Molybdenum U ND 0.000200 0.00100 mg/L 1.00 1		U										
	-	TT										
	Solids Analysis	U	ND	0.000200	0.00100	mg/L	1.00	1				

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Project: GPCC00101
Sample ID: 608815001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	Analy	yst Date	Time Batch	Method
Solids Analysis											
SM2540C Dissolved S	Solids "As Rec	ceived"									
Total Dissolved Solids		148	2.38	10.0	mg/L		(	CH6	02/02/23	1428 2377347	8
Spectrometric Analysi	is										
SM 4500-S(2-) D Sulf	fide "As Recei	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 1	HH2	02/02/23	1146 2376122	9
Titration and Ion Anal	lysis										
SM 2320B Total Alka	linity "As Rec	eived"									
Alkalinity, Total as CaCO3		20.6	1.45	4.00	mg/L		]	EK1	02/06/23	1521 2378067	10
Bicarbonate alkalinity (CaC	CO3)	20.6	1.45	4.00	mg/L						
Carbonate alkalinity (CaCO	03) U	ND	1.45	4.00	mg/L						
The following Prep M	lethods were p	erformed:									
Method	Descriptio	n		Analyst	Date		Time	Pı	rep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/30/23		0830	23	75510		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	01/30/23		1128	23	75753		
The following Analyt	rical Mathode v	ware performed:									

The following Analytical Methods were performed:

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

**Notes:** 

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-13S Project: GPCC00101
Sample ID: 608815001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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## Certificate of Analysis

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-70I Sample ID: 608815002

Matrix: WG

Collect Date: 26-JAN-23 10:22 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pH	I "As Receiv	ved"									
Field pH		5.60			SU			EOS1	01/26/23	1022 237535	7 1
GEL Field Ferrous Iron '	"As Receive	ed"									
Field Ferrous Iron		0			mg/L			EOS1	01/26/23	1022 237535	7 2
Ion Chromatography					8						
EPA 300.0 Anions Liqui	id "As Recei	ived"									
Fluoride	U	ND	0.0660	0.200	mg/L		2	JLD1	01/28/23	0037 237545	3 3
Chloride	C	5.37	0.0670	0.200	mg/L		1	JLD1	01/27/23	1709 237545	
Nitrate-N		0.275	0.0330	0.100	mg/L		1				
Sulfate		147	2.66	8.00	mg/L		20	JLD1	01/28/23	0007 237545	3 5
Mercury Analysis-CVA	A										
7470 Cold Vapor Mercu		As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1052 237575	4 6
Metals Analysis-ICP-MS	S				Ü						
SW846 3005A/6020B "A		"									
Beryllium	J	0.000217	0.000200	0.000500	mg/L	1.00	1	SKJ	02/01/23	1340 237551	1 7
Lithium	J	0.00381	0.00300	0.0100	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Magnesium		11.9	0.0500	0.150	mg/L	1.00	5	SKJ	02/01/23	1349 237551	1 8
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0010 237551	1 9
Arsenic	J	0.00366	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0250	0.000670	0.00400	mg/L	1.00	1				
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		33.4	0.0800	0.200	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt	J	0.000682	0.000300	0.00100	mg/L	1.00	1				
Iron	J	0.0364	0.0330	0.100	mg/L	1.00	1				
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1				
Manganese		0.271	0.00100	0.00500	mg/L	1.00	1				
Potassium		4.27	0.0800	0.300	mg/L	1.00	1				
Selenium		0.00921	0.00150	0.00500	mg/L	1.00	1				
Sodium	**	23.0	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1	CIZI	02/02/22	0007 007551	1 10
Boron		1.04	0.104	0.300	mg/L	1.00	20	SKJ	02/02/23	0827 237551	1 10
Solids Analysis											

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-70I Project: GPCC00101 Sample ID: 608815002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		272	2.38	10.0	mg/L		CH6	02/02/23	1428 2377347	11
Spectrometric Analys	sis									
SM 4500-S(2-) D Sul	lfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 HH2	02/02/23	1146 2376122	12
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	14.4	1.45	4.00	mg/L		EK1	02/06/23	1524 2378067	13
Bicarbonate alkalinity (Ca	CO3)	14.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaCo	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were p	erformed:								
Method	Description	n		Analyst	Date	Τ	ime F	rep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/30/23	0	830 2	375510		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/30/23	1	128 2	375753		
TT1 6 11 : A 1	13 6 .1 .1									

**Analyst Comments** 

The following Analytical Methods were performed:

Method	Description
1	SM 4500-H B/SW846 9040C, SM 2550B
2	GEL Field Method
3	EPA 300.0
4	EPA 300.0
5	EPA 300.0
6	SW846 7470A
7	SW846 3005A/6020B
8	SW846 3005A/6020B
9	SW846 3005A/6020B
10	SW846 3005A/6020B
11	SM 2540C
12	SM 4500-S (2-) D
13	SM 2320B

**Notes:** 

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-70I Project: GPCC00101
Sample ID: 608815002 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-05

Sample ID: 608815003

Matrix: WG

Collect Date: 26-JAN-23 12:00 Receive Date: 27-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	yst Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Lic	quid "As Recei	ived"									
Sulfate	•	74.9	1.33	4.00	mg/L		10	JLD1	01/28/23	0107 2375453	1
Chloride		3.37	0.0670	0.200	mg/L		1	JLD1	01/27/23	1739 2375453	2
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Nitrate-N	J	0.0646	0.0330	0.100	mg/L		1				
Mercury Analysis-CV	AA										
7470 Cold Vapor Mer	cury, Liquid ".	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1057 2375754	3
Metals Analysis-ICP-l	MS										
SW846 3005A/6020B		"									
Boron	J	0.00883	0.00520	0.0150	mg/L	1.00	1	SKJ	02/02/23	0829 2375511	4
Beryllium	J	0.000415	0.000200	0.000500	mg/L	1.00	1	SKJ	02/01/23	1343 2375511	5
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Magnesium		9.54	0.0100	0.0300	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0014 2375511	6
Arsenic	J	0.00470	0.00200	0.00500	mg/L	1.00					
Barium		0.0524	0.000670	0.00400	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00					
Calcium		16.7	0.0800	0.200	mg/L	1.00					
Chromium		0.0152	0.00300	0.0100	mg/L	1.00					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Manganese	J	0.00195	0.00100	0.00500	mg/L	1.00					
Potassium		4.50	0.0800	0.300	mg/L	1.00					
Selenium	J	0.00190	0.00150	0.00500	mg/L	1.00					
Sodium Thallium		12.1 ND	0.0800	0.250	mg/L	1.00 1.00					
	U	ND	0.000600	0.00200	mg/L	1.00	1				
Solids Analysis											
SM2540C Dissolved S	Solids "As Rec										
Total Dissolved Solids		145	2.38	10.0	mg/L			CH6	02/02/23	1428 2377347	7
Spectrometric Analysi											
SM 4500-S(2-) D Sulf	fide "As Recei										
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	HH2	02/02/23	1146 2376122	8

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## Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FD-05 Project: GPCC00101 Sample ID: 608815003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	KL	Units	PF	DF Anal	yst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	20.4	1.45	4.00	mg/L		EK1	02/06/23	1525 2378067	9
Bicarbonate alkalinity (Ca	CO3)	20.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were pe	erformed:								
Method	Description	n		Analyst	Date	Т	Γime P	rep Batch		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/30/23	1	128 2:	375753		
SW846 3005A	ICP-MS 3005	SA PREP		LG2	01/30/23	0	0830 23	375510		
The following Analy	ytical Methods v	vere performed:								

The following	Analy	tical i	Methods	were	nerformed:
The following	Anary	ucai.	wichious	WCIC	periornica.

The following A	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 4500-S (2-) D										
9	SM 2320B										

#### **Notes:**

Column headers are defined as follows:

Lc/LC: Critical Level DF: Dilution Factor 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

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-10

Sample ID: 608815004

Matrix: WQ

Collect Date: 26-JAN-23 11:00
Receive Date: 27-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liq	uid "As Recei	ved"									
Chloride	U	ND	0.0670	0.200	mg/L		1	JLD1	01/27/23	1809 2375453	1
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Nitrate-N	U	ND	0.0330	0.100	mg/L		1				
Sulfate	U	ND	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	AA										
7470 Cold Vapor Merc	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1058 2375754	2
Metals Analysis-ICP-M	4S										
SW846 3005A/6020B	"As Received	"									
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0018 2375511	3
Arsenic	J	0.00409	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					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00					
Potassium	U	ND	0.0800	0.300	mg/L	1.00					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00					
Sodium	U	ND	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		SKJ	02/01/23	1345 2375511	4
Lithium	U	ND	0.00300	0.0100	mg/L	1.00					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00		CITI	00/00/00	0001 0075511	_
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	02/02/23	0831 2375511	5
Solids Analysis											
SM2540C Dissolved S	olids "As Rec	eived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/02/23	1428 2377347	6
Spectrometric Analysis											
SM 4500-S(2-) D Sulfi	de "As Receiv	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	HH2	02/02/23	1147 2376122	7

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## Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-10 Project: GPCC00101
Sample ID: 608815004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Titration and Ion Ana	ılysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3 J	1.80	1.45	4.00	mg/L		EK1	02/06/23	1528 2378067	8
Bicarbonate alkalinity (Ca	CO3) J	1.80	1.45	4.00	mg/L					
Carbonate alkalinity (CaCo	O3) U	ND	1.45	4.00	mg/L					
The following Prep M	Methods were p	erformed:								
Method	Description	n		Analyst	Date		Time I	Prep Batch	l	
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/30/23		0830 2	2375510		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	01/30/23		1128 2	375753		
The fellowing Analy	tical Mathada	riana manfannadi								

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments	
Method	<b>.</b>	Anaryst 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 4500-S (2-) D		
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: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Sample ID: 608815005

Matrix: WG

Collect Date: 25-JAN-23 14:24 Receive Date: 27-JAN-23 Collector: Client Project: GPCC00101 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field pl	H "As Receiv	ed"									
Field pH		7.14			SU			EOS1	01/25/23	1424 2375357	1
GEL Field Ferrous Iron	"As Receive	d"									
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1424 2375357	2
Mercury Analysis-CVA	A				C						
7470 Cold Vapor Mercu		As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/31/23	1100 2375754	3
Metals Analysis-ICP-M	S				Č						
SW846 3005A/6020B ".		"									
Sodium	15 110001700	94.4	0.800	2.50	mg/L	1.00	10	SKJ	02/03/23	1014 2375511	4
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	0021 2375511	
Arsenic	J	0.00368	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0171	0.000670	0.00400	mg/L	1.00					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		46.3	0.0800	0.200	mg/L	1.00	1				
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.00249	0.000300	0.00100	mg/L	1.00	1				
Iron		0.220	0.0330	0.100	mg/L	1.00	1				
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1				
Manganese		0.0315	0.00100	0.00500	mg/L	1.00	1				
Potassium		8.93	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				
Boron		0.0362	0.00520	0.0150	mg/L	1.00	1	SKJ	02/02/23	0833 2375511	
Magnesium		9.93	0.0500	0.150	mg/L	1.00		SKJ	02/01/23	1352 2375511	
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00		SKJ	02/01/23	1347 2375511	. 8
Lithium		0.0165	0.00300	0.0100	mg/L	1.00	1				
Molybdenum		0.0222	0.000200	0.00100	mg/L	1.00	1				
Solids Analysis											
SM2540C Dissolved So	lids "As Rec	eived"									
Total Dissolved Solids		443	2.38	10.0	mg/L			CH6	02/01/23	1305 2376741	9
The following Prep Met	hods were pe	erformed:									
Method	Description	1		Analyst	Date	,	Time	e Pı	ep Batch		_
SW846 3005A	ICP-MS 3005	A PREP		LG2	01/30/23	(	0830	23	75510		

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Project: GPCC00101 Sample ID: 608815005 Client ID: GPCC001

Parameter	Qualifier Result	DL	RL	Units	PF	DF	Analyst Date	Time Batch	Method
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid		RM4	01/30/23		1128	2375753		
The following Analyt	ical Methods were performed:								
Method	Description			A	naly	st Cor	nments		
1	SM 4500-H B/SW846 9040C, SM 2550B				-				
_									

1	SM 4500-H B/SW 840 9
2	GEL Field Method
3	SW846 7470A
4	SW846 3005A/6020B
5	SW846 3005A/6020B
6	SW846 3005A/6020B
7	SW846 3005A/6020B
8	SW846 3005A/6020B
9	SM 2540C

## 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

Project:

Client ID:

Report Date: February 10, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Sample ID: 608815006

Matrix: WG

Collect Date: 26-JAN-23 12:40 Receive Date: 27-JAN-23 Collector: Client

DL RL Parameter **Oualifier** Units PF DF Analyst Date Time Batch Method Result Field Data Client collected Field pH "As Received" Field pH 7.14 SU EOS1 01/26/23 1240 2375357 1 GEL Field Ferrous Iron "As Received" Field Ferrous Iron 0 mg/L EOS1 01/26/23 1240 2375357 2 Ion Chromatography EPA 300.0 Anions Liquid "As Received" 2.00 JLD1 Chloride 12.3 0.670 10 01/28/23 0137 2375453 mg/L 3 Sulfate 142 1.33 4.00 10 mg/L Fluoride 0.0330 0.100 1.93 mg/L 1 JLD1 01/27/23 1839 2375453 Nitrate-N U ND 0.0330 0.100 mg/L Spectrometric Analysis SM 4500-S(2-) D Sulfide "As Received" Total Sulfide ND 0.0330 0.100 HH2 02/02/23 1147 2376122 mg/L 5 Titration and Ion Analysis SM 2320B Total Alkalinity "As Received" Alkalinity, Total as CaCO3 179 1.45 4.00 mg/L 02/06/23 1532 2378067 Bicarbonate alkalinity (CaCO3) 179 1.45 4.00 mg/L Carbonate alkalinity (CaCO3) U ND 1.45 4.00 mg/L The following Analytical Methods were performed:

 Method
 Description
 Analyst Comments

 1
 SM 4500-H B/SW846 9040C, SM 2550B

2 GEL Field Method 3 EPA 300.0 4 EPA 300.0 5 SM 4500-S (2-) D 6 SM 2320B

**Notes:** 

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Certificate of Analysis

Report Date: February 10, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-52D Project: GPCC00101 Sample ID: 608815006 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

## Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-36S

Sample ID: 608614001

Matrix: WG

Collect Date: 25-JAN-23 15:53
Receive Date: 26-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Field Data												
Client collected Field pH	H "As Receiv	/ed"										
Field pH		5.64			SU			EOS1	01/25/23	1553	2374741	1
GEL Field Ferrous Iron	"As Receive	d"										
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1553	2374741	2
Ion Chromatography					C							
EPA 300.0 Anions Liqui	id "As Recei	ved"										
Sulfate	110 110001	237	2.66	8.00	mg/L		20	HXC1	01/27/23	0453	2374768	3
Chloride		7.93	0.0670	0.200	mg/L		1		01/26/23		2374768	4
Fluoride		0.183	0.0330	0.100	mg/L		1					
Nitrate-N		0.131	0.0330	0.100	mg/L		1					
Mercury Analysis-CVA	A											
7470 Cold Vapor Mercu	ry, Liquid "A	As Received"										
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1243	2375028	5
Metals Analysis-ICP-MS	S											
SW846 3005A/6020B "A		"										
Manganese	J	0.00205	0.00100	0.00500	mg/L	1.00	1	SKJ	02/09/23	1117	2374786	6
Boron		1.18	0.0520	0.150	mg/L	1.00	10	SKJ	02/08/23	1830	2374786	7
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1946	2374786	8
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0278	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		48.2	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00682	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					
Magnesium		20.1	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.84	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00237	0.00150	0.00500	mg/L	1.00	1					
Sodium		40.4	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	SKJ	02/07/23	1934	2374786	9
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Solids Analysis												

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-36S Project: GPCC00101

Sample ID: 608614001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF DF	Analy	st Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		418	2.38	10.0	mg/L		CH6	02/01/23	1135 2376740	10
Spectrometric Analys	sis									
SM 4500-S(2-) D Su	lfide "As Receiv	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L	1	JW2	01/30/23	1541 2375142	11
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	22.0	1.45	4.00	mg/L		MS3	02/07/23	1351 2379826	12
Bicarbonate alkalinity (Ca	CO3)	22.0	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were pe	erformed:								
Method	Description	n		Analyst	Date	Time	Pre	ep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23	0830	237	4785		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/27/23	0959	237	5027		

The following Analytical I	Methods were performed:
----------------------------	-------------------------

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	·	
2	GEL Field Method		
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 4500-S (2-) D		
12	SM 2320B		

**Notes:** 

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

Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-36S Project: GPCC00101
Sample ID: 608614001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

## Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-37S

Sample ID: 608614002

Matrix: WG

Collect Date: 25-JAN-23 13:20 Receive Date: 26-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	F Analyst Date		Time Batch	Method
Field Data											
Client collected Field pl	H "As Receiv	ved"									
Field pH		5.84			SU			EOS1	01/25/23	1320 2374741	1
GEL Field Ferrous Iron	"As Receive	d"									
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1320 2374741	2
Ion Chromatography					C						
EPA 300.0 Anions Liqu	ıid "As Recei	ved"									
Nitrate-N		0.318	0.0660	0.200	mg/L		2	HXC1	01/26/23	2317 2374833	3
Chloride		1.92	0.0670	0.200	mg/L		1		01/26/23	1535 2374833	
Fluoride		0.114	0.0330	0.100	mg/L		1				
Sulfate	J	0.325	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	λA										
7470 Cold Vapor Merci	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1245 2375028	5
Metals Analysis-ICP-M	IS										
SW846 3005A/6020B "		"									
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	02/09/23	1052 2374786	6
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1834 2374786	
Arsenic	J	0.00300	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0247	0.000670	0.00400	mg/L	1.00	1				
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1				
Calcium		3.65	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					
Iron	U	ND	0.0330	0.100	mg/L	1.00					
Lead	U	ND	0.000500	0.00200	mg/L	1.00					
Magnesium		1.35	0.0100	0.0300	mg/L	1.00					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00					
Potassium		1.94	0.0800	0.300	mg/L	1.00					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1				
Sodium		4.85	0.0800	0.250	mg/L	1.00					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1	CIZI	00/07/00	1025 2254506	0
Beryllium	U	ND ND	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1937 2374786	8
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Solids Analysis											

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Certificate of Analysis

Project:

**Analyst Comments** 

Report Date: February 9, 2023

GPCC00101

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-37S

Sample ID: 608614002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF 1	DF Ana	lyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved Sol	lids "As Rece	eived"								
Total Dissolved Solids		28.0	2.38	10.0	mg/L		CH6	02/01/23	1135 2376740	9
Spectrometric Analysis										
SM 4500-S(2-) D Sulfid	e "As Receiv	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW2	01/30/23	1542 2375142	10
Titration and Ion Analys	is									
SM 2320B Total Alkalir	nity "As Rece	eived"								
Alkalinity, Total as CaCO3		21.2	1.45	4.00	mg/L		MS3	02/07/23	1353 2379826	11
Bicarbonate alkalinity (CaCO3	3)	21.2	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L					
The following Prep Met	hods were pe	erformed:								
Method	Description	1		Analyst	Date	T	ime I	Prep Batch		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/27/23	09	959 2	2375027		
SW846 3005A	ICP-MS 3005	A PREP		LG2	01/27/23	08	830 2	2374785		
The following Analytica	al Methods v	vere performed:								

	_	•	<u> </u>
Method			Description

1	$SM\ 4500\text{-H B/SW}846\ 9040C,\ SM\ 2550B$
2	GEL Field Method
3	EPA 300.0
4	EPA 300.0
5	SW846 7470A
6	SW846 3005A/6020B
7	SW846 3005A/6020B
8	SW846 3005A/6020B
9	SM 2540C
10	SM 4500-S (2-) D
11	SM 2320B

**Notes:** 

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Certificate of Analysis

Report Date: February 9, 2023

DF Analyst Date Time Batch Method

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Qualifier

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-37S Project: GPCC00101
Sample ID: 608614002 Client ID: GPCC001

RL

Units

PF

DL

Column headers are defined as follows:

Parameter

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Result

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# Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-38S

Sample ID: 608614003

Matrix: WG

Collect Date: 25-JAN-23 13:53
Receive Date: 26-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field p	H "As Receiv	ved"									
Field pH		4.75			SU			EOS1	01/25/23	1353 2374741	1
GEL Field Ferrous Iror	n "As Receive	ed"									
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1353 2374741	2
Ion Chromatography											
EPA 300.0 Anions Liq	uid "As Recei	ived"									
Sulfate		291	5.32	16.0	mg/L		40	HXC1	01/27/23	0018 2374833	3
Chloride		6.53	0.0670	0.200	mg/L		1	HXC1	01/26/23	1606 2374833	4
Fluoride		0.708	0.0330	0.100	mg/L		1				
Nitrate-N	J	0.145	0.0660	0.200	mg/L		2	HXC1	01/26/23	2348 2374833	5
Mercury Analysis-CVA	AA										
7470 Cold Vapor Merc	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1246 2375028	6
Metals Analysis-ICP-M	4S										
SW846 3005A/6020B	"As Received	"									
Boron		1.63	0.0520	0.150	mg/L	1.00	10	SKJ	02/08/23	1837 2374786	7
Manganese		1.65	0.0100	0.0500	mg/L	1.00	10				
Beryllium		0.00780	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1941 2374786	8
Lithium		0.0256	0.00300	0.0100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1949 2374786	9
Arsenic	J	0.00486	0.00200	0.00500	mg/L	1.00	1				
Barium		0.0180	0.000670	0.00400	mg/L	1.00	1				
Cadmium	J	0.000430	0.000300	0.00100	mg/L	1.00	1				
Calcium		32.8	0.0800	0.200	mg/L	1.00	1				
Chromium	J	0.00362	0.00300	0.0100	mg/L	1.00	1				
Cobalt		0.158	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				
Magnesium		36.9	0.0100	0.0300	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Potassium		6.12	0.0800	0.300	mg/L	1.00	1				
Selenium		0.0279	0.00150	0.00500	mg/L	1.00	1				
Sodium		42.3	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1				
Solids Analysis											

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Certificate of Analysis

Report Date: February 9, 2023

GPCC00101

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-38S Project:

Sample ID: 608614003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	l Solids "As Rec	eived"								
Total Dissolved Solids		484	2.38	10.0	mg/L		CHe	02/01/23	1305 2376741	10
Spectrometric Analy	rsis									
SM 4500-S(2-) D Su	ılfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW2	01/30/23	1542 2375142	. 11
Titration and Ion An	alysis									
SM 2320B Total All	kalinity "As Rec	eived"								
Alkalinity, Total as CaCC	)3 J	3.00	1.45	4.00	mg/L		MS.	3 02/07/23	1357 2379826	12
Bicarbonate alkalinity (Ca	aCO3) J	3.00	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	CO3) U	ND	1.45	4.00	mg/L					
The following Prep l	Methods were pe	erformed:								
Method	Description	n		Analyst	Date	Τ	ime	Prep Batch		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/27/23	0	959	2375027		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23	0	830	2374785		
TE1 C 11 : A 1	136.1.1									

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

**Notes:** 

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-38S Project: GPCC00101
Sample ID: 608614003 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Sample ID: 608614004

Matrix: WG

Collect Date: 25-JAN-23 16:15
Receive Date: 26-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Field Data												
Client collected Field pH	I "As Receiv	ved"										
Field pH		7.10			SU			EOS1	01/25/23	1615	2374741	1
GEL Field Ferrous Iron	"As Receive	d"										
Field Ferrous Iron		0			mg/L			EOS1	01/25/23	1615	2374741	2
Ion Chromatography					C							
EPA 300.0 Anions Liqu	id "As Recei	ved"										
Sulfate	10 110 110001	285	5.32	16.0	mg/L		40	HXC1	01/27/23	0120	2374833	3
Nitrate-N	U	ND	0.0660	0.200	mg/L		2		01/27/23		2374833	4
Chloride		4.66	0.0670	0.200	mg/L		1		01/26/23		2374833	5
Fluoride		0.282	0.0330	0.100	mg/L		1					
Mercury Analysis-CVA	A											
7470 Cold Vapor Mercu		As Received"										
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1251	2375028	6
Metals Analysis-ICP-MS	S											
SW846 3005A/6020B "A		"										
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1953	2374786	7
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0536	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	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.204	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Magnesium		19.4	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.00234	0.000200	0.00100	mg/L	1.00	1					
Potassium		6.66	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		48.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1		00/05/00	1011	225.450.4	
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1944	2374786	8
Lithium		0.0207	0.00300	0.0100	mg/L	1.00	1					
Calcium		78.5	0.400	1.00	mg/L	1.00	5	SKJ	02/08/23		2374786	9
Boron		1.11	0.0520	0.150	mg/L	1.00	10	SKJ	02/08/23		2374786	10
Manganese		0.628	0.00100	0.00500	mg/L	1.00	1	SKJ	02/09/23	1121	2374786	11
Solids Analysis												

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Project: GPCC00101 Sample ID: 608614004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Anal	yst Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved So	olids "As Rec	eived"										
Total Dissolved Solids		517	2.38	10.0	mg/L			CH6	02/01/23	1305	2376741	12
Spectrometric Analysis												
SM 4500-S(2-) D Sulfie	de "As Recei	ved"										
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	JW2	01/30/23	1542	2375142	13
Titration and Ion Analy	rsis											
SM 2320B Total Alkali	nity "As Rec	eived"										
Alkalinity, Total as CaCO3		49.0	1.45	4.00	mg/L			MS3	02/07/23	1401	2379826	14
Bicarbonate alkalinity (CaCC	03)	49.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3	) U	ND	1.45	4.00	mg/L							
The following Prep Me	thods were po	erformed:										
Method	Description	n		Analyst	Date		Time	P	rep Batch			
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23		0830	23	374785			
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/27/23		0959	23	375027			

The following Analytical Methods were performed	The	following	Analytical	Methods	were	performed
---	-----	-----------	------------	---------	------	-----------

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	•	
2	GEL Field Method		
3	EPA 300.0		
4	EPA 300.0		
5	EPA 300.0		
6	SW846 7470A		
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 4500-S (2-) D		
14	SM 2320B		

**Notes:** 

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Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-PZ-53D Project: GPCC00101 Sample ID: 608614004 Client ID: GPCC001

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

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

# Certificate of Analysis

Project:

Client ID:

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-09

Sample ID: 608614005

Matrix: WQ

Collect Date: 25-JAN-23 12:45 Receive Date: 26-JAN-23 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Ion Chromatography											
EPA 300.0 Anions Liqu	uid "As Recei	ved"									
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	01/26/23	1707 2374833	1
Fluoride	U	ND	0.0330	0.100	mg/L		1				
Nitrate-N	U	ND	0.0330	0.100	mg/L		1				
Sulfate	U	ND	0.133	0.400	mg/L		1				
Mercury Analysis-CVA	λA										
7470 Cold Vapor Merci	ury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/30/23	1253 2375028	2
Metals Analysis-ICP-M	IS										
SW846 3005A/6020B "	'As Received'	"									
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	SKJ	02/07/23	1948 2374786	3
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/08/23	1855 2374786	4
Arsenic	J	0.00210	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				
Magnesium	U	ND	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				
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				
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	SKJ	02/09/23	1055 2374786	5
Solids Analysis											
SM2540C Dissolved So	olids "As Rec	eived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	02/01/23	1305 2376741	6
Spectrometric Analysis											
SM 4500-S(2-) D Sulfic	de "As Receiv	ved"									
Total Sulfide	U	ND	0.0330	0.100	mg/L		1	JW2	01/30/23	1542 2375142	7

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### Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-EB-09 Project: GPCC00101
Sample ID: 608614005 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Titration and Ion Ana	lysis									
SM 2320B Total Alka	alinity "As Reco	eived"								
Alkalinity, Total as CaCO3	U	ND	1.45	4.00	mg/L		MS3	3 02/07/23	1403 2379826	8
Bicarbonate alkalinity (CaC	CO3) U	ND	1.45	4.00	mg/L					
Carbonate alkalinity (CaCC	D3) U	ND	1.45	4.00	mg/L					
The following Prep M	lethods were pe	erformed:								
Method	Description	1		Analyst	Date		Time	Prep Batch	l	
SW846 3005A	ICP-MS 3005	A PREP		LG2	01/27/23		0830	2374785		
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/27/23		0959	2375027		
The following Analyst	tical Methods v	vere performed:								

C	J I	
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 4500-S (2-) D	
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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

### Certificate of Analysis

Project:

Client ID:

1.00 1

1.00 1

1.00 1

1.00 1

1.00

1.00

1.00 1

1.00

1

1

CH6

JW2

02/01/23 1305 2376741

01/30/23 1542 2375142

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

mg/L

Report Date: February 9, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-08

Sample ID: 608614006

Matrix: WQ

Collect Date: 25-JAN-23 16:45 Receive Date: 26-JAN-23 Collector: Client

U

U

U

U

U

U

U

ND

Parameter **Oualifier** DL RL Units PF DF Analyst Date Time Batch Method Result Ion Chromatography EPA 300.0 Anions Liquid "As Received" Chloride ND 0.0670 0.200 mg/L HXC1 01/26/23 1809 2374833 1 ND Fluoride U 0.0330 0.100 mg/L 1 Nitrate-N U ND 0.0330 0.100 mg/L 1 Sulfate U ND 0.133 0.400mg/L1 Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury 0.0000670 0.000200 mg/L 1.00 1 JP2 01/30/23 1255 2375028 2 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received" Boron ND 0.00520 0.0150 mg/L 1.00 1 SKJ 02/09/23 1057 2374786 3 Beryllium U ND 0.0002000.000500mg/L 1.00 1 SKJ 02/07/23 1952 2374786 4 U 0.00300 0.0100 mg/L 1.00 Lithium ND 1 1.00 Antimony U ND 0.00100 0.00300 mg/L1 SKJ 02/08/23 1859 2374786 5 mg/L Arsenic 0.00228 0.00200 0.00500 1.00 1 J mg/L Barium U ND 0.000670 0.004001.00 1 U 0.00100 1.00 Cadmium ND 0.000300 mg/L Calcium U ND 0.0800 0.200 mg/L 1.00 1 U 0.0100 Chromium ND 0.00300mg/L 1.00 1 Cobalt U ND 0.000300 0.00100 1.00 mg/L 1 U 0.100 ND 0.0330 mg/L1.00 1 Iron mg/L

0.000500

0.0100

0.00100

0.000200

0.0800

0.00150

0.000600

0.0800

2.38

0.0330

0.00200

0.00500

0.00100

0.00500

0.00200

0.300

0.250

10.0

0.100

0.0300

SM2540C Dissolved Solids "As Received"

SM 4500-S(2-) D Sulfide "As Received"

Lead

Magnesium

Manganese

Potassium

Selenium

Sodium

Thallium

Total Sulfide

Solids Analysis

Total Dissolved Solids

Spectrometric Analysis

Molybdenum

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### Certificate of Analysis

Report Date: February 9, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-APE-FB-08 Project: GPCC00101 Sample ID: 608614006 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Titration and Ion Ana	alysis									
SM 2320B Total Alka	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3 U	ND	1.45	4.00	mg/L		MS3	02/07/23	1405 2379826	8
Bicarbonate alkalinity (Ca	CO3) U	ND	1.45	4.00	mg/L					
Carbonate alkalinity (CaCo	O3) U	ND	1.45	4.00	mg/L					
The following Prep M	Methods were po	erformed:								
Method	Description	n		Analyst	Date		Time P	rep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/27/23		0830 23	374785		
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/27/23		0959 23	375027		
The following Analy	tical Methods v	were performed:								

The following Analytical Methods v	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 4500-S (2-) D	
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

Page 39 of 130 SDG: 608815

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### Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-17S

Sample ID: 608418001

Matrix: WG

Collect Date: 24-JAN-23 16:18
Receive Date: 25-JAN-23
Collector: Client

Parameter DL RL Units PF DF Analyst Date Time Batch Method **Oualifier** Result Field Data Client collected Field pH "As Received" Field pH 6.37 SU AJ1 01/24/23 1618 2373871 1 GEL Field Ferrous Iron "As Received" Field Ferrous Iron 0 mg/L AJ1 01/24/23 1618 2373871 2 Ion Chromatography EPA 300.0 Anions Liquid "As Received" 0.200 Chloride 6.31 0.0670 HXC1 01/25/23 1838 2373867 mg/L 1 3 Fluoride 0.216 0.0330 0.100 mg/L 1 0.200 Nitrate-N J 0.119 0.0660 mg/L 2 HXC1 01/26/23 0136 2373867 4 HXC1 01/26/23 Sulfate 153 2.66 8.00 mg/L 20 0107 2373867 Mercury Analysis-CVAA 7470 Cold Vapor Mercury, Liquid "As Received" Mercury ND 0.0000670 0.000200 mg/L 1.00 1 JP2 01/27/23 1051 2374419 6 Metals Analysis-ICP-MS SW846 3005A/6020B "As Received" Antimony ND 0.00100 0.00300 mg/L 1.00 1 SKI 02/01/23 1926 2374301 Barium 0.0422 0.000670 0.00400 1.00 mg/L 1 Cadmium U ND 0.000300 0.00100 mg/L 1.00 1 Calcium 41.3 0.0800 0.200 mg/L 1.00 1 0.00886 0.0100 mg/LChromium J 0.00300 1.00 1 ND 0.00100 mg/L Cobalt U 0.000300 1.00 1 Iron U ND 0.0330 0.100 mg/L 1.00 1 Manganese U ND 0.001000.00500 mg/L 1.00 Potassium 1.08 0.0800 0.300 mg/L 1.00 1 0.00178 0.00500Selenium J 0.00150 mg/L 1.00 1 Sodium 0.250 25.5 0.0800 mg/L 1.00 1 Thallium U ND 0.000600 0.00200 mg/L1.00 1 Arsenic U ND 0.00200 0.00500 mg/L 1.00 1 SKJ 02/03/23 1453 2374301 1.00 Beryllium U ND 0.000200 0.000500 mg/L 1 Boron 0.0326 0.00520 0.0150 mg/L 1.00 1 ND 0.002001.00 Lead U 0.000500 mg/L 1 Lithium U ND 0.00300 0.0100 mg/L 1.00 1 26.1 0.0100 0.0300 mg/L1.00 Magnesium 1 Molybdenum U ND 0.000200 0.00100 mg/L 1.00

Page 40 of 130 SDG: 608815

Solids Analysis

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Certificate of Analysis

Report Date: February 7, 2023

GPCC00101

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-17S Project:

Sample ID: 608418001 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved S	Solids "As Rec	eived"								
Total Dissolved Solids		344	2.38	10.0	mg/L		CF	H6 01/31/23	1235 2376170	9
Spectrometric Analysi	S									
SM 4500-S(2-) D Sulf	ide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW	72 01/30/23	1543 2374521	10
Titration and Ion Anal	ysis									
SM 2320B Total Alka	linity "As Rec	eived"								
Alkalinity, Total as CaCO3	-	81.4	1.45	4.00	mg/L		EK	1 01/30/23	1543 2375521	11
Bicarbonate alkalinity (CaC	O3)	81.4	1.45	4.00	mg/L					
Carbonate alkalinity (CaCO	(3) U	ND	1.45	4.00	mg/L					
The following Prep M	ethods were po	erformed:								
Method	Description	n		Analyst	Date	Τ	ime	Prep Batch	ļ	
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23	1	222	2374418		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23	0	815	2374300		
The following Analyt	ical Methods v	vere performed:								

The following F	tharytical Methods were performed.		
Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	·	
2	GEL Field Method		
3	EPA 300.0		
4	EPA 300.0		
5	EPA 300.0		
6	SW846 7470A		
7	SW846 3005A/6020B		
8	SW846 3005A/6020B		
9	SM 2540C		
10	SM 4500-S (2-) D		
11	SM 2320B		

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-17S Project: GPCC00101
Sample ID: 608418001 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-33S

Sample ID: 608418002

Matrix: WG

Collect Date: 24-JAN-23 13:40 Receive Date: 25-JAN-23 Collector: Client

Priest   P	Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Persons Iron "As Received Field Persons Iron "As Recei	Field Data											
Field Persons Iron "As Received Field Persons Iron "As Recei	Client collected Field	d pH "As Recei	ved"									
Field Ferrous Iron "Na Received Front Property of State 1		1				SU			AJ1	01/24/23	1340 2373871	1
Field Ferrous Iron   Field F		on "As Receive	ed"									
Parameter   Para						mg/L			AJ1	01/24/23	1340 2373871	2
Fluoride	Ion Chromatography					8						
Fluoride			ived"									
Nitrate-N		iquia 115 iteee		0.0330	0.100	mg/L		1	HXC1	01/25/23	1908 2373867	3
Chloride		J				_		1	111101	01/23/23	1700 2373007	5
Sulfate   375   5.32   16.0   mg/L   3   3   3   3   3   3   3   3   3		-				_		40	HXC1	01/26/23	0206 2373867	4
Mercury Analysis-CVAA    7470 Cold Vapor Mercury, Liquid "As Received"   8	Sulfate					-						
7470 Cold Vapor Mercury, Liquid "As Received"           Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         01/27/23         1052         2374419         5           Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         01/27/23         1052         2374401         5           SW846 3005A/6020B "As Received"           Boron         1.19         0.0520         0.150         mg/L         1.00         10         SKJ         02/01/23         1427         2374301         6           Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         02/01/23         1342         2374301         6           Antimony         U         ND         0.00300         0.00400         mg/L         1.00         1         SKJ         02/01/23         374301         7           Barium         J. 000482         0.000300         0.00100         mg/L         1.00         1         5         5         5         5         5         4         5         4 <td< td=""><td>Mercury Analysis-C'</td><td>VAA</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Mercury Analysis-C'	VAA										
Mercury         U         ND         0.0000670         0.000200         mg/L         1.00         1         JP2         01/27/28         1052         2374419         5           Metals Analysis-ICP-MS         SW846 3005A/6020B "As Received"           Boron         1.19         0.0520         0.150         mg/L         1.00         10         SKJ         02/03/23         1427         2374301         6           Antimony         U         ND         0.00100         0.00400         mg/L         1.00         10         SKJ         02/03/23         1427         2374301         6           Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         5         4         574301         6           Cadmium         J         0.00482         0.000300         0.0100         mg/L         1.00         1         1         1         4         <	• •		As Received"									
Metals Analysis-ICP-MS           SW846 3005A/6020B "As Received"         1.19         0.0520         0.150         mg/L         1.00         10         SKJ         02/03/23         1427         2374301         6           Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         02/01/23         1427         2374301         6           Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         SKJ         02/01/23         193         2374301         6           Cadmium         J         0.0368         0.000300         0.00100         mg/L         1.00         1	-	• •		0.0000670	0.000200	mg/L	1.00	1	JP2	01/27/23	1052 2374419	5
SW846 3005 A/6020B "As Received"   Boron	•		T.D	0.0000070	0.000200		1.00	•	012	01/2//20	1002 2071119	
Boron   1.19	•		1"									
Antimony         U         ND         0.00100         0.00300         mg/L         1.00         1         SKJ         02/01/23         1930         2374301         7           Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         L         V         V         V         0.00000         0.00100         mg/L         1.00         1         L         V         V         V         V         0.00300         0.00100         mg/L         1.00         1         L         V		D AS RECEIVED		0.0520	0.150	ma/I	1.00	10	CVI	02/02/22	1427 2274201	6
Barium         0.0368         0.000670         0.00400         mg/L         1.00         1         Image: Control of the control o		ĪĪ				_						
Cadmium         J         0.000482         0.000300         0.00100         mg/L         1.00         1           Chromium         U         ND         0.00300         0.0100         mg/L         1.00         1           Cobalt         0.0582         0.000300         0.00100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Potassium         J         0.00490         0.0330         0.100         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.00600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         1         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         1         SKJ         02/03/23 <td>•</td> <td>O</td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td>SIX</td> <td>02/01/23</td> <td>1730 2374301</td> <td>,</td>	•	O				_			SIX	02/01/23	1730 2374301	,
Chromium         U         ND         0.00300         0.0100         mg/L         1.00         1           Cobalt         0.0582         0.000300         0.00100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Potassium         14.5         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         J         0.00         0.00600         0.00200         mg/L         1.00         1           Mangansee         2.68         0.0100         0.0500         mg/L         1.00         1         SKJ         02/03/23         154         2374301         9           Beryllium         0.00235         0.00200         0.00500         mg/L         1.00         1         Image: Company of the company of the company of t		ī				_						
Cobalt         0.0582         0.000300         0.00100         mg/L         1.00         1           Iron         U         ND         0.0330         0.100         mg/L         1.00         1           Potassium         14.5         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Solium         U         ND         0.000600         0.0200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         1         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         1         14         2374301         9           Lead         U         ND         0.000500         0.00200         mg/L						_						
Fron		C				_						
Potassium         14.5         0.0800         0.300         mg/L         1.00         1           Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         1         20/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         1         20/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         1         1         2374301         9           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1         1         1         2374301         9           Lithium         0.0115         0.00300         0.00200         mg/L         1.00         1         1         1		II				_		-				
Selenium         J         0.00490         0.00150         0.00500         mg/L         1.00         1           Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         1         1         1         1         2374301         9         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1<		C										
Sodium         37.2         0.0800         0.250         mg/L         1.00         1           Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         Image: Company of the company of t		J										
Thallium         U         ND         0.000600         0.00200         mg/L         1.00         1           Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1         C		·				_						
Calcium         116         0.800         2.00         mg/L         1.00         10         SKJ         02/02/23         1217         2374301         8           Manganese         2.68         0.0100         0.0500         mg/L         1.00         10         SKJ         02/03/23         1541         2374301         9           Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.00200         mg/L         1.00         1         Image: Control of the control of		U										
Manganese         2.68         0.0100         0.0500         mg/L         1.00         10           Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.000500         mg/L         1.00         1           Lead         U         ND         0.00300         0.0100         mg/L         1.00         1           Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1		_				_		10	SKJ	02/02/23	1217 2374301	8
Arsenic         J         0.00201         0.00200         0.00500         mg/L         1.00         1         SKJ         02/03/23         1541         2374301         9           Beryllium         0.00235         0.000200         0.000500         mg/L         1.00         1 </td <td>Manganese</td> <td></td> <td>2.68</td> <td></td> <td></td> <td>_</td> <td></td> <td>10</td> <td></td> <td></td> <td></td> <td></td>	Manganese		2.68			_		10				
Beryllium         0.00235         0.000200         0.000500         mg/L         1.00         1           Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	•	J	0.00201	0.00200	0.00500	_	1.00	1	SKJ	02/03/23	1541 2374301	9
Lead         U         ND         0.000500         0.00200         mg/L         1.00         1           Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	Beryllium		0.00235	0.000200	0.000500	_	1.00	1				
Lithium         0.0115         0.00300         0.0100         mg/L         1.00         1           Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1		U	ND	0.000500	0.00200	_	1.00	1				
Magnesium         15.0         0.0100         0.0300         mg/L         1.00         1           Molybdenum         U         ND         0.000200         0.00100         mg/L         1.00         1	Lithium		0.0115	0.00300	0.0100	_	1.00	1				
Molybdenum U ND 0.000200 0.00100 mg/L 1.00 1	Magnesium		15.0	0.0100	0.0300		1.00	1				
·	•	U	ND	0.000200	0.00100		1.00	1				
	Solids Analysis					-						

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

Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-33S Project: GPCC00101
Sample ID: 608418002 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF I	OF Ana	llyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	ceived"								
Total Dissolved Solids		615	2.38	10.0	mg/L		CH6	01/31/23	1235 2376170	10
Spectrometric Analys	sis									
SM 4500-S(2-) D Sul	lfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW2	01/30/23	1543 2374521	11
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3 J	3.80	1.45	4.00	mg/L		EK1	01/30/23	1551 2375521	12
Bicarbonate alkalinity (Car	CO3) J	3.80	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were p	erformed:								
Method	Description	n		Analyst	Date	Ti	me ]	Prep Batch		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23	08	15	2374300		
SW846 7470A Prep	EPA 7470A	Mercury Prep Liquid		RM4	01/26/23	12	22	2374418		
FB1 6 11 : A 1	13.6 .1 .1	6 1								

**Analyst Comments** 

The following Analytical Methods were performed:

Method	Description
1	SM 4500-H B/SW846 9040C, SM 2550B
2	GEL Field Method
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 4500-S (2-) D
12	SM 2320B

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-33S Project: GPCC00101
Sample ID: 608418002 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-34S

Sample ID: 608418003

Matrix: WG

Collect Date: 24-JAN-23 12:53
Receive Date: 25-JAN-23
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Field Data											
Client collected Field	oH "As Receiv	ved"									
Field pH	1253 2373871	1									
GEL Field Ferrous Iron	n "As Receive	ed"									
Field Ferrous Iron		0			mg/L			AJ1	01/24/23	1253 2373871	2
Ion Chromatography					J						
EPA 300.0 Anions Liq	mid "As Recei	ived"									
Chloride	ara Tis Iteees	7.50	0.0670	0.200	mg/L		1	HXC1	01/25/23	1938 2373867	3
Fluoride		0.122	0.0330	0.100	mg/L		1	111101	01/23/23	1930 2373007	5
Nitrate-N	U	ND	0.0330	0.100	mg/L		1				
Sulfate		267	5.32	16.0	mg/L		40	HXC1	01/26/23	0236 2373867	4
Mercury Analysis-CV	AA										
7470 Cold Vapor Merc	cury, Liquid "A	As Received"									
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	01/27/23	1054 2374419	5
Metals Analysis-ICP-N	ИS										
SW846 3005A/6020B		"									
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	SKJ	02/03/23	1544 2374301	6
Beryllium	U	ND	0.000200	0.000500	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		18.6	0.0100	0.0300	mg/L	1.00	1				
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1				
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	SKJ	02/01/23	1933 2374301	7
Barium		0.0232	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		0.00351	0.000300	0.00100	mg/L	1.00	1				
Iron	U	ND	0.0330	0.100	mg/L	1.00	1				
Potassium		3.54	0.0800	0.300	mg/L	1.00	1				
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1				
Sodium	**	21.7	0.0800	0.250	mg/L	1.00	1				
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1	CIZI	00/00/00	1242 2274201	0
Calcium		80.0 3.29	0.400 0.00500	1.00 0.0250	mg/L	1.00 1.00	5 5	SKJ	02/02/23	1343 2374301	8
Manganese Boron			0.00500	0.0250	mg/L	1.00	20	SKJ	02/03/23	1430 2374301	9
		2.21	0.104	0.500	mg/L	1.00	20	2V1	02/03/23	1430 2374301	9
Solids Analysis											

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-34S Project: GPCC00101

Sample ID: 608418003 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst Date	Time Batch	Method
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		433	2.38	10.0	mg/L		CI	H6 01/31/23	1235 2376170	10
Spectrometric Analys	sis									
SM 4500-S(2-) D Su	lfide "As Recei	ved"								
Total Sulfide	U	ND	0.0330	0.100	mg/L		1 JW	/2 01/30/23	1543 2374521	11
Titration and Ion Ana	alysis									
SM 2320B Total Alk	alinity "As Rec	eived"								
Alkalinity, Total as CaCO	3	30.0	1.45	4.00	mg/L		EF	(1 01/30/23	1557 2375521	12
Bicarbonate alkalinity (Ca	CO3)	30.0	1.45	4.00	mg/L					
Carbonate alkalinity (CaC	O3) U	ND	1.45	4.00	mg/L					
The following Prep N	Methods were po	erformed:								
Method	Description	n		Analyst	Date	,	Time	Prep Batch	ļ	
SW846 7470A Prep	EPA 7470A I	Mercury Prep Liquid		RM4	01/26/23		1222	2374418		
SW846 3005A	ICP-MS 3005	5A PREP		LG2	01/26/23		0815	2374300		
FP1 C 11 : A 1	136.1.1									

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	•	
2	GEL Field Method		
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 4500-S (2-) D		
12	SM 2320B		

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-34S Project: GPCC00101
Sample ID: 608418003 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### Certificate of Analysis

Project:

Client ID:

Report Date: February 7, 2023

GPCC00101

GPCC001

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-35S

Sample ID: 608418004

Matrix: WG

04 1431 00 14 44

	Collect Date:	24-JAN	1-23 14:44								
	Receive Date:	25-JAN	I-23								
	Collector:	Client									
						** *					
Parameter	Qua	lifier R	esult	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Field Data											
Client colle	ected Field pH "As	Received"									
Field pH			6.08			SU		AJ1	01/24/23	1444 2373871	1
GEL Field	Ferrous Iron "As R	Received"									
Field Ferrous	Iron		0			mg/L		AJ1	01/24/23	1444 2373871	2

Page 49 of 130 SDG: 608815

Solids Analysis

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-35S Project: GPCC00101
Sample ID: 608418004 Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst	t Date	Time	Batch	Method
Solids Analysis												
SM2540C Dissolved S	olids "As Rec	eived"										
Total Dissolved Solids		507	2.38	10.0	mg/L		C	CH6 (	01/31/23	1235 2	2376170	10
Spectrometric Analysis	S											
SM 4500-S(2-) D Sulfi	SM 4500-S(2-) D Sulfide "As Received"											
Total Sulfide	J	0.0354	0.0330	0.100	mg/L		1 Ј	W2 (	01/30/23	1543 2	2374521	11
Titration and Ion Analy	ysis											
SM 2320B Total Alkal	inity "As Rec	eived"										
Alkalinity, Total as CaCO3		51.6	1.45	4.00	mg/L		E	K1 (	01/30/23	1559 2	2375521	12
Bicarbonate alkalinity (CaCo	O3)	51.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3	3) U	ND	1.45	4.00	mg/L							
The following Prep Methods were performed:												
Method	Description	n		Analyst	Date		Time	Prep	p Batch			
SW846 7470A Prep	EPA 7470A N	Mercury Prep Liquid		RM4	01/26/23		1222	2374	1418			
SW846 3005A	ICP-MS 3005	SA PREP		LG2	01/26/23		0815	2374	1300			

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments	
1	SM 4500-H B/SW846 9040C, SM 2550B	•	
2	GEL Field Method		
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 4500-S (2-) D		
12	SM 2320B		

**Notes:** 

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Certificate of Analysis

Report Date: February 7, 2023

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

Atlanta, Georgia 30308

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRA-BRGWC-35S Project: GPCC00101
Sample ID: 608418004 Client ID: GPCC001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

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

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

Atlanta, Georgia Joju Abraham

Workorder: 608422

**Contact:** 

Report Date: February 7, 2023
Page 1 of 11

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2374002								
QC1205304359 608413001 DU Chloride	JР	3.79	3.79	mg/L	0.124		(0%-20%) HXC1	01/25/23 19:29
Fluoride	Л	0.0926 J	0.0925	mg/L	0.108 ^		(+/-0.100)	
Nitrate-N		0.945	0.920	mg/L	2.68 ^		(+/-0.500)	01/25/23 23:05
Sulfate		0.628	0.612	mg/L	2.71 ^		(+/-0.400)	01/25/23 19:29
QC1205304358 LCS Chloride	5.00		4.87	mg/L		97.3	(90%-110%)	01/25/23 20:31
Fluoride	2.50		2.53	mg/L		101	(90%-110%)	
Nitrate-N	2.50		2.43	mg/L		97.2	(90%-110%)	
Sulfate	10.0		9.76	mg/L		97.6	(90%-110%)	
QC1205304357 MB Chloride		U	ND	mg/L				01/25/23 21:02
Fluoride		U	ND	mg/L				
Nitrate-N		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205304360 608413001 PS Chloride	5.00	3.79	9.31	mg/L		110	(90%-110%)	01/25/23 20:00

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### **QC** Summary

Workorder: 608422 Page 2 of 11 Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography Batch 2374002 Fluoride 2.50 0.0926 2.68 mg/L104 (90%-110%) HXC1 01/25/23 20:00 Nitrate-N 2.50 0.189 2.65 98.2 (90%-110%) 01/25/23 23:36 mg/L Sulfate 10.0 0.628 10.6 mg/L 99.5 (90%-110%) 01/25/23 20:00 **Metals Analysis - ICPMS** Batch 2374301 QC1205304629 LCS 0.0500 0.0512 102 02/01/23 18:21 (80%-120%) Antimony mg/L Arsenic 0.0500 0.0540 mg/L 108 (80%-120%) 02/03/23 14:21 0.0500 0.0494 98.9 02/01/23 18:21 Barium mg/L (80%-120%) Beryllium 0.0500 0.0599 mg/L 120 (80%-120%) 02/03/23 14:21 Boron 0.100 0.113 113 (80%-120%) mg/L 0.0524 Cadmium 0.0500 mg/L 105 (80%-120%) 02/01/23 18:21 Calcium 2.00 2.14 mg/L107 (80%-120%) 0.0500 0.0525 105 Chromium mg/L (80%-120%) Cobalt 0.0500 0.0523 mg/L 105 (80%-120%) 102 2.00 2.04 (80%-120%) Iron mg/L 0.0500 Lead 0.0549 mg/L 110 (80%-120%) 02/03/23 14:21

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# QC Summary

608422 Page 3 of 11 REC% Parmname NOM Sample Qual QC Units RPD% Range Anlst Date Time Metals Analysis - ICPMS Batch 2374301 Lithium 0.0500 0.0574 mg/L115 (80%-120%) SKJ 02/03/23 14:21 Magnesium 2.00 2.36 118 (80%-120%) mg/L mg/L Manganese 0.0500 0.0508 102 (80%-120%) 02/01/23 18:21 0.0500 0.0539 108 Molybdenum mg/L (80%-120%) 02/03/23 14:21 Potassium 2.00 2.08 mg/L 104 (80%-120%) 02/01/23 18:21 0.0500 0.0500 100 Selenium mg/L(80%-120%) 2.23 Sodium 2.00 mg/L111 (80%-120%) 0.0500 0.0526 Thallium 105 (80%-120%) mg/L QC1205304628 MB U ND 02/01/23 18:18 Antimony mg/LU ND mg/L 02/03/23 14:18 Arsenic U ND 02/01/23 18:18 Barium mg/LU ND Beryllium 02/03/23 14:18 mg/L Boron U ND mg/L U ND 02/01/23 18:18 Cadmium mg/L Calcium U ND mg/L

Workorder:

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# QC Summary

Page 4 of 11 QC RPD% REC% Range **Parmname** NOM Sample Qual Units Anlst Date Time Metals Analysis - ICPMS Batch 2374301 Chromium U ND mg/LSKJ 02/01/23 18:18 Cobalt U ND mg/L Iron U ND mg/LU ND 02/03/23 14:18 Lead mg/L Lithium U ND mg/L U ND Magnesium mg/LU ND 02/01/23 18:18 Manganese mg/LU ND 02/03/23 14:18 Molybdenum mg/LU ND Potassium mg/L 02/01/23 18:18 Selenium U ND mg/LU ND Sodium mg/L Thallium U ND mg/L QC1205304630 608410001 MS Antimony 0.0500 U ND 0.0516 103 (75%-125%) 02/01/23 18:29 mg/L0.0500 U ND 0.0534 105 02/03/23 15:08 mg/L (75%-125%) Arsenic Barium 0.0500 0.0118 0.0604 mg/L 97.3 (75% - 125%)02/01/23 18:29

Workorder:

608422

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

## **QC** Summary

608422 Page 5 of 11 Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch Beryllium 0.0500 U ND 0.0578 mg/L 115 (75%-125%) SKJ 02/06/23 16:16 Boron 0.100 U ND 0.125 121 (75%-125%) 02/03/23 15:08 mg/L Cadmium 0.0500 U ND 0.0524 mg/L 105 (75%-125%) 02/01/23 18:29 Calcium 2.00 4.86 7.20 mg/L 117 (75%-125%) Chromium 0.0500 J 0.00950 0.0628 mg/L 107 (75%-125%) 0.0500 0.000829 0.0532 105 Cobalt J mg/L (75%-125%) J 0.0824 2.11 Iron 2.00 mg/L 102 (75%-125%) Lead 0.0500 U ND 0.0551 110 02/03/23 15:08 mg/L (75% - 125%)ND 0.0500 U 0.0625Lithium mg/L 124 (75%-125%) 2.00 5.34 7.70 Magnesium mg/L118 (75% - 125%)0.0500 0.0348 0.0864 103 (75%-125%) 02/01/23 18:29 Manganese mg/L 0.0500 U ND 0.0549 110 02/03/23 15:08 Molybdenum mg/L (75% - 125%)0.432 2.54 Potassium 2.00 mg/L 106 (75%-125%) 02/01/23 18:29 Selenium 0.0500 ND 0.0465 93.1 (75% - 125%)mg/L 2.00 3.63 5.85 Sodium mg/L 111 (75%-125%)

Workorder:

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

# QC Summary

Workorder: 608422									Page 6 of 11
Parmname	NO	M	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 2374301									
Thallium	0.0500	U	ND	0.0530	mg/L		106	(75%-125%) S	KJ 02/01/23 18:29
QC1205304631 608410001 MSD Antimony	0.0500	U	ND	0.0500	mg/L	3.18	99.4	(0%-20%)	02/01/23 18:32
Arsenic	0.0500	U	ND	0.0541	mg/L	1.27	106	(0%-20%)	02/03/23 15:11
Barium	0.0500		0.0118	0.0587	mg/L	3	93.7	(0%-20%)	02/01/23 18:32
Beryllium	0.0500	U	ND	0.0558	mg/L	3.42	112	(0%-20%)	02/06/23 16:18
Boron	0.100	U	ND	0.124	mg/L	0.226	121	(0%-20%)	02/03/23 15:11
Cadmium	0.0500	U	ND	0.0503	mg/L	4.08	101	(0%-20%)	02/01/23 18:32
Calcium	2.00		4.86	7.13	mg/L	0.991	113	(0%-20%)	
Chromium	0.0500	J	0.00950	0.0614	mg/L	2.16	104	(0%-20%)	
Cobalt	0.0500	J	0.000829	0.0530	mg/L	0.458	104	(0%-20%)	
Iron	2.00	J	0.0824	2.06	mg/L	2.49	99	(0%-20%)	
Lead	0.0500	U	ND	0.0543	mg/L	1.38	109	(0%-20%)	02/03/23 15:11
Lithium	0.0500	U	ND	0.0623	mg/L	0.261	123	(0%-20%)	
Magnesium	2.00		5.34	7.85	mg/L	1.81	125	(0%-20%)	
Manganese	0.0500		0.0348	0.0852	mg/L	1.43	101	(0%-20%)	02/01/23 18:32

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## **QC** Summary

608422 Page 7 of 11 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch Molybdenum 0.0500 U ND 0.0558 mg/L1.5 112 (0%-20%)SKJ 02/03/23 15:11 Potassium 2.00 0.432 2.55 mg/L 0.416 106 (0%-20%)02/01/23 18:32 mg/L Selenium 0.0500 ND 0.0467 0.333 93.4 (0%-20%)104 Sodium 2.00 3.63 5.71 mg/L 2.43 (0%-20%)Thallium 0.0500 U ND 0.0519 mg/L 2.13 104 (0%-20%)QC1205304632 608410001 SDILT Antimony U ND U ND ug/L N/A (0%-20%)02/01/23 18:39 U Arsenic ND U ND ug/L N/A (0%-20%)02/03/23 15:17 11.8 2.36 Barium J ug/L .33 (0%-20%)02/01/23 18:39 U ND U ND Beryllium ug/L N/A (0%-20%)02/06/23 16:20 U ND U ND (0%-20%)02/03/23 15:17 Boron ug/L N/A U ND U ND Cadmium ug/L N/A (0%-20%)02/01/23 18:39 1000 Calcium 4860 ug/L (0%-20%)3.15 Chromium J 9.50 U ND N/A (0% - 20%)ug/L J 0.829 U ND Cobalt ug/L N/A (0%-20%)Iron J 82.4 U ND ug/L N/A (0%-20%)

Workorder:

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### **QC** Summary

608422 Page 8 of 11 Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch (0%-20%) Lead U ND U ND ug/L N/A SKJ 02/03/23 15:17 U Lithium ND U ND ug/L (0%-20%)N/A Magnesium 5340 1050 ug/L 1.84 (0%-20%)34.8 (0%-20%)Manganese 6.88 ug/L 1.11 02/01/23 18:39 U Molybdenum ND U ND ug/L N/A (0%-20%)02/03/23 15:17 432 J 97.3 (0%-20%)Potassium ug/L 02/01/23 18:39 12.6 U U ND Selenium ND ug/L N/A (0% - 20%)Sodium 3630 689 4.95 (0%-20%)ug/L U ND U ND Thallium ug/L N/A (0% - 20%)Metals Analysis-Mercury 2374419 QC1205304806 608391001 DUP U Mercury ND U ND mg/LN/A JP2 01/27/23 10:12 QC1205304805 LCS Mercury 0.00200 0.00213mg/L106 (80% - 120%)01/27/23 10:08 QC1205304804 MB U ND mg/L 01/27/23 10:07 Mercury QC1205304807 608391001 MS Mercury 0.00200 U ND 0.00212 mg/L106 (75%-125%) 01/27/23 10:13

Workorder:

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### **QC** Summary

Workorder: 608422 Page 9 of 11 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury Batch 2374419 QC1205304808 608391001 SDILT U ND U ND ug/L JP2 01/27/23 10:15 Mercury N/A (0%-10%)**Solids Analysis** 2376170 Batch QC1205307926 608418001 DUP 344 Total Dissolved Solids 341 0.876 (0%-5%)CH6 01/31/23 12:35 mg/L OC1205307924 LCS Total Dissolved Solids 300 301 mg/L100 (95%-105%) 01/31/23 12:35 QC1205307923 U ND 01/31/23 12:35 Total Dissolved Solids mg/L Spectrometric Analysis 2374521 Batch QC1205304980 LCS Total Sulfide 0.400 0.402 101 JW2 01/30/23 15:43 mg/L(85%-115%) OC1205304979 MB Total Sulfide U ND 01/30/23 15:43 mg/LQC1205304981 608410001 PS ND 0.387 Total Sulfide 0.400 U 01/30/23 15:43 mg/L 96.8 (75% - 125%)OC1205304983 608418002 PS Total Sulfide 0.400 U ND 0.352 86.7 (75%-125%) 01/30/23 15:43 mg/LQC1205304982 608410001 PSD Total Sulfide 0.400 U ND 0.392 1.29 98.1 (0%-15%)01/30/23 15:43 mg/L QC1205304984 608418002 PSD Total Sulfide 0.400 U ND 0.362 89.3 (0%-15%)01/30/23 15:43 mg/L2.82

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### **QC** Summary

Workorder: 608422 Page 10 of 11 Units **Parmname** NOM Sample Qual  $\mathbf{OC}$ RPD% REC% Range Anlst Date Time Titration and Ion Analysis Batch 2375518 QC1205306806 608051001 DUP 67.6 69.6 mg/L MS3 01/28/23 12:24 Alkalinity, Total as CaCO3 2.92 (0%-20%)Bicarbonate alkalinity (CaCO3) 67.6 69.6 mg/L 2.92 (0%-20%)U ND ND Carbonate alkalinity (CaCO3) U N/A mg/L QC1205306658 LCS 103 Alkalinity, Total as CaCO3 100 mg/L 103 (90%-110%) 01/28/23 12:18 QC1205306807 608051001 MS Alkalinity, Total as CaCO3 100 67.6 167 mg/L 99.6 (80%-120%) 01/28/23 12:30

#### **Notes:**

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed

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### QC Summary

Workorder: 608422 Page 11 of 11
Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

invalid for reporting to regulatory agencies

- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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.
- B The target analyte was detected in the associated blank.
- 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
- J See case narrative for an explanation

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 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.

\* 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

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

Atlanta, Georgia Joju Abraham

Workorder: 608815

**Contact:** 

Report Date: February 10, 2023

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Parmname	NOM	Sample Qua	al QC	Units	RPD%	REC%	Range Ar	nlst Date Time
Ion Chromatography Batch 2375453								
QC1205306674 608815001 DUP Chloride		3.36	3.36	mg/L	0.0149		(0%-20%) I	ILD1 01/27/23 20:08
Fluoride	U	ND U	ND	mg/L	N/A			
Nitrate-N	J	0.0655 J	0.0595	mg/L	9.6	^	(+/-0.100)	
Sulfate		75.3	74.2	mg/L	1.55		(0%-20%)	01/27/23 23:08
QC1205306563 LCS Chloride	5.00		4.55	mg/L		91	(90%-110%)	01/27/23 19:38
Fluoride	2.50		2.56	mg/L		102	(90%-110%)	
Nitrate-N	2.50		2.33	mg/L		93.3	(90%-110%)	
Sulfate	10.0		9.47	mg/L		94.7	(90%-110%)	
QC1205306562 MB Chloride		U	ND	mg/L				01/27/23 19:09
Fluoride		U	ND	mg/L				
Nitrate-N		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205306675 608815001 PS Chloride	5.00	3.36	8.31	mg/L		98.8	(90%-110%)	01/27/23 20:38

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# QC Summary

Workorder: 608815 Page 2 of 11 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography Batch 2375453 Fluoride 2.50 U ND 2.67 mg/L107 (90%-110%) JLD1 01/27/23 20:38 Nitrate-N 2.50 J 0.0655 2.35 91.4 (90%-110%) mg/L Sulfate 10.0 7.53 17.3 mg/L 98.1 (90%-110%) 01/27/23 23:37 **Metals Analysis - ICPMS** Batch 2375511 QC1205306650 LCS 0.0500 0.0503 101 SKJ 01/31/23 23:42 mg/L(80%-120%) Antimony Arsenic 0.0500 0.0524 mg/L 105 (80%-120%) Barium 0.0500 0.0492 98.4 mg/L (80%-120%) Beryllium 0.0500 0.0567 mg/L 113 (80%-120%) 02/01/23 13:22 Boron 0.100 0.112 112 (80%-120%) mg/L 0.0520 Cadmium 0.0500 mg/L 104 (80%-120%) 01/31/23 23:42 Calcium 2.00 2.14 mg/L107 (80%-120%) 0.0500 0.0515 103 Chromium mg/L (80%-120%) Cobalt 0.0500 0.0515 mg/L 103 (80%-120%) 2.00 2.02 101 Iron (80%-120%) mg/L 0.0500 Lead 0.0533 mg/L107 (80%-120%)

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## QC Summary

Workorder: 608815 Page 3 of 11 QC RPD% REC% Parmname **NOM** Sample Qual Units Range Anlst Date Time Metals Analysis - ICPMS Batch 2375511 Lithium 0.0500 0.0548 mg/L110 (80%-120%) SKJ 02/01/23 13:22 Magnesium 2.00 2.23 mg/L 112 (80%-120%) Manganese 0.0500 0.0513 mg/L103 (80%-120%) 01/31/23 23:42 0.0500 0.0530 106 (80%-120%)02/01/23 13:22 Molybdenum mg/LPotassium 2.00 2.06 mg/L 103 (80%-120%) 01/31/23 23:42 0.0503 0.0500 101 Selenium mg/L(80%-120%) 2.00 2.15 Sodium mg/L108 (80%-120%) 0.0500 0.0517 Thallium 103 (80%-120%) mg/L QC1205306649 MB U ND 01/31/23 23:38 Antimony mg/LU ND mg/L Arsenic U ND mg/LBarium U ND 02/01/23 13:20 Beryllium mg/LBoron U ND mg/LU ND 01/31/23 23:38 Cadmium mg/L Calcium U ND mg/L

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## QC Summary

Workorder: 608815 Page 4 of 11 NOM QC RPD% REC% Range Parmname Sample Qual Units Anlst Date Time Metals Analysis - ICPMS Batch 2375511 Chromium U ND mg/LSKJ 01/31/23 23:38 Cobalt U ND mg/L Iron U ND mg/LU ND Lead mg/L 02/01/23 13:20 Lithium U ND mg/L U ND mg/LMagnesium U ND 01/31/23 23:38 Manganese mg/LU ND 02/01/23 13:20 Molybdenum mg/LU ND Potassium mg/L 01/31/23 23:38 Selenium U ND mg/LU ND Sodium mg/L Thallium U ND mg/L QC1205306651 608815001 MS Antimony 0.0500 U ND 0.0518 mg/L 103 (75%-125%) 01/31/23 23:49 0.0500 0.00388 0.0546 J 101 (75%-125%) Arsenic mg/L Barium 0.0500 0.0525 0.101 mg/L96.6 (75% - 125%)

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## **QC** Summary

Page 5 of 11 Sample Qual **Parmname** NOM QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2375511 Batch Beryllium 0.0500 0.000422 0.0573 mg/L114 (75%-125%) SKJ 02/01/23 13:27 Boron 0.100 J 0.0104 0.117 106 (75%-125%) mg/L Cadmium 0.0500 U ND 0.0519 mg/L104 (75%-125%) 01/31/23 23:49 Calcium 2.00 16.8 19.3 mg/L N/A (75%-125%) Chromium 0.0500 0.0153 0.0671 mg/L 104 (75%-125%) 0.0500 U ND 0.0514 mg/L 103 Cobalt (75%-125%) 2.00 U ND 99.2 Iron 1.99 mg/L (75%-125%) Lead 0.0500 U ND 0.0536 107 mg/L (75% - 125%)ND 0.0500 U 0.0563 02/01/23 13:27 Lithium mg/L 110 (75% - 125%)2.00 9.68 N/A Magnesium 11.6 mg/L(75% - 125%)0.0500 J 0.00207 0.0523 100 (75%-125%) 01/31/23 23:49 Manganese mg/L 0.0500 U ND 0.0542 108 02/01/23 13:27 Molybdenum mg/L (75% - 125%)104 Potassium 2.00 4.41 6.48 mg/L (75%-125%) 01/31/23 23:49 Selenium 0.0500 0.00215 0.0511 97.9 (75% - 125%)mg/L 2.00 11.7 14.3 Sodium mg/L N/A (75%-125%)

Workorder:

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Parmname	NO	M	Sample Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Time
Metals Analysis - ICPMS Batch 2375511										
Thallium	0.0500	U	ND	0.0522	mg/L		104	(75%-125%)	SKJ	01/31/23 23:49
QC1205306652 608815001 MSD Antimony	0.0500	U	ND	0.0498	mg/L	3.93	99.4	(0%-20%)		01/31/23 23:52
Arsenic	0.0500	J	0.00388	0.0549	mg/L	0.541	102	(0%-20%)		
Barium	0.0500		0.0525	0.0994	mg/L	1.41	93.8	(0%-20%)		
Beryllium	0.0500	J	0.000422	0.0577	mg/L	0.723	115	(0%-20%)		02/01/23 13:29
Boron	0.100	J	0.0104	0.124	mg/L	6.12	114	(0%-20%)		
Cadmium	0.0500	U	ND	0.0503	mg/L	3.11	101	(0%-20%)		01/31/23 23:52
Calcium	2.00		16.8	18.5	mg/L	4.38	N/A	(0%-20%)		
Chromium	0.0500		0.0153	0.0660	mg/L	1.77	101	(0%-20%)		
Cobalt	0.0500	U	ND	0.0518	mg/L	0.69	103	(0%-20%)		
Iron	2.00	U	ND	2.00	mg/L	0.515	99.7	(0%-20%)		
Lead	0.0500	U	ND	0.0531	mg/L	0.849	106	(0%-20%)		
Lithium	0.0500	U	ND	0.0561	mg/L	0.276	110	(0%-20%)		02/01/23 13:29
Magnesium	2.00		9.68	11.8	mg/L	1.97	N/A	(0%-20%)		
Manganese	0.0500	J	0.00207	0.0516	mg/L	1.19	99.1	(0%-20%)		01/31/23 23:52

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## **QC** Summary

Workorder: 608815 Page 7 of 11 Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2375511 Batch Molybdenum 0.0500 U ND 0.0546 mg/L 0.616 109 (0%-20%)SKJ 02/01/23 13:29 Potassium 2.00 4.41 6.55 mg/L 1.08 107 (0%-20%)01/31/23 23:52 Selenium 0.0500 0.00215 0.0508 mg/L 0.632 97.3 (0%-20%)Sodium 2.00 11.7 14.5 mg/L 0.899 N/A(0%-20%)mg/L Thallium 0.0500 U ND 0.0522 0.0364 104 (0%-20%)QC1205306653 608815001 SDILT Antimony U ND U ND ug/L N/A (0%-20%)01/31/23 23:59 J Arsenic 3.88 U ND ug/L N/A (0%-20%)52.5 10.3 Barium ug/L 1.39 (0%-20%)0.422 U ND 02/01/23 13:33 Beryllium J ug/L N/A (0%-20%)J 10.4 J 5.27 (0%-20%)Boron ug/L 153 U ND U ND 01/31/23 23:59 Cadmium ug/L N/A (0%-20%)16800 3280 Calcium ug/L 2.22 (0%-20%)Chromium 15.3 3.02 1.13 (0%-20%)ug/L U ND U ND Cobalt ug/L N/A (0%-20%)Iron U ND U ND ug/L N/A (0%-20%)

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## **QC** Summary

Workorder: 608815 Page 8 of 11 Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2375511 Batch Lead U ND U ND ug/L N/A (0%-20%)SKJ 01/31/23 23:59 U Lithium ND U ND ug/L (0%-20%)02/01/23 13:33 N/A ug/L Magnesium 9680 1880 3.11 (0%-20%)J 2.07 U ND (0%-20%)Manganese ug/L N/A 01/31/23 23:59 Molybdenum U ND U ND ug/L N/A (0%-20%)02/01/23 13:33 4410 839 (0%-20%)01/31/23 23:59 Potassium ug/L 4.91 J U ND Selenium 2.15 ug/L N/A (0%-20%)Sodium 11700 2330 (0%-20%)ug/L .218 U ND U ND Thallium ug/L N/A (0%-20%)Metals Analysis-Mercury 2375754 QC1205307096 608803003 DUP U Mercury ND U ND mg/LN/A JP2 01/31/23 10:21 QC1205307095 LCS Mercury 0.00200 0.00211 mg/L105 (80% - 120%)01/31/23 10:11 QC1205307094 MB U ND mg/L 01/31/23 10:09 Mercury QC1205307097 608803003 MS Mercury 0.00200 U ND 0.00180 mg/L (75%-125%) 01/31/23 10:22

Workorder: 608815			·	~	•						Page 9 of 1	11
Parmname	N	ОМ	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time	_
Metals Analysis-Mercury Batch 2375754  QC1205307098 608803003 Mercury	SDILT	U	ND	U	ND	ug/L	N/A		(0%-10%)	JP2	01/31/23 10:2	24
Solids Analysis Batch 2376741												-
QC1205308819 608803009 Total Dissolved Solids	DUP		693		693	mg/L	0		(0%-5%)	СН6	02/01/23 13:0	)5
QC1205308817 LCS Total Dissolved Solids	30	0			300	mg/L		100	(95%-105%)		02/01/23 13:0	)5
QC1205308816 MB Total Dissolved Solids				U	ND	mg/L					02/01/23 13:0	)5
Batch 2377347												-
QC1205309759 608803013 Total Dissolved Solids	DUP		2280		2240	mg/L	1.68		(0%-5%)	СН6	02/02/23 14:2	28
QC1205309760 608969004 Total Dissolved Solids	DUP		898		882	mg/L	1.8		(0%-5%)		02/02/23 14:2	28
QC1205309758 LCS Total Dissolved Solids	30	0			301	mg/L		100	(95%-105%)		02/02/23 14:2	28
QC1205309757 MB Total Dissolved Solids				U	ND	mg/L					02/02/23 14:2	28
Spectrometric Analysis Batch 2376122												-
QC1205307836 LCS Total Sulfide	0.40	0			0.396	mg/L		99	(85%-115%)	НН2	02/02/23 11:4	12
QC1205307835 MB Total Sulfide				U	ND	mg/L					02/02/23 11:4	12

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## **QC** Summary

Workorder: 608815 Page 10 of 11 Units **Parmname** NOM Sample Qual QC RPD% REC% Range Anlst Date Time Spectrometric Analysis Batch 2376122 QC1205307839 608815006 PS ND 0.367 0.400 U mg/L 86.7 HH2 02/02/23 11:47 Total Sulfide (75% - 125%)QC1205307840 608815006 PSD ND Total Sulfide 0.400 U 0.374 mg/L 1.88 88.4 (0%-15%)02/02/23 11:48 **Titration and Ion Analysis** 2378067 Batch QC1205313003 608803012 DUP Alkalinity, Total as CaCO3 6.00 6.20 mg/L 3.28 ^ (+/-4.00)02/06/23 14:58 6.00 Bicarbonate alkalinity (CaCO3) 6.20 mg/L 3.28 ^ (+/-4.00)U Carbonate alkalinity (CaCO3) ND U ND mg/L N/A QC1205311158 LCS Alkalinity, Total as CaCO3 100 104 mg/L 104 (90%-110%) 02/06/23 14:46 QC1205313004 608803012 MS 6.00 107 Alkalinity, Total as CaCO3 100 mg/L 101 (80%-120%) 02/06/23 15:03

#### **Notes:**

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample

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## **QC** Summary

Page 11 of 11 **Parmname NOM** Sample Qual  $\mathbf{OC}$ Units RPD% REC% Anlst Date Time

- Range RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.

608815

- Analyte concentration is not detected above the detection limit ND
- % difference of sample and SD is >10%. Sample concentration must meet flagging criteria Е
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- 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
- N1See case narrative

Workorder:

- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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 R purposes.
- The target analyte was detected in the associated blank. R
- 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 e reporting purposes
- See case narrative for an explanation

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 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.
- \* 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: February 7, 2023

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

Atlanta, Georgia Joju Abraham

Contact: Joju Ab

Workorder: 608418

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2373867								
QC1205304001 608418004 DUP Chloride		6.46	6.46	mg/L	0.065		(0%-20%) HXC1	01/25/23 20:38
Fluoride		0.239	0.199	mg/L	18.2 ^		(+/-0.100)	
Nitrate-N		0.149	0.151	mg/L	0.867 ^		(+/-0.100)	
Sulfate		334	334	mg/L	0.0547		(0%-20%)	01/26/23 04:36
QC1205304000 LCS Chloride	5.00		4.85	mg/L		97.1	(90%-110%)	01/25/23 23:07
Fluoride	2.50		2.61	mg/L		105	(90%-110%)	
Nitrate-N	2.50		2.50	mg/L		99.8	(90%-110%)	
Sulfate	10.0		10.0	mg/L		100	(90%-110%)	
QC1205303999 MB Chloride		U	ND	mg/L				01/25/23 22:37
Fluoride		U	ND	mg/L				
Nitrate-N		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205304002 608418004 PS Chloride	5.00	6.46	12.5	mg/L		120*	(90%-110%)	01/25/23 22:07

		ge b	unina,	•				
Workorder: 608418								Page 2 of 11
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
<b>Ion Chromatography</b> Batch 2373867								
Fluoride	2.50	0.239	2.80	mg/L		103	(90%-110%) HXC1	01/25/23 22:07
Nitrate-N	2.50	0.149	2.67	mg/L		101	(90%-110%)	
Sulfate	10.0	13.4	24.4	mg/L		111*	(90%-110%)	01/26/23 05:06
Metals Analysis - ICPMS Batch 2374301								
QC1205304629 LCS Antimony	0.0500		0.0512	mg/L		102	(80%-120%) SKJ	02/01/23 18:21
Arsenic	0.0500		0.0540	mg/L		108	(80%-120%)	02/03/23 14:21
Barium	0.0500		0.0494	mg/L		98.9	(80%-120%)	02/01/23 18:21
Beryllium	0.0500		0.0599	mg/L		120	(80%-120%)	02/03/23 14:21
Boron	0.100		0.113	mg/L		113	(80%-120%)	
Cadmium	0.0500		0.0524	mg/L		105	(80%-120%)	02/01/23 18:21
Calcium	2.00		2.14	mg/L		107	(80%-120%)	
Chromium	0.0500		0.0525	mg/L		105	(80%-120%)	
Cobalt	0.0500		0.0523	mg/L		105	(80%-120%)	
Iron	2.00		2.04	mg/L		102	(80%-120%)	
Lead	0.0500		0.0549	mg/L		110	(80%-120%)	02/03/23 14:21

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## QC Summary

Workorder: 608418 Page 3 of 11 RPD% REC% Parmname NOM Sample Qual QC Units Range Anlst Date Time Metals Analysis - ICPMS Batch 2374301 Lithium 0.0500 0.0574 mg/L115 (80%-120%) SKJ 02/03/23 14:21 Magnesium 2.00 2.36 118 (80%-120%) mg/L Manganese 0.0500 0.0508 mg/L102 (80%-120%) 02/01/23 18:21 0.0500 0.0539 108 (80%-120%)Molybdenum mg/L 02/03/23 14:21 Potassium 2.00 2.08 mg/L 104 (80%-120%) 02/01/23 18:21 0.0500 0.0500 100 Selenium mg/L(80%-120%) 2.23 Sodium 2.00 mg/L111 (80%-120%) 0.0500 0.0526 Thallium 105 (80%-120%) mg/L QC1205304628 MB U ND 02/01/23 18:18 Antimony mg/LU ND mg/L 02/03/23 14:18 Arsenic U ND 02/01/23 18:18 Barium mg/LU ND Beryllium 02/03/23 14:18 mg/L Boron U ND mg/L U ND 02/01/23 18:18 Cadmium mg/L Calcium U ND mg/L

		QC D	<i></i>	y					
Workorder: 608418									Page 4 of 11
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS Batch 2374301									
Chromium		U	ND	mg/L				SKJ	02/01/23 18:18
Cobalt		U	ND	mg/L					
Iron		U	ND	mg/L					
				C					
Lead		U	ND	mg/L					02/03/23 14:18
Loud			112	mg/L					02/03/23 11.10
Lithium		U	ND	ma/I					
Littiitiii		O	ND	mg/L					
		11	NID	/T					
Magnesium		U	ND	mg/L					
									00/01/00/10/10
Manganese		U	ND	mg/L					02/01/23 18:18
Molybdenum		U	ND	mg/L					02/03/23 14:18
Potassium		U	ND	mg/L					02/01/23 18:18
Selenium		U	ND	mg/L					
Sodium		U	ND	mg/L					
Thallium		U	ND	mg/L					
QC1205304630 608410001									
Antimony	0.0500 U	ND	0.0516	mg/L		103	(75%-125%	)	02/01/23 18:29
Arsenic	0.0500 U	ND	0.0534	mg/L		105	(75%-125%	)	02/03/23 15:08
Barium	0.0500	0.0118	0.0604	mg/L		97.3	(75%-125%	)	02/01/23 18:29

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Workorder:	608418									Page 5 of 11
Parmname Metals Analysis	- ICPMS	NO	<u>M</u>	Sample (	QC QC	Units	RPD% REC	C% Range	Anlst	Date Time
	2374301									
Beryllium		0.0500	U	ND	0.0578	mg/L	11	5 (75%-125%	SKJ	02/06/23 16:16
Boron		0.100	U	ND	0.125	mg/L	12	1 (75%-125%	5)	02/03/23 15:08
Cadmium		0.0500	T T	ND	0.0524	mg/L	10.	5 (75%-125%		02/01/23 18:29
Cadillulli		0.0300	U	ND	0.0324	IIIg/L	10	3 (73%-123%	))	02/01/23 18:29
Calcium		2.00		4.86	7.20	mg/L	11	7 (75%-125%	5)	
Chromium		0.0500	J	0.00950	0.0628	mg/L	10	7 (75%-125%	5)	
Cobalt		0.0500	J	0.000829	0.0532	mg/L	10.	5 (75%-125%	5)	
Iron		2.00	J	0.0824	2.11	mg/L	10	2 (75%-125%	5)	
Lead		0.0500	IJ	ND	0.0551	mg/L	11	0 (75%-125%	<i>(</i> )	02/03/23 15:08
Leau		0.0300	Ü	ND	0.0331	mg/L	11	0 (7570-12570	,,	02/03/23 13.00
Lithium		0.0500	U	ND	0.0625	mg/L	12	4 (75%-125%	5)	
Magnesium		2.00		5.34	7.70	mg/L	11	8 (75%-125%	5)	
Manganese		0.0500		0.0348	0.0864	mg/L	10	3 (75%-125%	5)	02/01/23 18:29
MILL		0.0500		ND	0.0549	/T	11	0 (750) 1050		02/02/22 15 00
Molybdenum		0.0500	U	ND	0.0349	mg/L	11	0 (75%-125%	)	02/03/23 15:08
Potassium		2.00		0.432	2.54	mg/L	10	6 (75%-125%	5)	02/01/23 18:29
Selenium		0.0500	U	ND	0.0465	mg/L	93.	1 (75%-125%	5)	
Sodium		2.00		3.63	5.85	mg/L	11	1 (75%-125%	5)	

Workorder: 608418									Page 6 of 11
Parmname	NO	М	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 2374301									
Thallium	0.0500	U	ND	0.0530	mg/L		106	(75%-125%) SK	J 02/01/23 18:29
QC1205304631 608410001 MSD Antimony	0.0500	U	ND	0.0500	mg/L	3.18	99.4	(0%-20%)	02/01/23 18:32
Arsenic	0.0500	U	ND	0.0541	mg/L	1.27	106	(0%-20%)	02/03/23 15:11
					_				
Barium	0.0500		0.0118	0.0587	mg/L	3	93.7	(0%-20%)	02/01/23 18:32
Beryllium	0.0500	U	ND	0.0558	mg/L	3.42	112	(0%-20%)	02/06/23 16:18
Boron	0.100	U	ND	0.124	mg/L	0.226	121	(0%-20%)	02/03/23 15:11
					8			(373 2373)	
Cadmium	0.0500	U	ND	0.0503	mg/L	4.08	101	(0%-20%)	02/01/23 18:32
Calcium	2.00		4.86	7.13	mg/L	0.991	113	(0%-20%)	
Chromium	0.0500	J	0.00950	0.0614	mg/L	2.16	104	(0%-20%)	
Cobalt	0.0500	J	0.000829	0.0530	mg/L	0.458	104	(0%-20%)	
Iron	2.00	J	0.0824	2.06	mg/L	2.49	99	(0%-20%)	
Lead	0.0500	U	ND	0.0543	mg/L	1.38	109	(0%-20%)	02/03/23 15:11
Lithium	0.0500	U	ND	0.0623	mg/L	0.261	123	(0%-20%)	
Magnesium	2.00		5.34	7.85	mg/L	1.81	125	(0%-20%)	
Manganese	0.0500		0.0348	0.0852	mg/L	1.43	101	(0%-20%)	02/01/23 18:32

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## **QC** Summary

608418 Page 7 of 11 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374301 Batch Molybdenum 0.0500 U ND 0.0558 mg/L1.5 112 (0%-20%)SKJ 02/03/23 15:11 Potassium 2.00 0.432 2.55 mg/L 0.416 106 (0%-20%)02/01/23 18:32 mg/L Selenium 0.0500 ND 0.0467 0.333 93.4 (0%-20%)104 Sodium 2.00 3.63 5.71 mg/L 2.43 (0%-20%)Thallium 0.0500 U ND 0.0519 mg/L 2.13 104 (0%-20%)QC1205304632 608410001 SDILT Antimony U ND U ND ug/L N/A (0%-20%)02/01/23 18:39 U Arsenic ND U ND ug/L N/A (0%-20%)02/03/23 15:17 11.8 2.36 Barium J ug/L .33 (0%-20%)02/01/23 18:39 U ND U ND Beryllium ug/L N/A (0%-20%)02/06/23 16:20 U ND U ND (0%-20%)02/03/23 15:17 Boron ug/L N/A U ND U ND Cadmium ug/L N/A (0%-20%)02/01/23 18:39 1000 Calcium 4860 ug/L (0%-20%)3.15 Chromium J 9.50 U ND N/A (0% - 20%)ug/L J 0.829 U ND Cobalt ug/L N/A (0%-20%)Iron J 82.4 U ND ug/L N/A (0%-20%)

Workorder:

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Workorder:	608418												Page 8 of 11
<b>Parmname</b>			NO	M	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis Batch	- <b>ICPMS</b> 2374301												
Lead				U	ND	U	ND	ug/L	N/A		(0%-20%)	SKJ	02/03/23 15:17
Lithium				U	ND	U	ND	ug/L	N/A		(0%-20%)		
Magnesium					5340		1050	ug/L	1.84		(0%-20%)		
Manganese					34.8		6.88	ug/L	1.11		(0%-20%)		02/01/23 18:39
Molybdenum				U	ND	U	ND	ug/L	N/A		(0%-20%)		02/03/23 15:17
Potassium					432	J	97.3	ug/L	12.6		(0%-20%)		02/01/23 18:39
Selenium				U	ND	U	ND	ug/L	N/A		(0%-20%)		
Sodium					3630		689	ug/L	4.95		(0%-20%)		
Thallium				U	ND	U	ND	ug/L	N/A		(0%-20%)		
Metals Analysis- Batch	<b>Mercury</b> 2374419												
QC12053048 Mercury	806 608391001	DUP		U	ND	U	ND	mg/L	N/A			JP2	01/27/23 10:12
QC12053048 Mercury	805 LCS		0.00200				0.00213	mg/L		106	(80%-120%)		01/27/23 10:08
QC12053048 Mercury	804 MB					U	ND	mg/L					01/27/23 10:07
QC12053048 Mercury	608391001	MS	0.00200	U	ND		0.00212	mg/L		106	(75%-125%)		01/27/23 10:13

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## **QC** Summary

Workorder: 608418 Page 9 of 11 **Parmname** NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury Batch 2374419 QC1205304808 608391001 SDILT U ND U ND ug/L JP2 01/27/23 10:15 Mercury N/A (0%-10%)**Solids Analysis** 2376170 Batch QC1205307926 608418001 DUP 344 Total Dissolved Solids 341 0.876 (0%-5%)CH6 01/31/23 12:35 mg/L OC1205307924 LCS Total Dissolved Solids 300 301 mg/L100 (95%-105%) 01/31/23 12:35 OC1205307923 U ND 01/31/23 12:35 Total Dissolved Solids mg/L Spectrometric Analysis 2374521 Batch QC1205304980 LCS Total Sulfide 0.400 0.402 101 JW2 01/30/23 15:43 mg/L(85%-115%) OC1205304979 MB Total Sulfide U ND 01/30/23 15:43 mg/LQC1205304983 608418002 PS ND 0.400 U 0.352 01/30/23 15:43 Total Sulfide mg/L 86.7 (75% - 125%)QC1205304984 608418002 PSD Total Sulfide 0.400 U ND 0.362 2.82 89.3 (0%-15%)01/30/23 15:43 mg/L**Titration and Ion Analysis** Batch 2375521 QC1205306667 608540001 DUP EK1 01/30/23 16:11 Alkalinity, Total as CaCO3 71.6 72.0 mg/L 0.557 (0%-20%)Bicarbonate alkalinity (CaCO3) 71.6 72.0 0.557 (0%-20%)mg/L

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## **QC** Summary

Workorder: 608418 Page 10 of 11 **Parmname** NOM Sample Qual  $\mathbf{OC}$ Units RPD% REC% Range Anlst Date Time **Titration and Ion Analysis** Batch 2375521 Carbonate alkalinity (CaCO3) U ND ND mg/L N/A EK1 01/30/23 16:11 QC1205306666 LCS 100 101 Alkalinity, Total as CaCO3 mg/L 101 (90%-110%) 01/30/23 15:14 QC1205306668 608540001 MS 100 71.6 173 101 01/30/23 16:15 Alkalinity, Total as CaCO3 mg/L (80%-120%)

#### Notes:

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- 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
- N1 See case narrative
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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.

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## QC Summary

Workorder: 608418

Parmname

NOM Sample Qual QC Units RPD% REC% Range AnIst Date Time

- B The target analyte was detected in the associated blank.
- 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
- J See case narrative for an explanation

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 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.
- \* 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

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

Atlanta, Georgia Joju Abraham

Workorder: 608614

**Contact:** 

Report Date: February 9, 2023

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Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography	-0									
Batch 237476 QC1205305382 60 Chloride			5.84		5.87	mg/L	0.538		(0%-20%) HXC1	01/26/23 21:55
Fluoride			0.130		0.180	mg/L	31.8 ^		(+/-0.100)	
Nitrate-N		U	ND	U	ND	mg/L	N/A			01/26/23 23:25
Sulfate			41.0		41.1	mg/L	0.217		(0%-20%)	
QC1205305381 Chloride	LCS	5.00			4.83	mg/L		96.6	(90%-110%)	01/26/23 21:25
Fluoride		2.50			2.61	mg/L		104	(90%-110%)	
Nitrate-N		2.50			2.49	mg/L		99.4	(90%-110%)	
Sulfate		10.0			10.0	mg/L		100	(90%-110%)	
QC1205305380 Chloride	МВ			U	ND	mg/L				01/26/23 19:56
Fluoride				U	ND	mg/L				
Nitrate-N				U	ND	mg/L				
Sulfate				U	ND	mg/L				
QC1205305383 60 Chloride	08602001 PS	5.00	5.84		11.6	mg/L		115*	(90%-110%)	01/26/23 22:25

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## **QC** Summary

Workorder: 608614 Page 2 of 12 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography 2374768 Batch Fluoride 2.50 0.130 2.78 mg/L106 (90%-110%) HXC1 01/26/23 22:25 Nitrate-N 2.50 U ND 2.47 98.7 (90%-110%) 01/26/23 23:55 mg/L Sulfate 10.0 8.20 18.7 mg/L 105 (90%-110%) Batch 2374833 QC1205305506 608457001 DUP Chloride 10.0 10.0 mg/L 0.186 (0%-20%) HXC1 01/27/23 04:25 0.585 Fluoride 0.734 mg/L22.6\* (0%-20%)01/26/23 22:15 1.17 Nitrate-N 1.18 mg/L 1.04 (0%-20%)01/27/23 04:25 Sulfate 5.03 5.08 01/26/23 22:15 mg/L 1.03 (0%-20%)QC1205305505 LCS Chloride 5.00 4.84 96.8 (90%-110%) 01/26/23 21:44 mg/L2.50 2.52 Fluoride mg/L 101 (90%-110%) Nitrate-N 2.50 2.39 95.7 mg/L (90%-110%) Sulfate 10.0 9.68 96.8 (90%-110%) mg/LQC1205305504 MB U ND 01/26/23 20:12 Chloride mg/L Fluoride U ND mg/L U ND Nitrate-N mg/L

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## QC Summary

Workorder: 608614 Page 3 of 12 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Ion Chromatography 2374833 Batch Sulfate U ND mg/L HXC1 01/26/23 20:12 QC1205305507 608457001 PS 5.01 Chloride 5.00 10.5 mg/L 110 (90%-110%) 01/27/23 04:56 Fluoride 2.50 0.585 3.14 102 (90%-110%) 01/26/23 22:46 mg/L Nitrate-N 2.50 0.590 2.87 91.3 (90%-110%) 01/27/23 04:56 mg/L Sulfate 10.0 5.03 15.4 mg/L 104 (90%-110%) 01/26/23 22:46 Metals Analysis - ICPMS 2374786 Batch QC1205305393 LCS 0.0500 0.0526 mg/L 105 SKJ 02/08/23 17:36 Antimony (80% - 120%)0.0527 Arsenic 0.0500 mg/L 105 (80% - 120%)0.0500 0.0508 102 Barium mg/L (80%-120%) 0.0597 Beryllium 0.0500 02/07/23 18:32 mg/L 119 (80%-120%) Boron 0.100 0.119 119 (80%-120%) 02/08/23 17:36 mg/L0.0500 0.0538 108 Cadmium mg/L (80%-120%) Calcium 2.00 2.20 110 (80%-120%) mg/LChromium 0.0500 0.0522 104 mg/L (80%-120%) Cobalt 0.0500 0.0514 mg/L 103 (80%-120%)

Workorder: 608614									Page 4 of 12
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Ar	ılst	Date Time
Metals Analysis - ICPMS Batch 2374786									
Iron	2.00		2.04	mg/L		102	(80%-120%)	SKJ	02/08/23 17:36
Lead	0.0500		0.0526	mg/L		105	(80%-120%)		
Lithium	0.0500		0.0571	mg/L		114	(80%-120%)		02/07/23 18:32
Magnesium	2.00		2.24	mg/L		112	(80%-120%)		02/08/23 17:36
Manganese	0.0500		0.0518	mg/L		104	(80%-120%)		
Molybdenum	0.0500		0.0547	mg/L		109	(80%-120%)		
Potassium	2.00		2.06	mg/L		103	(80%-120%)		
Selenium	0.0500		0.0527	mg/L		105	(80%-120%)		
Sodium	2.00		2.24	mg/L		112	(80%-120%)		
Thallium	0.0500		0.0516	mg/L		103	(80%-120%)		
QC1205305392 MB Antimony		U	ND	mg/L					02/08/23 17:32
Arsenic		U	ND	mg/L					
Barium		U	ND	mg/L					
Beryllium		U	ND	mg/L					02/07/23 18:29
Boron		U	ND	mg/L					02/08/23 17:32

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Workorder:	608614												5 of 12
Parmname		NO	<u>M</u>	Sample Q	)ual	QC	Units	RPD%	REC%	Range	Anlst	<b>Date</b>	Time
Metals Analysis Batch	- ICPMS 2374786												
Cadmium					U	ND	mg/L				SKJ	02/08/2	23 17:32
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					02/07/2	23 18:29
Magnesium					U	ND	mg/L					02/08/2	23 17:32
Manganese					U	ND	mg/L						
Molybdenum					U	ND	mg/L						
Potassium					U	ND	mg/L						
Selenium					U	ND	mg/L						
Sodium					U	ND	mg/L						
Thallium					U	ND	mg/L						
QC12053053 Antimony	394 608602001	MS 0.0500	U	ND		0.0535	mg/L		107	(75%-125%	n)	02/08/2	23 19:13

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## QC Summary

608614 Page 6 of 12 Sample Qual Parmname **NOM** QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch Arsenic 0.0500 0.00221 0.0524 mg/L100 (75%-125%) SKJ 02/08/23 19:13 Barium 0.0500 0.0498 0.0988 97.9 (75%-125%) mg/L Beryllium 0.0500 U ND 0.0601 mg/L 120 (75% - 125%)02/07/23 18:40 Boron 0.100 1.47 1.54 mg/L N/A (75%-125%) 02/08/23 17:43 Cadmium 0.0500 U ND 0.0530 mg/L 106 (75%-125%) 02/08/23 19:13 25.1 27.8 mg/L Calcium 2.00 N/A (75%-125%)0.0500 U ND 0.0520 Chromium mg/L 103 (75%-125%) Cobalt 0.0500 U ND 0.0513 102 (75% - 125%)mg/L 0.0504 2.04 Iron 2.00 J mg/L 99.6 (75%-125%) 0.0500 U ND 0.0518 104 Lead mg/L(75% - 125%)Lithium 0.0500J 0.00728 0.0653116 (75%-125%) 02/07/23 18:40 mg/L 2.00 10.8 13.1 N/A 02/08/23 19:13 Magnesium mg/L (75% - 125%)0.459 Manganese 0.0500 0.396 mg/L N/A (75%-125%) 02/09/23 11:05 Molybdenum 0.0500 ND 0.0554 111 (75% - 125%)02/08/23 19:13 mg/L 2.00 2.95 5.22 Potassium mg/L 114 (75%-125%)

Workorder:

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## **QC** Summary

Workorder: 608614 Page 7 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch Selenium 0.0500 U ND 0.0492 mg/L98.3 (75% - 125%)SKJ 02/08/23 19:13 Sodium 2.00 12.5 14.9 N/A (75%-125%) mg/L Thallium 0.0500 U ND 0.0513 mg/L 103 (75% - 125%)QC1205305395 608602001 MSD Antimony 0.0500 U ND 0.0526 mg/L 1.66 105 (0%-20%)02/08/23 19:17 0.0500 0.00221 0.0525 101 J mg/L 0.168 (0%-20%)Arsenic Barium 0.0500 0.0498 0.0968 mg/L 2 94 (0%-20%)Beryllium 0.0500 U ND 0.0617 2.74 123 (0%-20%)02/07/23 18:43 mg/L 1.47 Boron 0.100 1.61 mg/L 4.7 N/A(0%-20%)02/08/23 17:47 ND 0.0544 02/08/23 19:17 Cadmium 0.0500 U 2.71 109 (0%-20%)mg/L 2.00 25.1 27.2 N/A Calcium mg/L 2.09 (0%-20%)0.0500 U ND 0.0516 102 Chromium mg/L 0.689 (0%-20%)ND 0.0501 Cobalt 0.0500 U mg/L 99.8 (0%-20%)2.39 2.00 0.0504 2.01 1.41 98.2 (0% - 20%)Iron mg/L ND 0.0502 0.0500 U 100 mg/L 3.16 (0%-20%)Lead Lithium 0.0500 J 0.00728 0.0658 mg/L 0.747 117 (0%-20%)02/07/23 18:43

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## **QC** Summary

Workorder: 608614 Page 8 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch Magnesium 2.00 10.8 13.2 mg/L0.43 N/A (0%-20%)SKJ 02/08/23 19:17 Manganese 0.0500 0.396 0.444 3.41 N/A(0%-20%)02/09/23 11:07 mg/L mg/L Molybdenum 0.0500 ND 0.0559 0.82 112 (0%-20%)02/08/23 19:17 2.95 109 Potassium 2.00 5.12 mg/L 1.87 (0%-20%)Selenium 0.0500 U ND 0.0498 mg/L 1.27 99.6 (0%-20%)12.5 14.4 mg/L (0%-20%)Sodium 2.00 3.52 N/A0.0500 U ND 0.0494 Thallium mg/L 3.8 98.8 (0%-20%)QC1205305396 608602001 SDILT U ND U ND Antimony ug/L N/A (0%-20%)02/08/23 19:24 U ND J 2.21 ug/L N/A (0%-20%)Arsenic 49.8 9.94 (0%-20%)Barium ug/L .173 U ND U ND Beryllium ug/L N/A (0%-20%)02/07/23 18:50 147 37.0 Boron ug/L (0%-20%)02/08/23 17:50 26.2 Cadmium U ND U ND N/A (0%-20%)02/08/23 19:24 ug/L 25100 5080 Calcium ug/L 1.08 (0%-20%)Chromium U ND U ND ug/L N/A (0%-20%)

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## **QC** Summary

Workorder: 608614 Page 9 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 2374786 Batch (0%-20%) Cobalt U ND U ND ug/L N/A SKJ 02/08/23 19:24 J 50.4 U ND ug/L (0%-20%)Iron N/A ug/L Lead U ND U ND N/A (0%-20%)J 7.28 U ND (0%-20%)Lithium ug/L N/A 02/07/23 18:50 Magnesium 10800 2170 ug/L .232 (0%-20%)02/08/23 19:24 396 79.8 (0%-20%)ug/L .655 02/09/23 11:11 Manganese U U ND 02/08/23 19:24 Molybdenum ND ug/L N/A (0%-20%)Potassium 2950 585 (0%-20%)ug/L .814 U ND U ND Selenium ug/L N/A (0%-20%)Sodium 12500 2450 ug/L 1.88 (0%-20%)U Thallium ND U ND (0%-20%)ug/L N/A Metals Analysis-Mercury Batch 2375028 QC1205305820 608516009 DUP U Mercury ND U ND mg/L N/A JP2 01/30/23 12:15 QC1205305819 LCS 0.00200 0.00188 mg/L93.8 (80%-120%) 01/30/23 12:07 Mercury QC1205305818 MB U 01/30/23 12:05 Mercury ND mg/L

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## **QC** Summary

Workorder: 608614 Page 10 of 12 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Metals Analysis-Mercury Batch 2375028 QC1205305821 608516009 MS ND 0.00184 0.00200 U mg/L 91.9 JP2 01/30/23 12:17 (75% - 125%)QC1205305822 608516009 SDILT U ND Mercury U ND ug/L N/A (0%-10%)01/30/23 12:19 **Solids Analysis** 2376740 Batch QC1205308815 608602001 DUP **Total Dissolved Solids** 156 154 mg/L 1.29 (0%-5%)CH6 02/01/23 11:35 QC1205308813 LCS Total Dissolved Solids 300 302 mg/L 101 (95%-105%) 02/01/23 11:35 QC1205308812 MB U ND 02/01/23 11:35 **Total Dissolved Solids** mg/L 2376741 Batch QC1205308819 608803009 DUP **Total Dissolved Solids** 693 693 mg/L0 (0%-5%)CH6 02/01/23 13:05 OC1205308817 LCS 300 300 100 02/01/23 13:05 **Total Dissolved Solids** (95%-105%) mg/L QC1205308816 MB U ND 02/01/23 13:05 Total Dissolved Solids mg/L Spectrometric Analysis Batch QC1205306028 LCS 0.400 0.413 Total Sulfide 103 (85%-115%) JW2 01/30/23 15:41 mg/L QC1205306027 MB U ND 01/30/23 15:41 Total Sulfide mg/L

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## **QC** Summary

Workorder: 608614 Page 11 of 12 Units **Parmname NOM** Sample Qual QC RPD% REC% Range Anlst Date Time Spectrometric Analysis Batch 2375142 QC1205306031 608614004 PS ND 0.392 0.400 U mg/L 96.8 JW2 01/30/23 15:42 Total Sulfide (75% - 125%)QC1205306032 608614004 PSD ND 0.382 Total Sulfide 0.400 U mg/L 2.6 94.3 (0%-15%)01/30/23 15:42 **Titration and Ion Analysis** 2379826 Batch QC1205313789 608555001 DUP Alkalinity, Total as CaCO3 55.2 55.6 mg/L 0.722 (0%-20%)MS3 02/07/23 13:24 55.6 Bicarbonate alkalinity (CaCO3) 55.2 mg/L 0.722 (0%-20%)U Carbonate alkalinity (CaCO3) ND U ND mg/L N/A QC1205313786 LCS Alkalinity, Total as CaCO3 100 103 mg/L 103 (90%-110%) 02/07/23 12:39 QC1205313790 608555001 MS 55.2 158 Alkalinity, Total as CaCO3 100 mg/L 102 (80%-120%) 02/07/23 13:27

#### **Notes:**

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- N Metals--The Matrix spike sample recovery is not within specified control limits
- H Analytical holding time was exceeded
- < Result is less than value reported
- > Result is greater than value reported
- h Preparation or preservation holding time was exceeded
- R Sample results are rejected
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample

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## **QC** Summary

Page 12 of 12 **Parmname NOM** Sample Qual  $\mathbf{OC}$ Units RPD% REC% Range Anlst Date Time

- RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- N/A RPD or %Recovery limits do not apply.

608614

- Analyte concentration is not detected above the detection limit ND
- % difference of sample and SD is >10%. Sample concentration must meet flagging criteria Е
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- 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
- N1See case narrative

Workorder:

- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- 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 R purposes.
- The target analyte was detected in the associated blank. R
- 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 e reporting purposes
- See case narrative for an explanation

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 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.
- \* 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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#### Technical Case Narrative Georgia Power Company SDG #: 608815

### **Metals**

**Product: Determination of Metals by ICP-MS Analytical Method:** SW846 3005A/6020B **Analytical Procedure:** GL-MA-E-014 REV# 35

**Analytical Batch:** 2375511

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2375510

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815005	BRA-PZ-52D
1205306649	Method Blank (MB)ICP-MS
1205306650	Laboratory Control Sample (LCS)
1205306653	608815001(BRA-PZ-13SL) Serial Dilution (SD)
1205306651	608815001(BRA-PZ-13SS) Matrix Spike (MS)
1205306652	608815001(BRA-PZ-13SSD) 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 608815002 (BRA-PZ-70I) and 608815005 (BRA-PZ-52D) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

Analyte	608815			
	002	005		
Boron	20X	1X		
Magnesium	5X	5X		
Sodium	1X	10X		

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 39

**Analytical Batch:** 2375754

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 39

**Preparation Batch:** 2375753

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815005	BRA-PZ-52D
1205307094	Method Blank (MB)CVAA
1205307095	Laboratory Control Sample (LCS)
1205307098	608803003(BRA-BRGWC-30IL) Serial Dilution (SD)
1205307096	608803003(BRA-BRGWC-30ID) Sample Duplicate (DUP)
1205307097	608803003(BRA-BRGWC-30IS) 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:** 2375453

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608815001 BRA-PZ-13S

608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815006	BRA-PZ-52D
1205306562	Method Blank (MB)
1205306563	Laboratory Control Sample (LCS)
1205306674	608815001(BRA-PZ-13S) Sample Duplicate (DUP)
1205306675	608815001(BRA-PZ-13S) 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 1205306674 (BRA-PZ-13SDUP), 1205306675 (BRA-PZ-13SPS), 608815001 (BRA-PZ-13S), 608815002 (BRA-PZ-70I), 608815003 (BRA-APE-FD-05) and 608815006 (BRA-PZ-52D) were diluted because target analyte concentrations exceeded the calibration range. The following sample 608815002 (BRA-PZ-70I) in this sample group was diluted due to matrix interference. 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	608815			
	001	002	003	006
Chloride	1X	1X	1X	10X
Fluoride	1X	2X	1X	1X
Sulfate	10X	20X	10X	10X

#### **Miscellaneous Information**

#### **Manual Integrations**

Sample 608815006 (BRA-PZ-52D) was 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# 20

**Analytical Batch:** 2376741

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification
608815005 BRA-PZ-52D
1205308816 Method Blank (MB)

1205308817 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:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2377347

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
1205309757	Method Blank (MB)
1205309758	Laboratory Control Sample (LCS)
1205309759	608803013(BRA-PZ-61I) Sample Duplicate (DUP)
1205309760	608969004(BRA-PZ-57I) 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:** Sulfide, Total

Analytical Method: SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

**Analytical Batch:** 2376122

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815006	BRA-PZ-52D
1205307835	Method Blank (MB)
1205307836	Laboratory Control Sample (LCS)
1205307839	608815006(BRA-PZ-52D) Post Spike (PS)
1205307840	608815006(BRA-PZ-52D) Post Spike Duplicate (PSD)

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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:** 2378067

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608815001	BRA-PZ-13S
608815002	BRA-PZ-70I
608815003	BRA-APE-FD-05
608815004	BRA-APE-EB-10
608815006	BRA-PZ-52D
1205311158	Laboratory Control Sample (LCS)
1205313003	608803012(BRA-PZ-60I) Sample Duplicate (DUP)
1205313004	608803012(BRA-PZ-60I) 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.

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# Technical Case Narrative Georgia Power Company SDG #: 608614

# **Metals**

Product: Determination of Metals by ICP-MS Analytical Method: SW846 3005A/6020B Analytical Procedure: GL-MA-E-014 REV# 35

**Analytical Batch:** 2374786

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2374785

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205305392	Method Blank (MB)ICP-MS
1205305393	Laboratory Control Sample (LCS)
1205305396	608602001(BRA-PZ-44L) Serial Dilution (SD)
1205305394	608602001(BRA-PZ-44S) Matrix Spike (MS)
1205305395	608602001(BRA-PZ-44SD) 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 boron. Client sample concentrations were less than the MDL or greater than two times the CRDL; therefore the data were not adversely affected. 608614001 (BRA-BRGWC-36S), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D).

#### **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**

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# **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 608614001 (BRA-BRGWC-36S), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

A 1 + -	608614			
Analyte	001	003	004	
Boron	10X	10X	10X	
Calcium	1X	1X	5X	
Manganese	1X	10X	1X	

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

Analytical Procedure: GL-MA-E-010 REV# 39

**Analytical Batch:** 2375028

**Preparation Method:** SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 39

**Preparation Batch:** 2375027

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205305818	Method Blank (MB)CVAA
1205305819	Laboratory Control Sample (LCS)
1205305822	608516009(NonSDGL) Serial Dilution (SD)
1205305820	608516009(NonSDGD) Sample Duplicate (DUP)
1205305821	608516009(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

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**Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

**Analytical Batch:** 2374768

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification	
608614001	BRA-BRGWC-36S	
1205305380	Method Blank (MB)	
1205305381	Laboratory Control Sample (LCS)	
1205305382	608602001(BRA-PZ-44) Sample Duplicate (DUP)	

1205305383 608602001(BRA-PZ-44) 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	1205305383 (BRA-PZ-44PS)	115* (90%-110%)

# **Technical Information**

## **Sample Dilutions**

The following samples 1205305382 (BRA-PZ-44DUP), 1205305383 (BRA-PZ-44PS) and 608614001 (BRA-BRGWC-36S) were diluted because target analyte concentrations exceeded the calibration range. The following samples 1205305382 (BRA-PZ-44DUP) and 1205305383 (BRA-PZ-44PS) in this sample group were diluted due to matrix interference. 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.

Analysta	608614	
Analyte	001	
Sulfate	20X	

**Product: Ion Chromatography Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30

**Analytical Batch:** 2374833

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The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205305504	Method Blank (MB)
1205305505	Laboratory Control Sample (LCS)
1205305506	608457001(NonSDG) Sample Duplicate (DUP)
1205305507	608457001(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.

#### **Quality Control (QC) Information**

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Fluoride	1205305506 (Non SDG 608457001DUP)	22.6* (0%-20%)

# **Technical Information**

# **Sample Dilutions**

The following samples 1205305506 (Non SDG 608457001DUP), 1205305507 (Non SDG 608457001PS), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D) were diluted because target analyte concentrations exceeded the calibration range. The following samples 1205305506 (Non SDG 608457001DUP), 1205305507 (Non SDG 608457001PS), 608614002 (BRA-BRGWC-37S), 608614003 (BRA-BRGWC-38S) and 608614004 (BRA-PZ-53D) in this sample group were diluted due to matrix interference. 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.

A l 4 -	608614			
Analyte	002	003	004	
Nitrate-N	2X	2X	2X	
Sulfate	1X	40X	40X	

#### **Miscellaneous Information**

# **Manual Integrations**

Samples 608614004 (BRA-PZ-53D) and 608614006 (BRA-APE-FB-08) were manually integrated to correctly position the baseline as set in the calibration standards.

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**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2376740

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#

608614001

BRA-BRGWC-36S

608614002

BRA-BRGWC-37S

1205308812

Method Blank (MB)

Laboratory Control Sample (LCS)

1205308815 608602001(BRA-PZ-44) 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# 20

**Analytical Batch:** 2376741

The following samples were analyzed using the above methods and analytical procedure(s).

**GEL Sample ID# Client Sample Identification** 608614003 **BRA-BRGWC-38S** 608614004 BRA-PZ-53D BRA-APE-EB-09 608614005 608614006 BRA-APE-FB-08 1205308816 Method Blank (MB) 1205308817 Laboratory Control Sample (LCS) 608803009(BRA-PZ-51D) Sample Duplicate (DUP) 1205308819

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:** Sulfide, Total

Analytical Method: SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

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**Analytical Batch:** 2375142

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608614001	BRA-BRGWC-36S
608614002	BRA-BRGWC-37S
608614003	BRA-BRGWC-38S
608614004	BRA-PZ-53D
608614005	BRA-APE-EB-09
608614006	BRA-APE-FB-08
1205306027	Method Blank (MB)
1205306028	Laboratory Control Sample (LCS)
1205306031	608614004(BRA-PZ-53D) Post Spike (PS)
1205306032	608614004(BRA-PZ-53D) Post Spike Duplicate (PSD)

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:** 2379826

The following samples were analyzed using the above methods and analytical procedure(s).

Client Sample Identification
BRA-BRGWC-36S
BRA-BRGWC-37S
BRA-BRGWC-38S
BRA-PZ-53D
BRA-APE-EB-09
BRA-APE-FB-08
Laboratory Control Sample (LCS)
608555001(NonSDG) Sample Duplicate (DUP)
608555001(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.

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# Technical Case Narrative Georgia Power Company SDG #: 608422

# **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2374301

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2374300

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304628	Method Blank (MB)ICP-MS
1205304629	Laboratory Control Sample (LCS)
1205304632	608410001(BRA-BRGWA-2SL) Serial Dilution (SD)
1205304630	608410001(BRA-BRGWA-2SS) Matrix Spike (MS)
1205304631	608410001(BRA-BRGWA-2SSD) 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 608422001 (BRA-APE-FD-04) was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument.

A 1	608422	
Analyte	001	
Boron	10X	
Calcium	10X	

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**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 39

**Analytical Batch:** 2374419

**Preparation Method:** SW846 7470A Prep

Preparation Procedure: GL-MA-E-010 REV# 39

**Preparation Batch:** 2374418

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304804	Method Blank (MB)CVAA
1205304805	Laboratory Control Sample (LCS)
1205304808	608391001(NonSDGL) Serial Dilution (SD)
1205304806	608391001(NonSDGD) Sample Duplicate (DUP)
1205304807	608391001(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:** 2374002

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	<u>Client Sample Identification</u>
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304357	Method Blank (MB)
1205304358	Laboratory Control Sample (LCS)
1205304359	608413001(BRA-BRGWA-12S) Sample Duplicate (DUP)
1205304360	608413001(BRA-BRGWA-12S) 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 sample 608422001 (BRA-APE-FD-04) was diluted because target analyte concentrations exceeded the calibration range. The following samples 1205304359 (BRA-BRGWA-12SDUP), 1205304360 (BRA-BRGWA-12SPS) and 608422001 (BRA-APE-FD-04) in this sample group were diluted due to matrix interference. 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.

Amalasta	608422	
Analyte	001	
Chloride	40X	
Nitrate-N	2X	
Sulfate	40X	

# **Miscellaneous Information**

## **Manual Integrations**

Sample 608422001 (BRA-APE-FD-04) was 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# 20

**Analytical Batch:** 2376170

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205307923	Method Blank (MB)
1205307924	Laboratory Control Sample (LCS)
1205307926	608418001(BRA-BRGWC-17S) 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.

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**Product:** Sulfide, Total

Analytical Method: SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

**Analytical Batch:** 2374521

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205304979	Method Blank (MB)
1205304980	Laboratory Control Sample (LCS)
1205304981	608410001(BRA-BRGWA-2S) Post Spike (PS)
1205304982	608410001(BRA-BRGWA-2S) Post Spike Duplicate (PSD)
1205304983	608418002(BRA-BRGWC-33S) Post Spike (PS)
1205304984	608418002(BRA-BRGWC-33S) Post Spike Duplicate (PSD)

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:** 2375518

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
608422001	BRA-APE-FD-04
608422002	BRA-APE-FB-07
1205306658	Laboratory Control Sample (LCS)
1205306806	608051001(NonSDG) Sample Duplicate (DUP)
1205306807	608051001(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.

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# Technical Case Narrative Georgia Power Company SDG #: 608418

# **Metals**

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2374301

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 2374300

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205304628	Method Blank (MB)ICP-MS
1205304629	Laboratory Control Sample (LCS)
1205304632	608410001(BRA-BRGWA-2SL) Serial Dilution (SD)
1205304630	608410001(BRA-BRGWA-2SS) Matrix Spike (MS)
1205304631	608410001(BRA-BRGWA-2SSD) 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 608418002 (BRA-BRGWC-33S), 608418003 (BRA-BRGWC-34S) and 608418004 (BRA-BRGWC-35S) were diluted to ensure that the analyte concentrations were within the linear calibration range of the instrument.

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A 1.	608418		
Analyte	002	003	004
Boron	10X	20X	20X
Calcium	10X	5X	5X
Manganese	10X	5X	1X

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 39

**Analytical Batch:** 2374419

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 39

**Preparation Batch:** 2374418

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205304804	Method Blank (MB)CVAA
1205304805	Laboratory Control Sample (LCS)
1205304808	608391001(NonSDGL) Serial Dilution (SD)
1205304806	608391001(NonSDGD) Sample Duplicate (DUP)
1205304807	608391001(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:** 2373867

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

608418001 BRA-BRGWC-17S 608418002 BRA-BRGWC-33S

608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205303999	Method Blank (MB)
1205304000	Laboratory Control Sample (LCS)
1205304001	608418004(BRA-BRGWC-35S) Sample Duplicate (DUP)
1205304002	608418004(BRA-BRGWC-35S) 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	1205304002 (BRA-BRGWC-35SPS)	120* (90%-110%)
Sulfate	1205304002 (BRA-BRGWC-35SPS)	111* (90%-110%)

#### **Technical Information**

#### **Sample Dilutions**

The following samples 1205304001 (BRA-BRGWC-35SDUP), 1205304002 (BRA-BRGWC-35SPS), 608418001 (BRA-BRGWC-17S), 608418002 (BRA-BRGWC-33S), 608418003 (BRA-BRGWC-34S) and 608418004 (BRA-BRGWC-35S) were diluted because target analyte concentrations exceeded the calibration range. The following sample 608418001 (BRA-BRGWC-17S) in this sample group was diluted due to matrix interference. 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		608	418	
Allalyte	001	002	003	004
Chloride	1X	40X	1X	1X
Nitrate-N	2X	1X	1X	1X
Sulfate	20X	40X	40X	25X

**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 20

**Analytical Batch:** 2376170

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205307923	Method Blank (MB)
1205307924	Laboratory Control Sample (LCS)
1205307926	608418001(BRA-BRGWC-17S) 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:** Sulfide, Total

**Analytical Method:** SM 4500-S (2-) D

**Analytical Procedure:** GL-GC-E-052 REV# 12

**Analytical Batch:** 2374521

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205304979	Method Blank (MB)
1205304980	Laboratory Control Sample (LCS)
1205304983	608418002(BRA-BRGWC-33S) Post Spike (PS)
1205304984	608418002(BRA-BRGWC-33S) Post Spike Duplicate (PSD)

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:** 2375521

The following samples were analyzed using the above methods and analytical procedure(s).

# GEL Sample ID# Client Sample Identification

608418001	BRA-BRGWC-17S
608418002	BRA-BRGWC-33S
608418003	BRA-BRGWC-34S
608418004	BRA-BRGWC-35S
1205306666	Laboratory Control Sample (LCS)
1205306667	608540001(NonSDG) Sample Duplicate (DUP)
1205306668	608540001(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.

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Sample ID	T. Gade	Send Results To: SCS & (	Geosyntec (	Contacts			ylqq		ARRES	SM 2540 Sicarb Al	7L '0109 4 s ju	912, 932		requ	Note: extra sample is ired for sample speci
BAG-WC-345  BAG-WC	Sample ID * For composites - indicate start and stop date		*Time Collected (Military) (hhmm)	QC Code (3)	Field Filtered <sup>(3)</sup>	Sample Matrix (4)	yes, please su		Station Co.	EPA 300, 5 Total & B	EPA 6020,	HnS 6 948-MS		Ta	QC Sk_Code: BRA-CCF ASSMT-2023S1
BAGSAC-375	BRA- BAGWC-345	01/25/23	1553	Ö	z	Эм	2	2	7	7	1	1		field	= 0.00
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S, see Sample Receipt & Review form (SRR.)  FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Y - for yes the sample was field filtered or - N - for sample was not field filtered.  We water, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix  Interced (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank  Characteristic Hazards  Listed Waste  Characteristic Hazards  LW= Listed Waste  CO = Corrosive  RE = Reactive  RE = Reactive  RE = Reactive  FT.K.P and U-listed wastes.)  FT.K.P and U-listed wastes.)  Misc. Highlow PH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  Description:  Description:	Mount Hall	C	1	1/1	6/23	7	2	Addition For Lab	al Rema Receivi	rks: ng Use (	* Meta	s: B,Ca,Sb,As	Ba,Be,Cd,Cr,Co,Pl	b,Li,Mo,Se,Tl,Fo	,Mg,Mn,K,Na,Hg
Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Duplicate, MSD = Matrix Spike Duplicate, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Equipment Blank, MS = Matrix Spike Duplicate, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Equipment Blank, MS = Matrix Spike Duplicate, G = Grab, C = Composite  Normal Sample, TB = Trip Blank, FD = Equipment Blank, MS = Matrix Spike Duplicate, G = Grab, C = Composite  Normal Sample, TB = G = Grab, C = Composite  Normal Sample, TB = G = Grab, C = Composite  Normal Matrix  Normal Matrix  Normal Matrix  Normal File Field Duplicate, EB = Fquipment Blank, MS = Matrix Spike Duplicate, G = Grab, C = Composite  Normal Matrix  Normal	· For sample shipping and delivery details, see S	Sample Receipt & Review forn	n (SRR.)			S	ample C	ollection	Time i	cone: [x	] Easter	l [ ] Pacif	-	10	ther:
Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Requested: Analytical method requested (i.e. 8260B - 3, 6010B/7470A - 1).  Rescription: Characteristic Hazards  FL = Flammable/Ignitable  CO = Corrosive  Hear Mare Code(s):  RE = Reactive  Requested: Number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  RE = Reactive  RE = Reactive  FYARE code(s):  RE = Requested: Number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  RE = Reactive  RE = Reactive  FYARE code(s):  RE = Requested: Number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  RE = Reactive  RE = Reactive  FYARE code(s):  RE = Requested: Number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  RE = Reactive  FYARE code(s):  RE = Reactive  FYARE code(s):  RE = Requested: Number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  RE = Reactive  FYARE code(s):  RE = Reactive Code(s):  RE = Reactive Code(s):  FYARE code(s):  RE = Reactive Code(s):  RE =	Chain of Custody Number = Client Determined  QC Codes: N = Normal Sample, TB = Trip Blank, FD = Fi  Field Filtered: For liquid matrices, indicate with a - Y - for y	field Duplicate, EB = Equipment Blank, yes the sample was field filtered or - N	MS = Matrix :	Spike Samp	le, MSD = N iltered.	Aatrix Spik	e Duplicate	Sample, G	= Grab, (	C = Compo	site				
Claracteristic Hazards   Claracteristic Hazards   Claracteristic Hazards   Claracteristic Hazards   Claracteristic Hazards   CD = Corrosive   FL = Flammable/Ignitable   LW = Listed Waste   OT = Other / Unknown	), matrix codes. W D-Drinking water, W G-Groundwater, V ) Sample Analysis Requested: Analytical method requested (i ) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Ac	(i.e. 8260B, 6010B/7470A) and number cid, SH = Sodium Hydroxide, SA = Su	of containers p	rovided for = Ascorbic	sz–seume each (i.e. 82 Acid, HX =	60B - 3, 60 Hexane, S	108/7470A T = Sodium	vater Quai 1). Thiosulfa	e, If no pi	eservative	s added =	eave field blank			
Hg= Mercury RE = Reactive RE = Reactive Rescription: Ag= Silver MR= Misc. RCRA metals RE = Reactive Raste code(s): Description:  TSCA Regulated Description:  CO = Corrosive Raste code(s): Description:  CB = Polychlorinated Description:  CB = Reactive Raste code(s): Description:  CB = Polychlorinated Description:  CB = Republication Description: Descripti	NOWN OR POSSIBLE HAZARDS	Characteristic Hazards FL = Flammable/Ignitable	Listed LW= I	Waste Listed Wa	iste			Other OT=Oth	ier / Un	cnown			Ple	ease provide ar	y additional details handling and/or
Ag= Silver MR= Misc. RCRA metals		CO = Corrosive RE = Reactive	(F,K,P Waste	and U-li code(s):	sted waste	5.5		i.e.: Hig nisc. hee Descript	h/low p ilth hazi ion:	H, asbes ırds, etc.	os, bery	Nium, irritan	-	sposal concern mple(s), type oj ttrices, etc.)	s. (i.e.: Origin of site collected from, od
		TSCA Regulated PCB = Polychlorinated biphenyls													

PO Number:  Client Name: GA Power  Project/Site Name: Plant Branch Ash Ponds - TW. E  Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: ( ( ) A) A AC Send Results		Chall	500	ממא מוור	Analyti	Chain of Custody and Analytical Request	F Custody and Analytical Request	Mayuco		д	Charleston, SC 29407 Phone: (843) 556-8171	407 8171
Client Name: GA Power  Project/Site Name: Plant Branch Ash Ponds -TW, E  Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: 7 ( A) A AC Send Result	GEL Work Order Number:		S	GEL Project Manager: Erin Trent	t Manage	r: Erin 1	Trent			H	Fax: (843) 766-1178	78
Project/Site Name: Plant Branch Ash Ponds - TW. E. Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: 7 (23) 0 ACC Send Result	Pho	Phone # 404-	404-506-7116			Sa	Sample Ana	Analysis Requested (5)	quested		e number of con	(Fill in the number of containers for each test)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308  Collected By: ( ) ACC   Send Result	Fax#	# 3			Shou	Should this	diore		IN IN			< Preservative Type (6)
(Lahlo ACC					consi	sample be considered:	503	ΙΚ	LHL	+		Comments
	Send Results To: SCS & Geosyntec	yntec Con	Contacts			r. sr.qz	TDS, N	A dassis Boss	20, 6010 Metals			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time	*Date Collected (N (mm/dd/yy) (l	*Time Collected (Military) Co	QC Fie	Field Sample Filtered (9) Matrix (4)	E adioactive yes, please su isotopic info.	(7) Known or	Total numbe Cl, F, SO4, EPA 300,	Total & B		WS WS		QC Task_Code: BRA-CCR- ASSMT-2023S1
		10	D D	2003 N	Z	3	>	1	57	1		field pH =
BRA-												field pH =
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BRA-			Name of the last o									field pH =
BRA-												field ferrous iron = field pH =
Chain of Custody Signatures	ody Signatures					TA	TAT Beaussted Normal.	- Nor	- 1	Push:	Spacify	field ferrous iron =
Relinquished By (Signed) Date Time	Received by (signed)	Date		Time		Fax Res	Fax Results: [ 1 Yes	es fx] No	5		- Canada	(28
1 ml 2012 126-73/ 0827	May	1	18	8. 801	500	Select D	eliverable:	[]Cof.	4 [ 100	Select Deliverable: [   C of A   ] QC Summary [ ] level 1		[x] Level 2 [ ] Level 3 [ ] Level 4
12,153 7:15	2 148	11	26/2	2	7	Addition	Additional Remarks:	.S. *	Metals: B,	* Metals: B,Ca,Fe,Mg,Mn,K,Na	1 1	1 1
3	3					For Lat	h Receiving	Use Onl	v: Custou	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	[] Yes [] No	Cooler Temp: °C
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	pt & Review form (S)	cR.)			Sample	Collection	n Time Zo.	ne: [x] E	astern	Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central	Show	[ ] Mountain [ ] Other:
<ol> <li>Chain of Custody Number = Client Determined</li> <li>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</li> <li>Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.</li> </ol>	B = Equipment Blank, MS as field filtered or - N - for s	= Matrix Spik ample was not	e Sample, M	SD = Matrix :	spike Duplica	te Sample, C	G = Grab, C =	- Composite				
4.) Matrix Codes: WD=Drmking Water, WG=Groundwater, WS=Surface Water, WW=Waste Water, WL=Leachate, SO=Soil, SE=Sediment, SL=Sludge, WQ=Water Quality Control Matrix S. Sample Analysis Requested: Analytical method requested (i.e. 82608, 6010B/7470A) and number of containers provided for each (i.e. 82608 - 3, 6010B/74704 - 1).	sr, W.W=Waste Water, W.L. B/7470A) and number of co	=Leachate, St ntainers provid	Jesoil, SE	(i.e. 8260B -	3, 6010B/747	= water Qua 0A - 1).	unty Control IV	Tatrix		1		
E.) Preservative Type: HA = Hydrochlone Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfune Acid, AA = Ascorbic Acid, HA = Hexane, SI = Sodium Injosuliate, If no preservative is added = leave held blank  VANOVINI OD DOCEDED E HAZA DISC.	n Hydroxide, SA = Sulfuric	Acid, AA = A	scorbic Acid	, нх = нехаг	e, S1 = Sodik	Im I mosuifa	ate, if no presi	ervative is ac	ided = leave	neld blank	, u	TO FIL SHEET
_	ble	Listed waste LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	waste Listed Waste and U-listed code(s):	wastes.)		OT= Other / (i.e.: High/lc misc. health Description:	Office: Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	own asbestos, ds, etc.)	beryllim	Other / Unknown  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.)
AR MR Misc, RCRA metals PCB =	Polychlorinated biphenyls				ľ							

CEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

SDG/AR/COC/Work Order: 608622, 60864 GPCC Client: Received By: Stacy Boone Date Received: JAN 26, 2023 FedEx Express FedEx Ground UPS Field Services Courier Carrier and Tracking Number 2 1816 Net Counts > 1000pm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Suspected Hazard Information UN#: Hazard Class Shipped: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes\_\_\_No\_ A)Shipped as a DOT Hazardous? COC notation or radioactive stickers on containers equal client designation. B) Did the client designate the samples are to be Maximum Net Counts Observed\* (Observed Counts - Area Background Counts): \_\_\_\_\_\_\_CPM / mR/Hr received as radioactive? Classified as: Rad 1 Rad 2 Rad 3 C) Did the RSO classify the samples as radioactive? COC notation or hazard labels on containers equal elient designation. D) Did the client designate samples are hazardous? If D or E is yes, select Hazards below. RCRA Asbestos Beryllium Fareign Soil Flammable PCB's E) Did the RSO identify possible hazards? Comments/Qualifiers (Required for Non-Conforming Items) § <del>≥</del> 2 Sample Receipt Criteria Circle Applicable: Scals broken Damaged container Leaking container Other (describe) Shipping containers received intact and sealed? COC created upon receipt Circle Applicable: Client contacted and provided COC Chain of custody documents included Preservation Method: Wet Ice Ice Packs Dry ice None Other:
\*all temperatures are recorded in Colsius with shipment? TEMP: 14 x 5 Samples requiring cold preservation within  $(0 \le 6 \text{ deg. C})$ ?\* Temperature Device Serial #: 1R3-22 Daily check performed and passed on IR Secondary Temperature Device Serial # (If Applicable): Circle Applicable: Seals broken Damuged container Leaking container Other (describe) temperature gun? Sample containers intact and sealed? 5 Sample ID's and Containers Affected; Samples requiring chemical preservation If Yes, are Encores or Soil Kits present for solids? Yes No NA (If yes, take to VOA Freezer) 6 at proper pH? Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes\_\_\_ No\_\_ NA\_ Do any samples require Volatile 7 Analysis? Sample ID's and containers affected: ID's and tests affected: Samples received within holding time? ID's and containers affected: Sample ID's on COC match ID's on Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) bottles? Date & time on COC match date & time on bottles? Circle Applicable: No container count on COC Other (describe) Number of containers received match number indicated on COC? Are sample containers identifiable as GEL provided by use of GEL labels? Circle Applicable: Not relinquished Other (describe) COC form is properly signed in relinquished/received sections? Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials

age: of 6.7 Project #	333	GEL GEL GEL GRAND	DE Chain		ADOF nistry   Rad	ator iochemist	Laboratories   Coloratories   Colo	LC ioassay 18	#	60881 6	00	0	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	LLC .07
O Number:	GEL Work Order Number:	er Number		5	GEL Pr	oject M.	GEL Project Manager: Erin Trent	Erin Tre	ent		N		Fax: (843) 766-1178	
Client Name: GA Power			Phone # 40	404-506-7116	91	2013	根原	Sam	Sample Analysis Requested (5)	alysis F	Request		(Fill in the number of containers for each test)	ainers for each test)
Project/Site Name: Plant Branch Ash Ponds - E			Fax#				Should this	1100	S		IN			< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308						sample be considered:	161	60		_	07		Comments
Collected By: A Schniffen ACC	Send Results To: SCS & Geosyntec	: SCS & G	sosyntec C.	Contacts		31/	(If	rds	LDS, N	lA dassi	2610,74	əpi		Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field S Filtered (3) M	Sample Matrix (4)	Radioactive yes, please sup isotopic info.)	(7) Known or possible Haza	Total number	EPA 300, S Total & Bi	Meta Radium 22	F6 948-WS		QC Task Code: BRA-CCR-ASSMT-2023S1
3RA-PZ-135	01	82/92/10	0711	Ö	z	DM	>	2	>	>	>	>		field pH = $5.56$
IOL-2d-V88	10	01 26 23	220	9	N,	MG	2	2	>	>	>	>		-
BRA-APE-FD-05	110	01/26/23	/	9	2	9	Z	2	>	>	>	>		
3RA- APE-EB-10	/10	01/26/23	1100	0	7	MB	2	Z	>	>	>	7		field pH = $NA$ field ferrous iron = $NA$
SRA-														field pH =
Ch	Chain of Custody Signatures	ignatures						TAT	TAT Requested:		Normal:	x Rush:	Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time	(	Received by (signed)	1	Date	Time		T.	Fax Results: [ ] Yes	S: [ ] Y		[x] No			
1/21/23	0950	M	1	1/8/	28 9	2		elect Del	iverable	:[]Co	[] ¥J	QC Summa	Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2	wel 2 [ ] Level 3 [ ] Level 4
JANA 1/27/23 X	7	1	d	153	23	7	<b>→</b>	Additional Remarks: For Lah Receiving I	Remari	O dsi	* Metals	B,Ca,Sb,As,	Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,N	* Metals: B.Ca.Sb.As.Ba.Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  * Metals: B.Ca.Sb,As.Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	ımple Receipt & R	eview form	(SRR.)			Sı	ample Co.	llection 5	Time Zo	ne: [x]	Eastern	[ ] Pacifi	77	Tountain [ ] Other:
). 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 yeas the sample was field filtered or - N - for sample was not field filtered.	ld Duplicate, EB = Equi	pment Blank, 1	MS = Matrix S or sample was	pike Sample	., MSD = Ma	atrix Spike	Duplicate S.	ample, G=	Grab, C=	= Composi	υ,			
.) 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. 82608, 60108/14704) and number of containers provided for each (i.e. 82608 - 3, 60108/14704 - 1).	S=Surface Water, WW= 2. 8260B, 6010B/7470A	-Waste Water, '	WL=Leachate, f containers pri	SO=Soil, S	E=Sediment ach (i.e. 826)	, SL=Slud, 0B - 3, 60.	ge, WQ=W <sub>E</sub>	nter Quality	Control A	fatrix				
) 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	d, SH = Sodium Hydrox	ide, SA = Sulfi	ric Acid, AA =	Ascorbic /	\cid, HX = F	Texane, ST	r = Sodium T	Thiosulfate,	If no pres	ervative is	added = le	ave field blank		
NOR POSSIBLE HAZARDS  teals iic Hg= Mercury im Se= Selenium nium Ag= Silver mium MR= Misc. RCRA metals	Characteristic Hazards FL = Flammable/Ignitable CO = Corrosive RE = Reactive TISCA Regulated PCB = Polychlorinated	gnitable	Listed Waste LW= Listed V (F,K,P and U- Waste code(s)	Listed Waste LW=Listed Waste (F,K,P and U-listec Waste code(s):	Listed Waste LW= Listed Waste (F,K,P and U-listed wastes.) Waste code(s):			Other OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	r / Unkn Iow pH, h hazar. n:	own asbestc ds, etc.)	s, beryli	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.)
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age: 2 of 2.		45	0	CC Chain of Custody and Analytical Request	tOries	S LLC idiobioassay	Specialty	Analytics	8	15	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	LLC 07 1171	
O Number:	GEL Work Order Number:	r:		GEL Project Manager: Erin Trent	ct Manag	er: Erin	Frent				Fax: (843) 766-1178	8,	-
lient Name: GA Power		Phone # 40	404-506-7116	9		S	Sample Analysis Requested (5)	alysis R	quested		he number of con	(Fill in the number of containers for each test)	
roject/Site Name: Plant Branch Ash Ponds - E		Fax#			Sho	122	s.	Œ	IN IN			< Preservative Type (6)	13
ddress: 241 Ralph McGill Blvd SE, Atlanta GA 30308	4 30308				Sar	sample be considered:	-60		8	40		Comments	
ollected By: A Schmittler ACC	Send Results To: SCS & Geosyntec Contacts	Jeosyntec Co	ontacts		ylqq		TDS, №	icarb Al 820B	77 % 97 9010° 4	005		Note: extra sample is required for sample specific	.0
Sample ID * For composites - indicate start and stop date/time	*Date Collected	*Time Collected (Military) (hhmm)	QC Code (2) Fil	Field Sample Filtered (3) Matrix (4)	Radioactive yes, please sup	isotopic info.) (7) Known or possible Hazs	Total number	Total & B SM 2:	Meta EPA 6020, 6 SW-846 93	SM 4 CI, 7, SC EPA 300,		QC Task_Code: BRA-CCR- ASSMT-2023S1	
BRA- PZ-52D	01/25/13	1424	U	D <sub>M</sub>	2	>	N		>			field pH = $7$ i $\dot{\psi}$ field ferrous iron = $0.0.0$	1
OSS-520	01/26/23 1240	0771	<b>O</b>	N WG	5	2	W	>		>		field pH = 7+488	
IRA-												field pH = field ferrous iron =	
RA-												field pH =	
RA-				H									1-1-
Ü	Chain of Custody Signatures					TA	TAT Requested:		Normal: x	Rush:	Specify:	(Subject to Surcharge)	
Relinquished By (Signed) Date Time	ne Received by (signed)	) jeg	Date	Time		Fax Res	Fax Results: [ ] Yes	Yes [x] No	o <sub>N</sub>				1
1/22/100	0450	No	1921	23 6	000	Select	Select Deliverable: [ ] C of A	:[]Cof	A [ ]Q(	[ ] QC Summary	[ ] level 1 [x] Level 2	evel 2 [ ] Level 3 [ ] Level 4	
91/0/ 1/8/183	30 2 11	d	112	2	2	For La	Additional Remarks: For Lab Receiving I	ks: *	Metals: B	Ca,Sb,As,Ba	Additional Remarks: * Metals: B.Ca.Sb.As,Ba.Be.Cd.Cr.Co.Pb.Li,M. Far Lab Reveiving Use Only: Custody Seal Intart? [ ] Yes [ ] No	* Metals: B.Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  "http://weindo.goog/prince? [ ] Yee [ ] No Cooler Temm:	1
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Receipt & Review forn	ı (SRR.)			Sample	Collectio	n Time Zo	me: [x] I	astern	] Pacific	[ ] Central [ ] N	ountain [ ] Other:	
Chain of Custody Number = Client Determined QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MS Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered	rield Duplicate, $\mathbf{EB} = \mathbf{Equipment}$ Blank, yes the sample was field filtered or - N	MS = Matrix Sp - for sample was	oike Sample, not field filter	Spike Sample, $MSD = Matrix$ Spike Duplicate Sample, $G = Grab$ , $C = Composite$ is not field filtered.	s Spike Duplic	ate Sample,	G = Grab, C	= Composite					
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. 82608, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  Preservative Tyne: 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	WS=Surface Water, WW=Waste Water (i.e. 8260B, 6010B/7470A) and number cid, SH = Sodium Hydroxide, SA = Su	, WL=Leachate, of containers pro fluric Acid, AA =	SO=Soil, SE wided for eac Ascorbic Ac	=Sediment, SI h (i.e. 8260B id, HX = Hex	_=Sludge, W( - 3, 6010B/74 me, ST = Sod	2=Water Qua 704 - 1). ium Thiosulf	lity Control l	Matrix Matrix Servative is a	dded = leave	field blank			
KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards FL = Flammable/Ignitable	Listed Waste LW=Listed W	Listed Waste LW= Listed Waste			Other OT= Ot	Other OT= Other / Unknown	nown			Please, below 1	Please provide any additional details below regarding handling and/or	V
	CO = Corrosive RE = Reactive	(F,K,P a Waste co	(F,K,P and U-listed wastes.) Waste code(s):	d wastes.)	1	(i.e.: High/lo misc. health Description:	(i.e.: High/low pH, asbeste misc. health hazards, etc.) Description:	, asbestos ds, etc.)	, beryllim	(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)	
<pre>d = Cadmium Ag= Silver r = Chromium MR= Misc. RCRA metals b = Lead</pre>	TSCA Regulated PCB = Polychlorinated . biphenyls				I								

Cli	ent:			en	SAMPLE RECEIPT & REVIEW FORM  G/AR/COC/Work Order:
	ceived By:Thyasia Tatum				
Re	Carrier and Tracking Number			Da	rice Received:  Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Sus	pected Hazard Information	ž	ž	*If	Net Counts > 100cpm on sumples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)S	Shipped as a DOT Hazardous?	_	\ <u></u>	Haz	zard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
	Did the client designate the samples are to be sived as radioactive?		/	1	C notation or radioactive stickers on containers equal client designation.
	Did the RSO classify the samples as loactive?	,		Ma	ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad i Rad 2 Rad 3
	Did the client designate samples are hazardous?	  -	/	1 1	Cnotation or hazard labels on containers equal client designation.  O or E is yes, select Hazards below.  PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
E) I	Did the RSO identify possible hazards?  Sample Receipt Criteria	× S	12/2	ž	
1	Shipping containers received intact and sealed?	/	7	<u>z</u>	Circle Applicable: Scals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?				Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*				Preservation Method: Wet Ice life Packs Dry ice None Other: *all temperatures are recorded in Celsius  TEMP:
4	Daily check performed and passed on IR temperature gun?			_	Temperature Device Serial #: <u>IR2-20</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	V			Circle Applicable: Scals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	V			Sample ID's and Containers Affected:  If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			レ	If Y/s, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)  No liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA  Sample ID's and containers affected:
8	Samples received within holding time?	V			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	レ			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	V	Ĺ		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?			<b>!</b>	Circle Applicable: No container count on COC Other (describe)
12	GEL provided by use of GEL labels?	V		/	
13 Con	COC form is properly signed in relinquished/received sections?	し			Circle Applicable: Not relinquished Other (describe)
					A) 1/2/1

age: of	809	608418	GEL Glass		Cabain of Custody and Analytical Request	ator inchemistand Ar	Tes   try   Radiot	LC bioassay I	Specialty Jest	Analytics			GEL Laboratories, LL 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-817	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171	
O Number;	GEL Work	GEL Work Order Number:	3		GEL Pr	oject M	GEL Project Manager: Erin Trent	Erin Ti	ent.				Fax: (843) 766-1178	766-1178	
Client Name: GA Power			Phone # 4(	404-506-7116	116			Sar	Sample Analysis Requested (5)	alysis F	equest		the number	of containers	(Fill in the number of containers for each test)
roject/Site Name: Plant Branch Ash Ponds - E	ш		Fax#				Should this	this	S.		IN			29410	< Preservative Type (6)
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308						sample be considered:	be red:	60			0			Comments
Sollected By: 7 ; 6054-27 ACC	Send Resul	Send Results To: SCS & Geosyntec		Contacts		317			N 'SQL	A dassi	L '0109	əpi			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time	aie/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field S Filtered (3) M	Sample Matrix (4)	Radioactive yes, please suj isotopic info.)	(7) Known or possible Haza	Total number	EPA 300, S Total & B SM 23	Meta EPA 6020, 6 Radium 22	FE 948-WS			Task_Code: BRA-CCR-ASSMT-2023S1
BRA- BRGWC-17S		01/24/23	1618	Ð	z	DM	2	Z	8	1	>	1		在	field pH = G.37
8RA- BRGWC-335		01/24/23	1340	5	N	FMG.	'Z	Z	8	)	1	)		打 打 打	200
RA-BAGNC-34S		01/24/23	1253	5	2	MG	Z	2	5	1	/	1		41 4	field pH = 5.93
RA- BAGNIC - 35S		01/24/23	1441	9	7	W.C.	2	2	8	1	2	1		# # #	8
RA-														iii ii	
	Chain of Custo	Chain of Custody Signatures				t		TAT	TAT Requested:		Normal:	x Rush:	Specify		field ferrous iron = (Subject to Surcharge)
Relinquished By (Signed) Date Tin	Time	Received by (signed)	ned)	Date	Time		Į.,	ax Resul	Fax Results: [ ] Yes		[x] No				(18 miles of the first of the f
194/02 195-23/ 6	0229	I Brown	all s	13	22 July	Shi	2000	elect De	Select Deliverable: [	[ ]Co	A [ ]	Seject Deliverable: [] C of A [] QC Summary Additional Remarks. * Morelle: P.O. St. & B.O.	[ ] level 1	[x] Level 2	of A [] QC Summary [] level 1 [x] Level 2 [] Level 3 [] Level 4  * Morelle: B Co. St. A. B. B. C. A. C., D. L. I. M. S. C. T. D. M. M. M. V. M. M.
		3					F	or Lab	Receiving	Use O	ly: Cus.	ody Seal Inte	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	No Coo	Cooler Temp:
For sample shipping and delivery details, see Sample Receipt & Review form (SRR.) Chain of Creardy Munkop = Client Detainment	Sample Receip	t & Review form	(SRR.)			St	Sample Collection Time Zone: [x] Eastern	llection	Time Zo	ne: [x]	Sastem	[ ] Pacific	[ ] Pacific [ ] Central	[ ] Mo	[ ] Other:
O Chairl of Custody Normel Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite of Fleted: For liquid matrices, indicate with a - Y - for vos the sample was field filtered or - N - for sample was not field filtered.	Field Duplicate, EB	= Equipment Blank,	MS = Matrix S for sample was	pike Sample not field fill	, MSD = Ma	ıtrix Spike	Duplicate S	ample, G =	Grab, C=	Composit					
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	WS=Surface Water,	WW=Waste Water,	WL=Leachate,	SO=Soil, S	E=Sediment,	SL=Sludg	ge, WQ=Wa	iter Quality	Control N	atrix					
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 = Hydrochloric Acid, This entities of the preservative is added = Leaves field bloom.	(i.e. 8260B, 6010B/ Acid. SH = Sodium 1	7470A) and number Hydroxide. SA = Sulf	of containers printing Acid AA =	ovided for e	provided for each (i.e. 8260B - 3, 6010B/7470A - 1). A = Ascorbic Acid HX = Hevane ST = Sodium Thio	18 -3, 601	10B/7470A	- 1). Thiosulfate	If no pres	o evitori	ed = laber	Just bloth			
KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	tic Hazards	Listed Waste	Vaste			0	Other			700	o non	1	Please provide	Please provide any additional details
	FL = Flammable CO = Corrosive RE = Reactive	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW= Listed W (F,K,P and U-l. Waste code(s):	LW= Listed Waste (F,K,P and U-lister Waste code(s):	LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):		O E E O	OT= Other / (i.e.: High/lc misc. health Description:	OT= Other / Unknown fi.e.: High/low pH, asbest misc. health hazards, etc., Description:	asbesto.	i, berylli	OT=Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regarding he disposal concerns. sample(s), type of simatrices, etc.)	below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
a = Cadmum Ag= Silver r = Chromium MR= Misc. RCRA metals b = Lead	PCB = Polychlorinated biphenyls	Regulated Solychlorinated biphenyls				1	111						Ш		
			8												

GEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

04			יעפן	G/AR/COC/Work Order: 608418 608420
Received By: # 6				te Received: 175/73
Carrier and Tracking Number				Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	ž	*If	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Haz	ard Class Shipped:  If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
B) Did the client designate the samples are to be received as radioactive?		Х	1:	C notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Max	ximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?      E) Did the RSO identify possible hazards?		メメ	ــــال	C notation or hazard labels on containers equal client designation.  Por E is yes, select Hazards below.  PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other;
Sample Receipt Criteria	Yes	NA.	l 2	
1 Shipping containers received intact and scaled?	<u>/</u>	Z	Z	Comments/Qualifiers (Required for Non-Conforming Items)  Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	Z			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X			Preservation Method: Wet Ice Ice Packs Dry ice None Other:  *all temperatures are recorded in Celsius  TEMP:
Daily check performed and passed on IR temperature gun?	X		_	Temperature Device Serial #: IR1-23 Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	Y			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	X			Sample ID's and Containers Affected:  If Preservation added, Lot#:
Do any samples require Volatile Analysis?	:		Х	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?	X			ID's and tests affected:
g Sample ID's on COC match ID's on bottles?	Х			ID's and containers affected:
Date & time on COC match date & time on bottles?	X			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?  Are sample containers identifiable as	X			Circle Applicable: No container count on COC Other (describe)
GEL provided by use of GEL labels?  COC form is properly signed in relinquished/received sections?	X. Y			Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):				als AM Date   26 2 3 Page of

ge:	608422 GE	22 6	The gelicom		Laboratories LLC Chemistry I Radiochemistry I Radiobloassay I Specialty Analytics	Ories	S LLC diobloassay	Specialt	y Analytic	ø		GEL Li 2040 S Charles	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	
OC Number (0):	0000	3	Chair	of Cus	Chain of Custody and Analytical Request	d Analyt	ical Rec	nest				Phone:	Phone: (843) 556-8171	
O Number:	GEL Work Order Number:	er Number:	Dhone # 404	3117 305 404	GEL Project Manager: Erin Trent	ct Manag	er: Erin	rent		5		Fax: (8	Fax: (843) 766-1178	
Jein Name. On rower			<b>t</b>	-2000-1110			ñ	Sample Analysis Requested	nalysis	Kedne		II in the num	iber of containe	(Fill in the number of containers for each test)
oject/Site Name: Plant Branch Ash Ponds - E		Щ	Fax#			Sho	Should this	r.s		IN	IN			< Preservative Type (6)
ddress: 241 Ralph McGill Blvd SE, Atlanta GA 30308	30308					cons	sample be considered:	1	OC	047				Comments
ollected By: J. Collected By: J. ACC	Send Results To: SCS & Geosyntec	SCS & Ge		Contacts				W-lot	SM 254	* sli	315, 93 7de			Note: extra sample is required for sample specific
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm/dd/yy)	*Time Collected (Military)	QC Filtr	Field Sample Filtered (3) Matrixy(9)	Radioactive yes, please su	isotopic info.) (7) Known or possible Haza	Total numbe	EPA 300, 5 Total & B	EPA 6020,	2 muibsA 2 6 948-W2 3 MS			QC Task_Code: BRA-CCR- ASSMT-2023S1
RA- APE - FD - OH	010	01/24123		Ŋ	P P	2	3	00	>	>	1			field pH =
RA- 17PE - FB - 07	110	01/24/23	1400	5	のなって	2	7	×	1	>	>			field pH =field ferrous iron =
RA-														field pH = field ferrous iron =
RA-							<u>'</u>							
RA-									-					field pH =
Ü	Chain of Custody Signatures	Signatures					TA	TAT Requested:		Normal: x		Rush: Sp	Specify:	(Subject to Surcharge)
Relinquished By (Signed) Date Time		Received by (signed)	ed) Date		Time		Fax Re	Fax Results: [ ] Yes	9	[x] No				
Tay Sall 1-25-23/ 0	1,7824	my	n	1.	135/18	20	Z Select I	Deliverab	ile: [ ] C	ofA	J QC Sum	6.6.2 Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1	el 1 [x] Level 2	2 [ ] Level 3 [ ] Level 4
1921	2 "	4	{		3	500		Additional Remarks: For Lab Receiving I	ing Use	* Mets	Is: B,Ca,Sb	Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,C	r,Co,Pb,Li,Mo,Se	* Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg  "http:://www.Seal/hiart?"   1 Yes   1 No Cooler Town:
I- For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	Sample Receipt & 1	Review form (	SRR.)			Sample	Collectio	n Time	Zone: [	k] Easte	Sample Collection Time Zone: [x] Eastern [ ] Pacific	ific [ ] Central	1 [ ] Mo	[ ] Other:
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: MSD-Driving Waster WG-Commentaries Wises Wilton Wilton WG-Commentaries Wilton Wilton WG-Commentaries Wilton WG-Commentaries Wilton WG-Commentaries Wilton WG-Commentaries Wilton WG-Commentaries WG-	iteld Duplicate, EB = Equ yes the sample was field	nipment Blank, N filtered or - N - fi	1S = Matrix Sp or sample was r	ike Sample, I not field filter	MSD = Matrix ed.	: Spike Duplic	ate Sample,	G = Grab,	C = Comp	osite				
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, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	(i.e. <b>8260B</b> , <b>6010B/7470</b> .cid, SH = Sodium Hydro	A) and number of xide, SA = Sulfu	containers pro	vided for eac Ascorbic Aci	n (i.e. 8260B	-3, 6010B/74 ine, ST = Sod	70A - 1).	ate, If no p	reservative	is added =	leave field bl	놛		
	Characteristic Hazards FL = Flammable/Ignitable CO = Corrosive RE = Reactive	Tgnitable	Listed Waste LW=Listed W (F,K,P and U-l) Waste code(s):	Listed Waste LW= Listed Waste (F.K.P and U-listed wastes.) Waste code(s):	d wastes.)		Other OT=Other/(i.e.: High/lomisc. health	Other OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	known H, asbe: ards, etc	itos, ber	Other OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	ants, other	Please provid below regard disposal conc sample(s), typ matrices, 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 matrices, etc.)
1 = Cadmium Ag= Silver = Chromium MR= Misc, RCRA metals = Lead	TSCA Regulated PCB = Polychlorinated biphenyls	inated				1	Ш							

GEL	Laboratories LLC
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SAMPLE RECEIPT & REVIEW FORM

Client: ( ppc C			DG/AR/COC/Work Order: , 605422 608423
Received By: PG			Pate Received: 1/25/23
Carrier and Tracking Number			Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	8	If Net Counts > 100cpm on samples net marked "radioactive", contact the Radiation Safety Group for further investigation
A)Shipped as a DOT Hazardous?		X	azard Class Shipped:  UN#:  If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
B) Did the client designate the samples are to be received as radioactive?		X	OC notation or radicactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		Χ	faximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM/ mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazartious?		X	OC notation or hazard labels on containers equal client designation.  D or E is yes, select Hazards below.
E) Did the RSO identify possible hazards?			PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	NA	Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	χ̈́		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	く		Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	X		Preservation Method: Wet Ice Control Ice Packs Dry Ice None Other:  *all temperatures are recorded in Celsius  TEMP:
4 Daily check performed and passed on IR temperature gun?	X	:	Temperature Device Serial #: <u>IR1-23</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	X		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	χ		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? YesNoNA (If yes, take to VOA Freezer)  Do liquid VOA vials contain acid preservation? YesNoNA (If unknown, select No)  Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:
8 Samples received within holding time?	X		ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X		ID's and containers affected:
Date & time on COC match date & time on bottles?	X		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC?	χ		Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?	X]		
COC form is properly signed in relinquished/received sections?  Comments (Use Continuation Form if needed):	$\checkmark$		Circle Applicable: Not relinquished Other (describe)
Solution (Cos Continuente l'Origin Rececul),			

Page 126 of 130 SDG: 608815

List of current GEL Certifications as of 10 February 2023

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
Kansas NELAI  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
	9976
Michigan	9976 SC00012
Mississippi Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP New Mexico	SC002
	SC00012
New York NELAP  North Carolina	11501
North Carolina SDWA	233
	45709
North Dakota	R-158
Oklahoma  Danasakasais NELAR	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

List of current GEL Certifications as of 07 February 2023

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	SC000122023-4
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

List of current GEL Certifications as of 09 February 2023

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
Kansas NELAI  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
	9976
Michigan	9976 SC00012
Mississippi Nebraska	NE-OS-26-13
Nevada	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP New Mexico	SC002
	SC00012
New York NELAP  North Carolina	11501
North Carolina SDWA	233
	45709
North Dakota	R-158
Oklahoma  Danasakasais NELAR	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

List of current GEL Certifications as of 07 February 2023

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	SC000122023-4
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC002 SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2022-160
Pennsylvania NELAP	
Pennsylvania NELAP  Puerto Rico	68-00485
S. Carolina Radiochem	SC00012
	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

# APPENDIX B

Slug Test Data Plots

# Table 3 Summary of Estimated Horizontal Hydraulic Conductivity Values Plant Branch AP-E, Putnam County, Georgia

					Well In	formation							A(	TESOL	V Input l	Parameter	·s					Н	orizontal Hyd	lraulic Conduc	tivity (Kh)	
Well ID/Test No.	Screen Zone Material	Slug Test Type	Depth to Sensor [ft bTOC]	Static DTW [ft bTOC]	DTW after Pressure Release [ft bTOC]	Top Screen	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]		Bouwer-Rice Kh [cm/sec]	KGS or Hvorslev Kh [cm/sec]	Geomean Kh [cm/sec]
PZ-70I Test 1	Connolito/DW/D	Pnumatic	48.00	28.90	36.30	39.60	49.60	50.00	7.40	21.10	21.10	0.1	10.70	10.0	19.10	0.083	0.03	0	0.25	0.25	1.222	1.535	1.400	4.3E-04	5.4E-04	4.9E-04
PZ-70I Test 2	Saprolite/PWR	Pnumatic	48.00	28.90	35.34	39.60	49.60	50.00	6.44	21.10	21.10	0.1	10.70	10.0	19.10	0.083	0.03	0	0.25	0.25	1.309	1.566	1.400	4.6E-04	5.5E-04	4.7E-04

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

Transducer Depth below the water table

r(c) Inside radius of well casingr(eq) Radius of downhole equipment

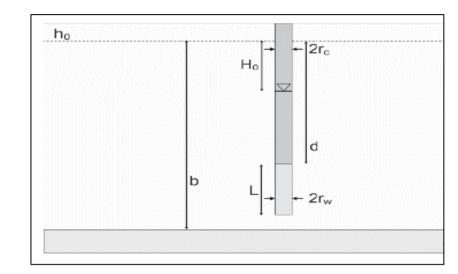
**r(w)** Radius of well open or perforated interval

r(sk) Outside radius of well skin distrubed zone enveloping filter pack

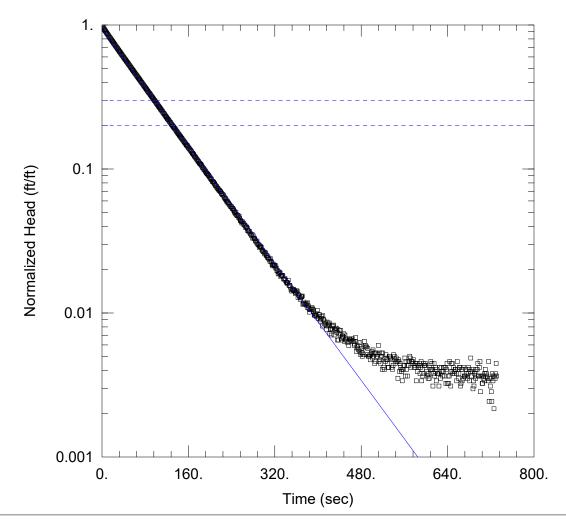
**bTOC** Below Top Of Casing

**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.



Page 1 of 1



Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10 22\Data\Aqtesolv\PZ-70 Test 1 BR.aqt

Date: 10/14/22 Time: 14:13:27

# PROJECT INFORMATION

Company: Geosyntec Consultants Client: Georgia Power Company

Project: GW8862 Location: Plant Branch Test Well: PZ-70 Test Date: 10/12/2022

# **AQUIFER DATA**

Saturated Thickness: 21.1 ft Anisotropy Ratio (Kz/Kr): 0.1

# WELL DATA (PZ-70 Test 1)

Initial Displacement: 7.4 ft

Static Water Column Height: 21.1 ft

Total Well Penetration Depth: 20.7 ft

Screen Length: 10. ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

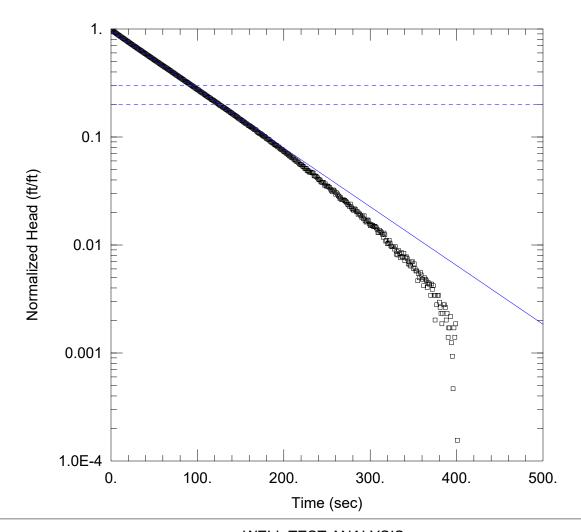
# **SOLUTION**

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.222 ft/day

y0 = 6.894 ft



Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10 22\Data\Aqtesolv\PZ-70 Test 2 BR.aqt

Date: 10/14/22 Time: 14:17:30

# PROJECT INFORMATION

Company: Geosyntec Consultants Client: Georgia Power Company

Project: GW8862

Location: Plant Branch Test Well: PZ-70 Test 2 Test Date: 10/12/2022

# **AQUIFER DATA**

Saturated Thickness: 21.1 ft Anisotropy Ratio (Kz/Kr): 0.1

# WELL DATA (PZ-70 Test 2)

Initial Displacement: 6.44 ft Static Water Column Height: 21.1 ft

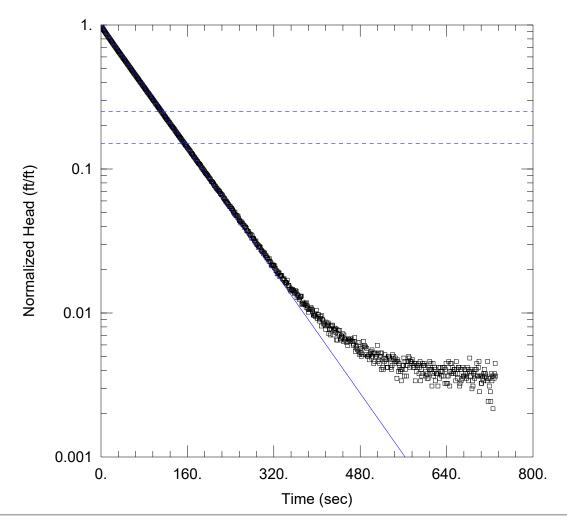
Screen Length: 10. ft Total Well Penetration Depth: 20.7 ft Casing Radius: 0.083 ft

Well Radius: 0.25 ft

# **SOLUTION**

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 1.309 ft/dayy0 = 6.24 ft



Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10 22\Data\Aqtesolv\PZ-70 Test 1 HS.aqt

Time: 14:14:05 Date: 10/14/22

# PROJECT INFORMATION

Company: Geosyntec Consultants Client: Georgia Power Company

Project: GW8862 Location: Plant Branch Test Well: PZ-70 Test Date: 10/12/2022

# **AQUIFER DATA**

Saturated Thickness: 21.1 ft Anisotropy Ratio (Kz/Kr): 0.1

# WELL DATA (PZ-70 Test 1)

Initial Displacement: 7.4 ft

Static Water Column Height: 21.1 ft

Total Well Penetration Depth: 20.7 ft

Screen Length: 10. ft Well Radius: 0.25 ft

Casing Radius: 0.083 ft

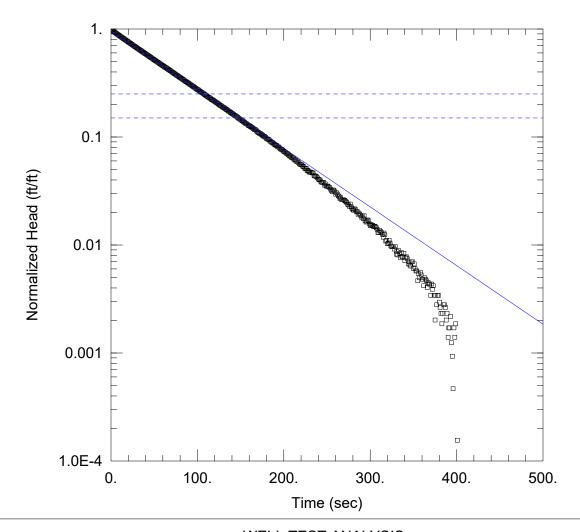
# **SOLUTION**

Aquifer Model: Unconfined

Solution Method: Hvorslev

K = 1.535 ft/day

y0 = 7.36 ft



Data Set: C:\Users\ccain\Desktop\Branch Slug Testing 10 22\Data\Aqtesolv\PZ-70 Test 2 HS.aqt

Date: 10/14/22 Time: 14:18:11

# PROJECT INFORMATION

Company: Geosyntec Consultants
Client: Georgia Power Company

Project: GW8862

Location: Plant Branch
Test Well: PZ-70 Test 2
Test Date: 10/12/2022

# **AQUIFER DATA**

Saturated Thickness: 21.1 ft Anisotropy Ratio (Kz/Kr): 0.1

# WELL DATA (PZ-70 Test 2)

Initial Displacement: 6.44 ft Static Water Column Height: 21.1 ft

Total Well Penetration Depth: 20.7 ft Screen Length: 10. ft

Casing Radius: 0.083 ft Well Radius: 0.25 ft

# **SOLUTION**

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 1.566 ft/day y0 = 6.164 ft