Prepared for

Georgia Power Company
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Atlanta, Georgia 30308

2022 SEMIANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

PLANT BRANCH ASH POND E

Prepared by

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CERTIFICATION STATEMENT

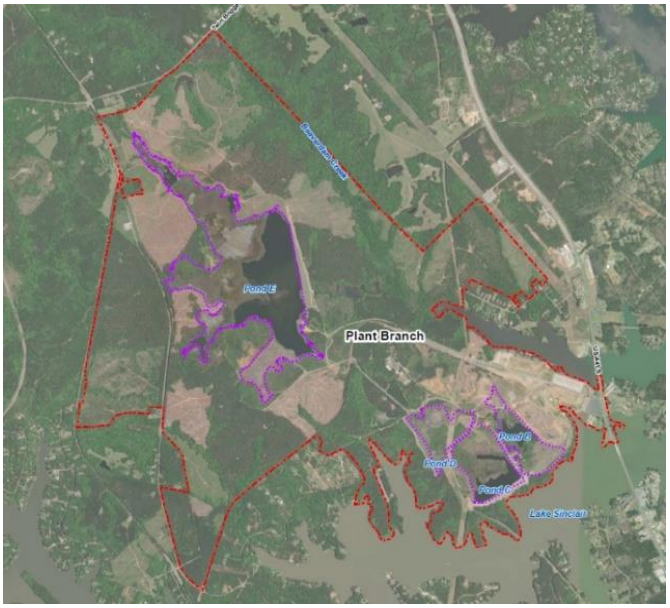
This 2022 Semiannual Groundwater Monitoring and Corrective Action Report, Plant Branch Ash Pond E (AP-E) has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically § 257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants, Inc. I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).

Lauren E. Fitzgerald
Georgia Professional Engineer No. 048960

February 28, 2023
Date

SUMMARY

This summary of the *2022 Semiannual Groundwater Monitoring and Corrective Action Report* provides the status of the groundwater monitoring and corrective action program for the reporting period of July through December 2022 (referred herein as the 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[1] of the U.S. Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D).



Plant Branch and the Site

Plant Branch is located at 1100 Milledgeville Road, approximately 8 miles north of Milledgeville in Putnam County, Georgia. Plant Branch formerly operated as a coal-fired electric generating facility until its decommissioning in July 2015, at which point it ceased producing electricity. CCR materials resulting from power generation were historically transferred and stored at the five ash ponds (i.e., A, B, C, D, and E). Ash Pond A was taken out of service in the late 1960s and was closed in April 2016. Ash Ponds B, C, D, and E are inactive, and will be closed by removal and relocation of its stored CCR to a proposed fully lined landfill located on the plant property. As required in the CCR Rule, this Semiannual Report describes the status of the groundwater monitoring program, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and presents projected key activities for the upcoming year for AP-E. The other CCR units (AP-BCD) at Plant Branch are reported separately.

[1] 80 FR 21468, Apr. 17, 2015, as amended at 81 FR 51807, Aug. 5, 2016; 83 FR 36452, July 30, 2018; 85 FR 53561, Aug. 28, 2020

Groundwater at the Site is monitored using a comprehensive well network that meets federal and state monitoring requirements. Routine sampling and reporting began after the background groundwater conditions were established between 2016 and 2018. Based on groundwater conditions at the Site, an assessment monitoring program was established on November 13, 2019, and the Site entered into an assessment of corrective measures on July 21, 2022. During the 2022 semiannual reporting period, the Site remained in assessment monitoring as corrective measures are being evaluated.

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

Groundwater monitoring sampling events for AP-E were conducted by Atlantic Coast Consulting (ACC) in August and September 2022 (referred herein as August 2022 or Fall 2022) for this semiannual reporting period. In order to meet the requirements of GA EPD Rule 391-3-4-.10(6) and 40 CFR 257.95 (b) and (d)(1), this semiannual event included sampling and analysis of all Appendix III and Appendix IV constituents. Samples were collected and submitted to GEL Laboratories, LLC, for analysis. Per the CCR Rule, groundwater results through from these sampling events were evaluated in accordance with the certified statistical methods. That evaluation showed statistically significant values of Appendix III[2] and Appendix IV[3] parameters in wells listed in the tables below.

Appendix III Parameter[3]	**August 2022**
Boron	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S
Calcium	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S
Chloride	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S
Fluoride	BRGWC-17S, BRGWC-36S, BRGWC-38S
pH (lower limit)	BRGWC-33S, BRGWC-34S, BRGWC-36S, BRGWC-37S, BRGWC-38S
Sulfate	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S
Total Dissolved Solids (TDS)	BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

[2] Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)
[3] Antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 + 228

Appendix IV Parameter[4]	August 2022
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 December 2022, the Site will continue in assessment monitoring. An evaluation of remedies was presented in an Assessment of Corrective Measures (ACM) Report submitted in December 2022 in accordance with the requirements of § 257.96. 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.

Geosyntec consultants

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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
EDR	Environmental Data Resources
ft/day	feet per day
GA EPD	Georgia Environmental Protection Division
GEL Laboratories	GEL Laboratories, LLC.
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GSC	Groundwater Stats Consulting
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
K_h	horizontal hydraulic conductivity
MCL	Maximum Contaminant Level
mg/L	milligram per liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric turbidity units
ORP	oxidation-reduction potential
PL	prediction limit
PWR	partially weathered rock
QA/QC	Quality Assurance/Quality Control
RPD	relative percent difference
SSI	statistically significant increase
SSL	statistically significant level
s.u.	standard unit
TDS	total dissolved solids
TWR	transitionally weathered rock
Unified Guidance	Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (CCR Rule) (40 Code of Federal Regulations [CFR] Part 257, Subpart D) and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants, Inc. (Geosyntec) has prepared this *2022 Semiannual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Branch (Site) Ash Pond E (AP-E) for the reporting period of July 2022 through December 2022 (referred to herein as the 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, Ash Ponds E are not subject to the CCR Rule. A CCR Unit Solid Waste Handling Permit application for AP-BCD was submitted to GA EPD in November 2018 and is under review.

Due to statistically significant increases (SSIs) of Appendix III parameters identified in the *2019 Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2019), Georgia Power initiated an assessment monitoring program for AP-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 program (ACM) for AP-E on July 21, 2022. Georgia Power requested and was subsequently granted an extension to the ACM in October 2022 due to site-specific conditions or circumstances. This extension request is provided in **Appendix A**. The ACM was submitted to GA EPD in December 2022. Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-E in accordance with the assessment monitoring

program established for the unit in 2019, including semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

SSLs of beryllium and cobalt have been observed in all assessment monitoring events since 2019 and documented in subsequent 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 is a valley-fill containment area formed by the construction of an earthen embankment dike at the eastern portion of the ash pond. Ash Pond 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 the ash ponds is shown on **Figure 1**. The former Ash Pond A, the first ash pond constructed at the facility, was taken out of service in the late 1960s and was closed in April 2016 by the removal and relocation of its stored CCR to Ash Pond E. Ash Ponds B, C, D, and E are currently not active and will be closed by removal, specifically, by relocation of the CCR stored in those ash ponds to a new, permitted, on-site CCR landfill.

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

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

2.0 GROUNDWATER MONITORING ACTIVITIES

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

2.1 Monitoring Well Installation and Maintenance

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 B** and was submitted to GA EPD under separate cover.

The well and piezometer networks are inspected semiannually to evaluate if any repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). In Fall 2022, the networks were inspected, necessary corrective actions were identified and subsequently completed, as documented in **Appendix C**. This documentation and was performed under the direction of a professional geologist or engineer registered in the State of Georgia.

2.2 Assessment Monitoring

Pursuant to § 257.94(e)(3), an assessment monitoring program was initiated for AP-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 ACM for AP-E on July 21, 2022. Georgia Power completed an ACM (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.

One groundwater monitoring event was conducted for this reporting period in August 2022 in accordance with § 257.93. The wells in the certified monitoring system for AP-E are tabulated in **Table 1,** and their locations are shown on **Figure 2**. A summary of

groundwater wells sampled at AP-E during this reporting period is presented in **Table 2**. The analytical results are included in **Appendix D**.

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

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 Fall 2022 assessment monitoring event and were analyzed for major cations (calcium [Ca], magnesium [Mg], potassium [K], and sodium [Na]) and major anions (chloride [Cl], sulfate [SO_4], and alkalinity [i.e., bicarbonate, carbonate, total] [HCO_3]) 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 D**.

3.0 SAMPLING METHODOLOGY AND ANALYSES

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

3.1 Groundwater Level Measurement

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

The groundwater elevation data were used to prepare potentiometric surface map for the August 2022 event, which is presented on **Figure 3**. 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

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

Horizontal hydraulic conductivity (K_h) values used in flow calculations range from 2.7 to 5.5 feet per day (ft/day) and were based on slug test data presented in the 2020 Hydrogeologic Assessment Report Revision 01 (Geosyntec, 2020). The highest observed K_h estimates from each well set were used, resulting in a conservatively high estimate of groundwater flow velocity. An estimated effective porosity of 0.20 is used to represent average conditions at AP-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 event, 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 = Average hydraulic conductivity $\left(\frac{feet}{day}\right)$

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

n_e = Effective porosity

The supporting calculations for the August 2022 semiannual event are presented in **Table 4.** The tables also present the average hydraulic gradients calculated from the measurement event. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figure 3.** Well pairs were selected to provide the most accurate alignment possible relative to the interpreted groundwater flow path across AP-E. As presented on **Table 4**, groundwater flow velocity at the site is approximately 0.18 ft/day across AP-E. The observed groundwater flow velocities calculated for this reporting period 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 ± 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 Fall 2022 assessment monitoring event are provided in **Appendix D**.

3.4 Laboratory Analyses

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 D**.

The analytical results from the Fall 2022 monitoring event 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 D** with the laboratory reports.

4.0 STATISTICAL ANALYSIS

The following section summarizes the statistical analysis of Appendix III groundwater monitoring data performed pursuant to § 257.93. In addition, pursuant to § 257.95(d)(2), Georgia Power established GWPS for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the Fall 2022 assessment monitoring event. The data were analyzed by Groundwater Stats Consulting (GSC); the reports generated from the analyses are provided in Appendix D.

4.1 Statistical Methods

The selected statistical method for AP-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™ groundwater statistical software was used to perform the statistical analyses. Sanitas™ is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the Unified Guidance.

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

Based on guidance from GA EPD, statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits (PLs) combined with a 1-of-2 verification resample plan for each of the Appendix III constituents. Interwell PLs pool upgradient well data to establish a background limit for an individual constituent, and the

most recent sample from each downgradient well is compared to the same limit for each constituent to assess whether there are statistically significant increases (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.

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.

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:

(1) The maximum contaminant level (MCL) established under §141.62 and 141.66.

(2) Where an MCL has not been established:

(i) Cobalt 0.006 mg/L;

(ii) Lead 0.015 mg/L;

(iii) Lithium 0.040 mg/L; and

(iv) Molybdenum 0.10 mg/L.

(3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

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

4.2 Statistical Analyses Results

Based on review of the Appendix III statistical analysis discussion presented in **Appendix E**, 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 E**.

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

4.2.1 Fall 2022 Data

- 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 E**). 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.

5.0 NATURE AND EXTENT

Delineation of the nature and extent of beryllium and cobalt SSLs identified at AP-E was performed by the sampling and analysis of groundwater, both laterally and vertically of the detection monitoring wells showing SSLs. The lateral and vertical assessment monitoring wells are PZ-70I and PZ-53D for detection monitoring well BRGWC-38S, and PZ-13S and PZ-52D for detection monitoring well BRGWC-33S. The existing well PZ-54, initially proposed as the lateral assessment monitoring well for BRGWC-38S, will continue to be used for water level monitoring.

Results from initial delineation activities performed during the current reporting period indicate that lateral and vertical delineation of beryllium and cobalt has been completed at AP-E. Beryllium and cobalt were not detected in the lateral and vertical assessment monitoring wells in exceedance of the GWPS (**Table 5**).

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

6.0 MONITORING PROGRAM STATUS

6.1 Assessment Monitoring Status

Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-E in accordance with the assessment monitoring program regulations of § 257.95 while corrective measures are evaluated 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

An ACM program was initiated on July 21, 2022. Georgia Power completed an ACM (Geosyntec, 2022) for AP-E at Plant Branch on December 16, 2022.

In accordance with § 257.97(a), remedy selection progress reports will be prepared and submitted concurrent with semiannual groundwater monitoring reports to document results associated with additional data collection, and present progress toward selection and design of a groundwater remedy beginning in July 2023. The following ACM efforts completed during the reporting period will be summarized:

i) The current conceptual site model (CSM).

ii) Summary of work completed to date to achieve delineation of constituents exceeding GWPS and a summary of data collected to date to support remedy selection.

iii) The status of evaluating applicable corrective measures at the site, planned activities, and anticipated schedule for the following semi-annual reporting period.

The iso-concentration maps for beryllium and cobalt are presented in **Figures 4** and **5**; these figures were also presented in the ACM report submitted in December 2022. The maps show that beryllium and cobalt are delineated within a close proximity to the detection monitoring wells, BRGWC-33S and BRGWC-38S. From review of the Fall 2022 groundwater sampling data, the beryllium and cobalt SSL concentration trends are statistically significantly decreasing in BRGWC-33S and BRGWC-38S (**Figure 6**). Ongoing geochemical investigations will assess the upgradient and downgradient

geochemical conditions that could contribute to the mobilization of the SSL constituents at AP-E.

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). The risk evaluation is included in **Appendix F**.

6.3 Semiannual Potable Water Survey

An updated potable well survey of potential groundwater wells within a two-mile radius of AP-E was conducted in December 2022 and consisted of reviewing federal, state, county records, and online sources. Surveys conducted by Environmental Data Resources (EDR) are included in **Appendix G**. Additional federal, state, county records and online sources outside of the EDR survey were also reviewed. The Putnam County Health Department did not respond to Geosyntec's request for information due to inadequate resources. Georgia Power abandoned the Skills Center Well on January 5th, 2023, which was the only potable well on the site property.

7.0 CONCLUSIONS AND FUTURE ACTIONS

This *2022 Semiannual 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 monitoring event are generally consistent with historical evaluations. Statistical evaluations 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 GWPSs. In accordance with GA EPD Rule 391-3-4-.10(6) and § 257.96, Georgia Power has initiated an assessment of corrective measures program for the identified SSLs. Based on the risk evaluation (**Appendix F**), concentrations of beryllium and cobalt detected in groundwater at AP-E are not expected to pose a risk to human health or the environment

Georgia Power will continue to monitor AP-E groundwater under the assessment monitoring program and evaluate the remedies presented in the ACM Report in accordance with the requirements of § 257.96. The next routine semiannual assessment monitoring event for AP-E is scheduled for January 2023.

8.0 REFERENCES

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

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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 [2] (ft)	Top of Screen Elevation [2] (ft)	Bottom of Screen Elevation [2] (ft)	Well Depth (ft BGS)	Screen Interval Length (ft)
AP-BCD Detection Monitoring Well Network										
BRGWA-2S	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 Monitoring 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

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

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

Notes:
ft = feet
ft BGS = feet below ground surface
-- = not applicable
(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet.
(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).

Table 2

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

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

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

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

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

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

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

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

Notes:
-- = Ground water depth was not measured due to low groundwater levels
N/A = Not applicable
ft = feet
ft BTOC = feet below top of casing
(1) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88).

Table 4

Horizontal Gradient and Flow Velocity Calculations

Plant Branch AP-E, Putnam County, Georgia

	August 22, 2022			
Flow Path Direction [(1)]	**h_1 (ft)**	**h_2 (ft)**	**L (ft)**	**i (ft/ft)**
BRGWA-5S/BRGWC-33S	431.69	407.72	5108	0.005
PZ-4I/BRGWC-38S	451.95	409.29	3904	0.011

Flow Path Direction [(1)]	**K_h (ft/day)**	**n_e**	**i (ft/ft)**	**V (ft/day)[(2)]**	**Average V (ft/day)[(3)]**
BRGWA-5S/BRGWC-33S	2.70	0.20	0.005	0.06	0.18
PZ-4I/BRGWC-38S	5.50	0.20	0.011	0.30	

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 Figure 3 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-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-53D	PZ-70I
	Sample Date:	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/23/2022	8/24/2022	8/23/2022	8/24/2022	8/24/2022	8/24/2022	8/23/2022	8/23/2022	8/23/2022	9/1/2022	8/23/2022	9/1/2022
	Parameter [1,2,3]																
APPENDIX III	Boron	0.00532 J	0.00592 J	0.00538 J	< 0.0052	< 0.0052	0.0273	0.975	2.45	2.23	1.10	< 0.0052	1.67	< 0.0052	0.0403	1.04	1.20
	Calcium	4.65	13.9	18.2	14.3	3.97	43.6	119	75.0	68.5	48.1	3.70	37.1	9.69	69.0	76.4	42.6
	Chloride	2.18	2.02	3.59	3.64	2.39	5.00	30.3	6.17	6.53	7.96	1.97	6.42	4.20	6.24	4.94	10.8
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.274	0.187	0.140	< 0.033	0.194	0.105	0.609	0.128	0.140	0.164	1.43
	pH	5.95	6.67	6.36	6.24	6.51	6.62	4.67	5.75	6.05	5.59	5.82	3.97	5.46	7.70	7.18	6.13
	Sulfate	0.452	5.66	0.521	2.21	0.479	157	385	268	279	224	0.307 J	389	51.0	340	348	172
	TDS	45.0	117	101	107	52.0	370	614	452	507	418	40.0	568	130	754	543	321
APPENDIX IV	Antimony	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001	< 0.001
	Arsenic	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.00262 J	< 0.002	< 0.002	< 0.002	< 0.002	0.00337 J	< 0.002	--	< 0.002	< 0.002
	Barium	0.0120	0.00954	0.0379	0.0241	0.0140	0.0512	0.0409	0.0249	0.0339	0.0296	0.0260	0.0141	0.0562	--	0.0547	0.0444
	Beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00241	< 0.0002	0.000210 J	< 0.0002	< 0.0002	0.00854	0.000331 J	--	< 0.0002	< 0.0002
	Cadmium	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.000509 J	0.000517 J	< 0.0003	< 0.0003	< 0.0003	0.000459 J	< 0.0003	--	< 0.0003	< 0.0003
	Chromium	0.00908 J	< 0.003	0.00435 J	0.00647 J	0.0143	0.0127	< 0.003	< 0.003	0.00752 J	0.00713 J	< 0.003	0.00398 J	0.0128	--	< 0.003	< 0.003
	Cobalt	0.000844 J	0.000767 J	< 0.0003	0.000553 J	< 0.0003	< 0.0003	0.0639	0.00438	< 0.0003	< 0.0003	< 0.0003	0.173	< 0.0003	0.00150	< 0.0003	0.00560
	Fluoride	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	0.274	0.187	0.140	< 0.033	0.194	0.105	0.609	0.128	0.140	0.164	1.43
	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
	Lithium	< 0.003	0.0262	< 0.003	< 0.003	0.00314 J	< 0.003	0.0109	< 0.003	< 0.003	< 0.003	< 0.003	0.0214	< 0.003	--	0.0171	0.00615 J
	Mercury	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	< 0.000067	0.000117 J	< 0.000067	--	< 0.000067	< 0.000067
	Molybdenum	< 0.0002	0.00240	< 0.0002	0.00151	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	--	0.00265	0.00142
	Comb. Radium 226/228	0.531 U	1.70 U	0.735 U	2.30	0.203 U	0.152 U	1.94	1.86	3.10	1.38 U	2.37 U	3.12	1.83 U	--	3.04	1.57 U
	Selenium	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	0.00208 J	0.00610	< 0.0015	< 0.0015	0.00246 J	< 0.0015	0.0296	0.00157 J	--	< 0.0015	0.00625
	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
GEOCHEM	Alkalinity (Bicarbonate as CaCO3)	32.6	62.4	73.8	72.8	58.2	74	3.4	28.6	50.6	20.6	21.2	< 1.45	21.4	--	82.8	37.8
	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
	Alkalinity (total) as CaCO3	32.6	62.4	73.8	72.8	58.2	74	3.4	28.6	50.6	20.6	21.2	< 1.45	21.4	--	82.8	37.8
	Iron	0.0763 J	0.183	0.151	< 0.033	0.0701 J	< 0.033	0.0381 J	< 0.033	0.162	< 0.033	< 0.033	< 0.033	< 0.033	--	0.294	1.48
	Magnesium	4.86	8.82	8.51	10.4	4.06	25.7	14.7	18.6	36.9	20.5	1.29	41.3	5.94	--	19.3	15.5
	Manganese	0.0391	0.0134	0.014	< 0.001	0.00329 J	< 0.001	2.75	2.97	0.017	0.00295 J	< 0.001	1.8	0.00137 J	--	0.641	1.06
	Potassium	0.439	5.88	0.635	0.909	0.685	1.29	13	3.79	4.24	3.78	1.84	5.75	3.59	--	6.44	5.62
	Sodium	3.36	5.73	4.03	4.93	2.44	24.6	24	22.8	19.8	40.6	4.51	44.1	12.5	--	52	25.8

Notes:
-- = Parameter was not analyzed
ND = Non-detect
< = Indicates the parameter was not detected above the analytical method detection limit (MDL).
J = Indicates the parameter was estimated and detected between the MDL and the reporting limit (RL).
B = Analyte was detected in the associated method blank.
TDS = total dissolved solids
U = Indicates the parameter was not detected above the analytical minimum detectable concentration (MDC) (Specific to combined radium 226/228)
(1) Appendix III/IV parameter per 40 CFR 257 Subpart D. Parameters are reported in units of milligrams per liter (mg/L), except for pH reported as s.u. (standard units) and combined radium reported as picocuries per liter (pCi/L).
(2) Metals were analyzed by EPA Method 6010D, 6020B, and 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540-2011, and combined radium 226/228 by EPA Methods 9315/9320.
(3) The pH value presented was recorded at the time of sample collection in the field.

Table 6

Summary of Background Concentrations and Groundwater Protection Standards

Plant Branch AP-E, Putnam County, Georgia

Analyte	Units	MCL	CCR-Rule Specified	Background[(1)] Fall, 2022	GWPS[(2)(3)]
Antimony	mg/L	0.006		0.003	0.006
Arsenic	mg/L	0.01		0.005	0.01
Barium	mg/L	2		0.063	2
Beryllium	mg/L	0.004		0.0005	0.004
Cadmium	mg/L	0.005		0.001	0.005
Chromium	mg/L	0.1		0.016	0.1
Cobalt	mg/L	n/a	0.006	0.0034	0.006
Fluoride	mg/L	4		0.19	4
Lead	mg/L	n/a	0.015	0.0020	0.015
Lithium	mg/L	n/a	0.040	0.089	0.089
Mercury	mg/L	0.002		0.00021	0.002
Molybdenum	mg/L	n/a	0.10	0.01	0.10
Selenium	mg/L	0.05		0.005	0.05
Thallium	mg/L	0.002		0.002	0.002
Combined Radium-226/228	pCi/L	5		1.65	5

Notes:

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

MCL = Maximum Contaminant Level

mg/L = milligrams per liter

n/a = not applicable

pCi/L = picocuries per liter

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

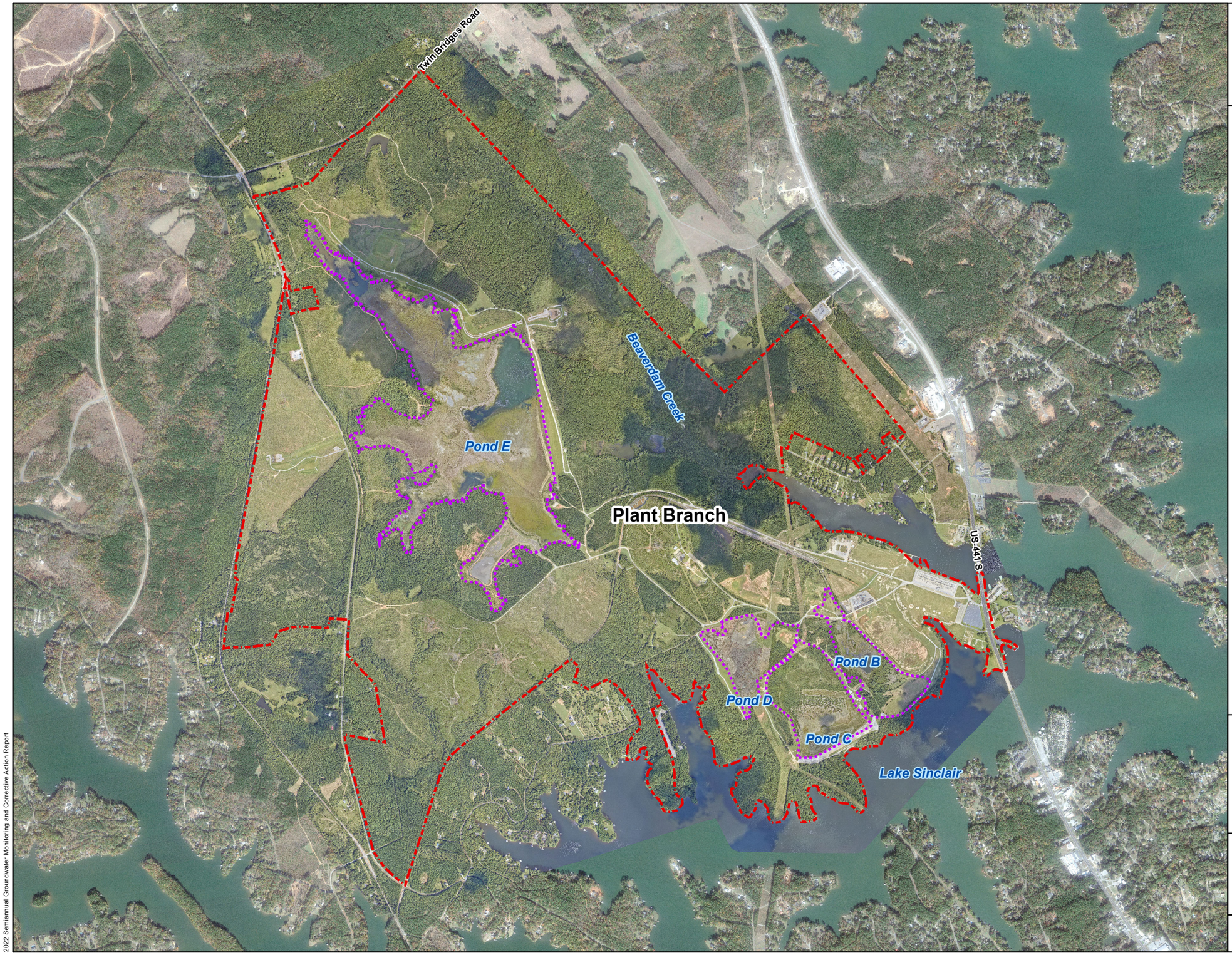
Background limits and groundwater protection standards (GWPS) are applicable to the Fall 2022 event.

(1) The background limits were used when determining the GWPS under 40 CFR 257.95(h) and Georgia Environmental Protection Division (GA EPD) Rule 391-3-4-.10(6)(a).

(2) Under 40 CFR 257.95(h)(1-3) the 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



N

LEGEND

Plant Branch Property Boundry

Approximate Ash Pond Boundary

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

0 2,000 4,000

Scale in Feet

SITE LOCATION MAP

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | FEBRUARY 2023

FIGURE 1

2022 Semiannual Groundwater Monitoring and Corrective Action Report

N

LEGEND

- Detection Monitoring Well
- Horizontal Assessment Monitoring Well
- Vertical Assessment Monitoring Well
- Plant Branch Property Boundry
- Approximate Ash Pond Boundary

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

0 1,000 2,000
Scale in Feet

MONITORING WELL NETWORK MAP

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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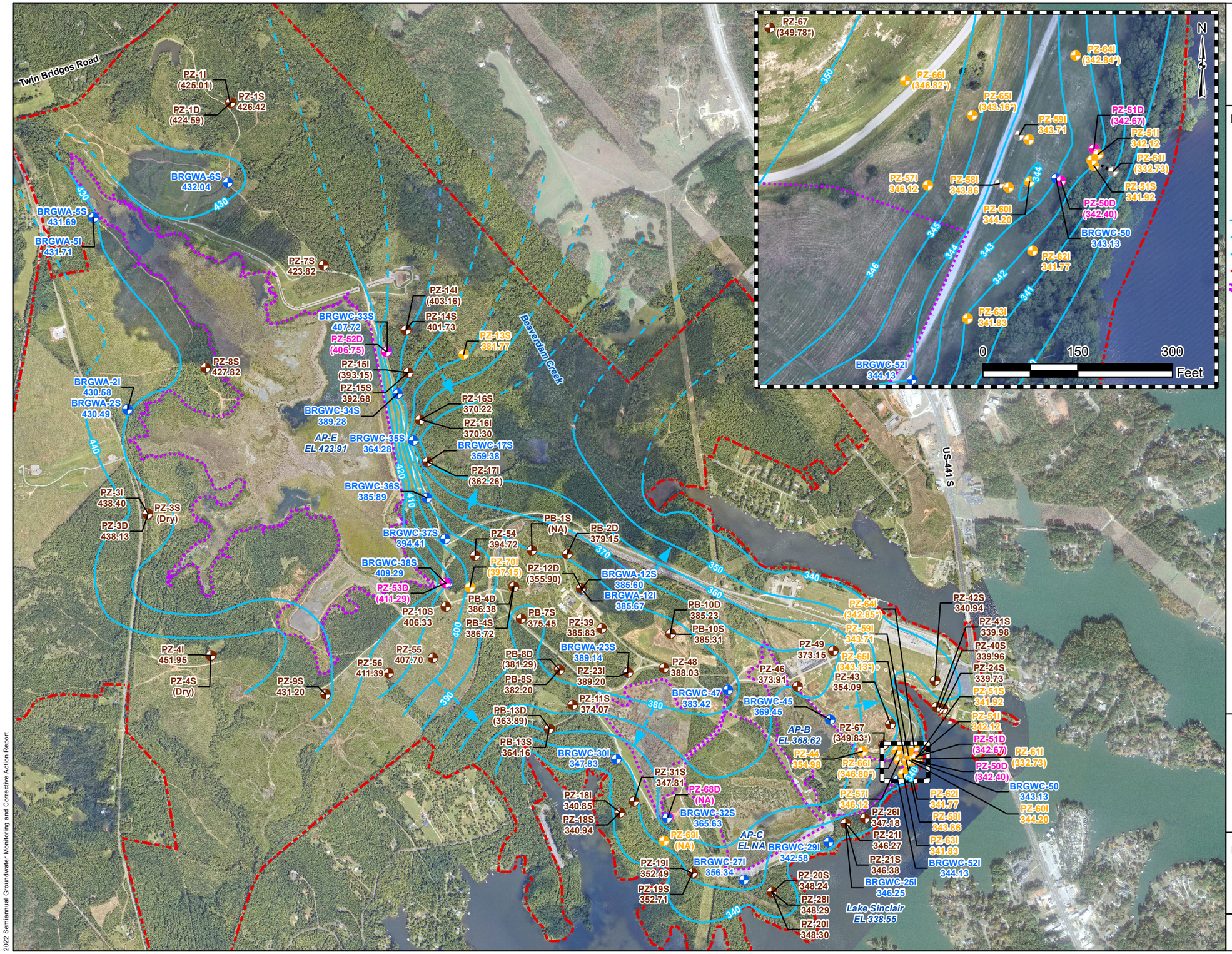
FIGURE 2

2022 Semiannual Groundwater Monitoring and Corrective Action Report



LEGEND

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

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

0 1,500 3,000
Scale in Feet

POTENTIOMETRIC SURFACE CONTOUR MAP - AUGUST 2022

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

Prepared For: Georgia Power
Prepared By: Geosyntec consultants

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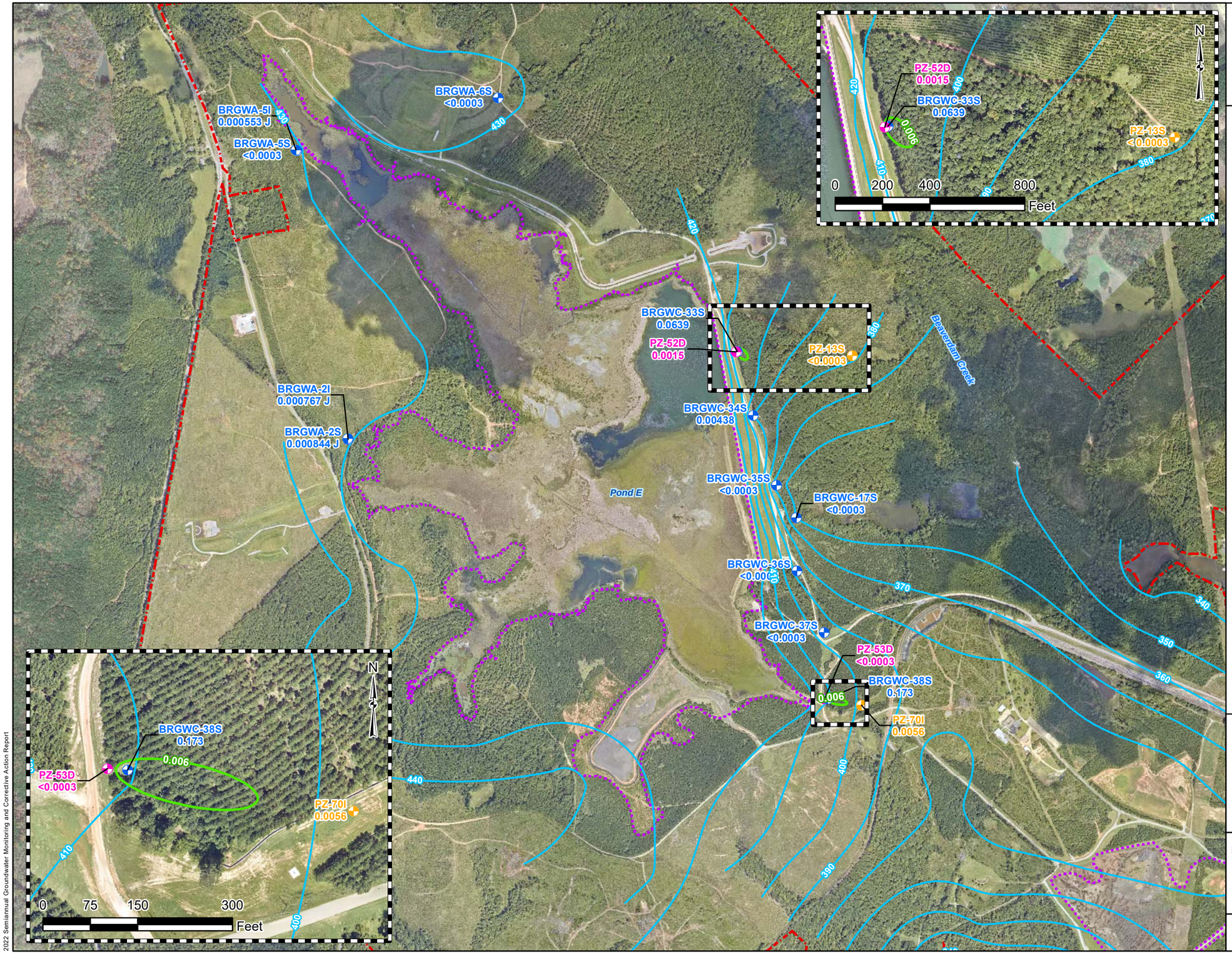
FIGURE 3

2022 Semiannual Groundwater Monitoring and Corrective Action Report



LEGEND

- Detection Monitoring Well
- Horizontal Assessment Monitoring Well
- Vertical Assessment Monitoring Well
- Groundwater Elevation Iso-Contour (August 2022)
- Cobalt GWPS Iso-Concentration Contour (mg/L)
- Plant Branch Property Boundry
- Approximate Ash Pond Boundary

Notes:
1. Concentration data from groundwater samples collected during the August 2022 semiannual monitoring event and subsequent September 2022 sampling event for PZ-52D and PZ-70I.
2. Concentrations are reported in milligrams per liter (mg/L).
3. Water level elevation recorded on August 22, 2022.
4. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
5. The Groundwater Protection Standard (GWPS) for cobalt is 0.006 mg/L.
6. J - Estimated value.
7. Property Boundary Provided by Southern Company Services.
8. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.

0 1,000 2,000
Scale in Feet

ISO-CONCENTRATION MAP, COBALT - AUGUST 2022

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

Prepared For: Georgia Power
Prepared By: Geosyntec consultants

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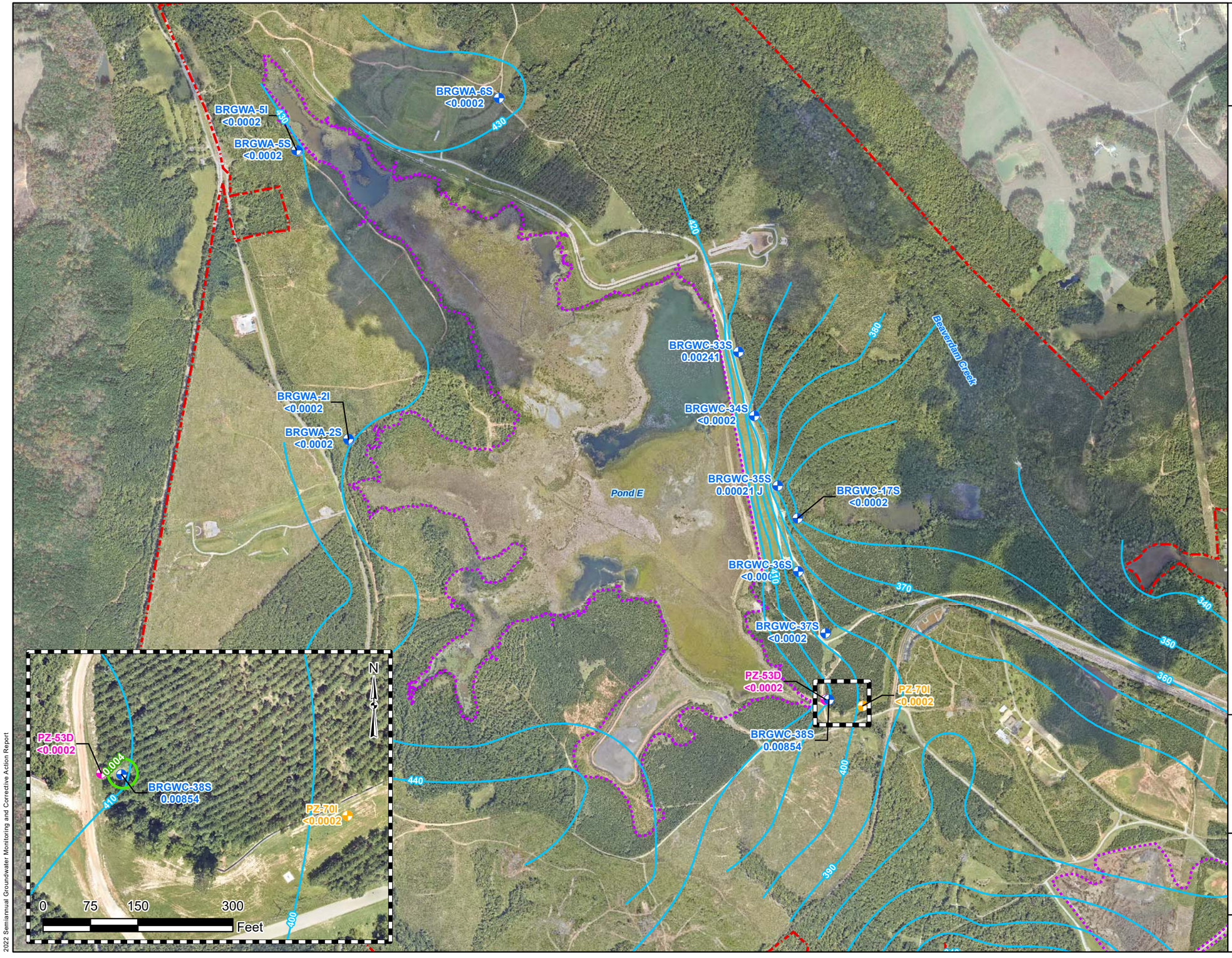
FIGURE 4

2022 Semiannual Groundwater Monitoring and Corrective Action Report



N

LEGEND

- Detection Monitoring Well
- Horizontal Assessment Monitoring Well
- Vertical Assessment Monitoring Well
- Groundwater Elevation Iso-Contour (August 2022)
- 0.004 Beryllium GWPS Iso-Concentration Contour (mg/L)
- Plant Branch Property Boundry
- Approximate Ash Pond Boundary

Notes:
1. Concentration data from groundwater samples collected during the August 2022 semiannual monitoring event and subsequent September 2022 sampling event for PZ-70I.
2. Concentrations are reported in milligrams per liter (mg/L).
3. Water level elevation recorded on August 22, 2022.
4. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
5. The Groundwater Protection Standard (GWPS) for beryllium is 0.004 mg/L.
6. J - Estimated value.
7. Property Boundary Provided by Southern Company Services.
8. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.

0 1,000 2,000
Scale in Feet

ISO-CONCENTRATION MAP, BERYLLIUM - AUGUST 2022

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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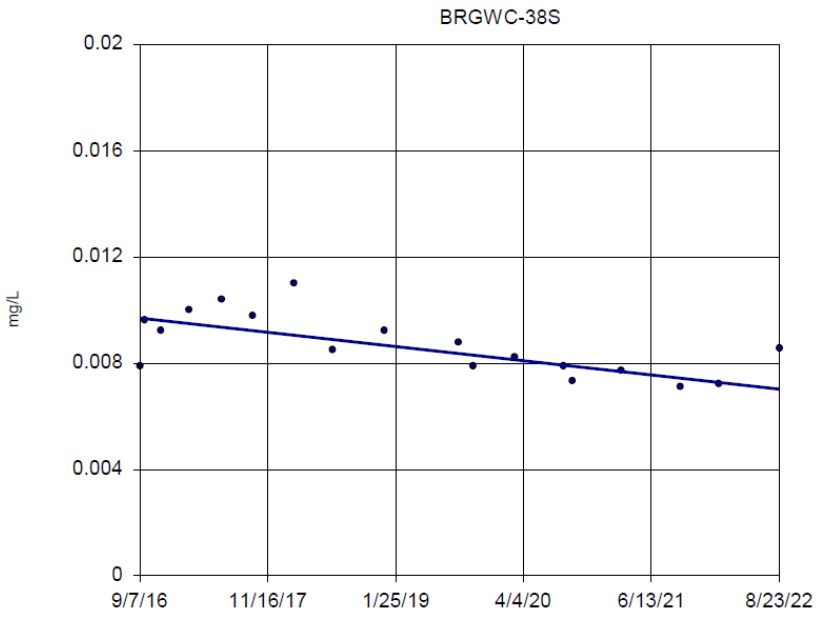
FIGURE 5

2022 Semiannual Groundwater Monitoring and Corrective Action Report

Beryllium



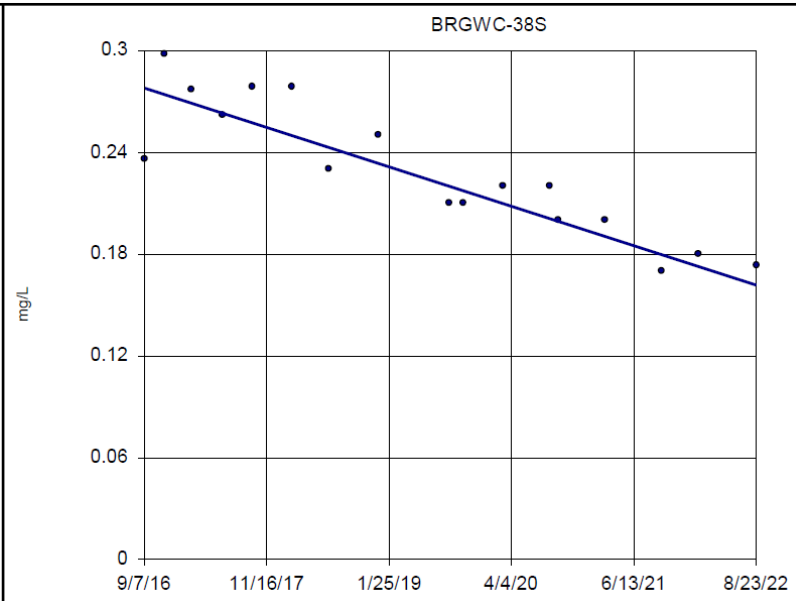
n = 18

Slope = -0.0004476 units per year.

Mann-Kendall statistic = -77
critical = -68

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Cobalt

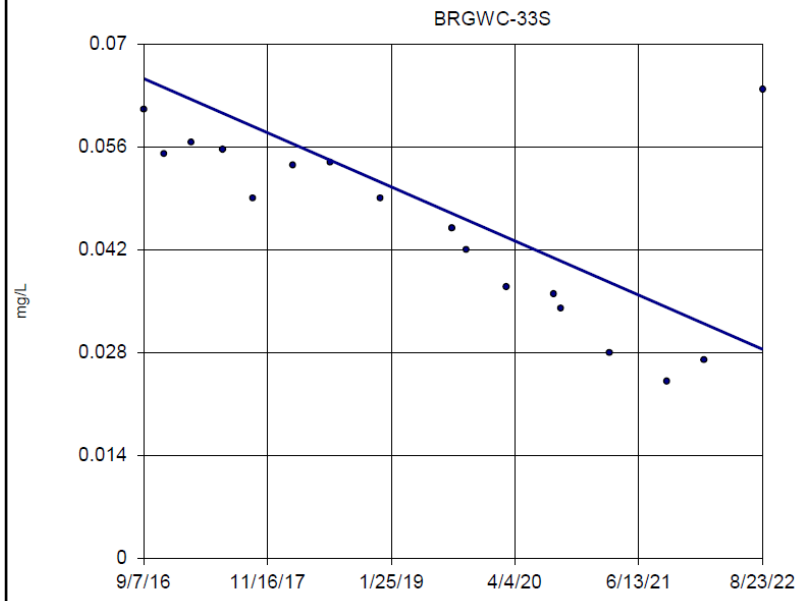


n = 17

Slope = -0.01947 units per year.

Mann-Kendall statistic = -98
critical = -63

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).



n = 18

Slope = -0.006188 units per year.

Mann-Kendall statistic = -105
critical = -68

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Notes:

1. Groundwater trends completed by Groundwater Stats Consulting using groundwater data collected for the full monitoring period through the August 2022 semiannual sampling event.
2. Trends shown are in wells where statistically significant levels (SSLs) have been identified.
3. mg/L = milligrams per liter

Beryllium and Cobalt Concentration Trends

Georgia Power Company
Plant Branch AP-E
Putnam County, Georgia

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

Kennesaw, GA

February 2023

Figure 6

2022 Semiannual Groundwater Monitoring and Corrective Action Report

APPENDIX A

Assessment of Corrective Measures (ACM) Extension Request

Geosyntec consultants

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

DEADLINE EXTENSION DEMONSTRATION
ASSESSMENT OF CORRECTIVE MEASURES
40 CFR §257.96(a)
PLANT BRANCH ASH POND E (AP-E)
GEORGIA POWER COMPANY

Pursuant to 40 CFR §257.96(a), Georgia Power Company requires that the deadline to complete the Assessment of Corrective Measures (ACM) be extended by 60 days, until December 16, 2022, due to site-specific conditions or circumstances.

The 60-day extension is required because activities are on-going at Plant Branch AP-E to characterize the nature and extent of target constituents and relevant site conditions that may affect evaluation of possible corrective measures. Additional time is required to evaluate groundwater monitoring data from the delineation wells. These data will be incorporated into the existing conceptual site model (CSM). An updated CSM is necessary for a complete evaluation of appropriate corrective measures that can be undertaken to meet the requirements of 40 CFR §257.96(c). An additional 60 days will enable the preparation of the ACM based on a more thorough evaluation of technical data to develop the most appropriate solutions for the protection of groundwater quality.

CERTIFICATION

I, Whitney B. Law , being a Registered Professional Engineer licensed in the state where the CCR unit is located, do hereby certify to the best of my knowledge, information, and belief, that the information provided above is accurate. I hereby certify that I am a qualified groundwater scientist, in accordance with 40 CFR §258.50(g).

Whitney B. Law, PE
Project Director
Geosyntec Consultants

October 19, 2022
Date

APPENDIX B

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)

Prepared by

Geosyntec consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW8862

November 2022

Geosyntec
consultants

Southern Company

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	Georgia Power Company
NAD	North America Datum
NAVD	North American Vertical Datum
NSF	National Sanitation Foundation
ORP	oxygen reduction potential
PVC	polyvinyl chloride
SCS	Southern Company Services
TOC	top of casing
US EPA	United States Environmental Protection Agency

1. INTRODUCTION

Georgia Power Company's (Georgia Power) Plant Branch (Plant) is located near Milledgeville and Eatonton, in Putnam County, Georgia. Over the course of power generation at the Plant, five Coal Combustion Residuals (CCR) ponds, identified as Ash Ponds A, B, C, D, and E, were utilized. Ash Ponds B, C, 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 pre-cleaned and packaged by the manufacturer. The U-Pack® well screen was constructed onsite by packing sand between slotted PVC and the well screen. Well construction materials are sufficiently durable to resist chemical and physical degradation and do not interfere with the quality of groundwater samples. Casing and screen are flush-threaded. Solvent or glue was not used to construct the 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) [3]
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

N

LEGEND

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

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

0 500 1,000
Scale in Feet

AP-E Well Location Map

GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | NOVEMBER 2022

FIGURE 1

APPENDIX A

Well Driller Performance Bonds

Power of Attorney

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

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

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

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

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

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

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

By _____
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

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

ALISON DWAN NASH-TROUT
NOTARY PUBLIC - MINNESOTA
My Commission Expires
January 31, 2025

_____
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.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

This Power of Attorney expires
January 31, 2025

_____
Kara Barrow, Secretary

Please direct bond verifications to surety@intactinsurance.com

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company , Surety upon

a certain Bond No. 800033976

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

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

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

does hereby continue said bond in force for the further period

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

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

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

Description of bond Performance Bond for Water Well Contractors

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

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

Atlantic Specialty Insurance Company

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

Parker, Smith & Feek, Inc.
Agent

2233 112th Ave NE Bellevue, WA 98004
Address of Agent

425-709-3600
Telephone Number of Agent

S-0157/GE 8/08

XDP

APPENDIX B

Boring and Well Construction Logs

Geosyntec consultants
engineers | scientists | innovators

BORING AND WELL LOG LEGEND

LITHOLOGY	WATER LEVEL	WELL/BORING COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample
							ASPHALT		
							CONCRETE		
							FILL		
							TOPSOIL		
							COBBLES		
							IGNEOUS Rock		
							METAMORPHIC Rock		
							SEDIMENTARY Rock		
							Well-graded GRAVEL (GW)		
							Poorly graded GRAVEL (GP)		
							Silty GRAVEL (GM)		
							Clayey GRAVEL (GC)		
							Well-graded GRAVEL with silt (GW-GM)		
							Poorly graded GRAVEL with silt (GP-GM)		
							Well-graded GRAVEL with clay (GW-GC)		
							Poorly graded GRAVEL with clay (GP-GC)		
							Well-graded SAND (SW)		
							Poorly graded SAND (SP)		
							Silty SAND (SM)		
							Clayey SAND (SC)		
							Well-graded SAND with silt (SW-SM)		
							Poorly graded SAND with silt (SP-SM)		
							Well-graded SAND with clay (SW-SC)		
							Poorly graded SAND with clay (SP-SC)		
							SILT (ML)		
							Lean CLAY (CL)		
							Organic SOIL (OL)		
							Elastic SILT (MH)		
							Fat CLAY (CH)		
							Organic SOIL (OH)		
							PEAT (PT)		
							Volume Descriptors: Trace = <5% Few = 5-10% Little = 15-25% Some = 30-45% Mostly = >=50%		
	▽ ▼						Water Level During Drilling Water Level at End of Drilling/in Completed Well		
							Cap Riser Screen Cement Bentonite Grout Bentonite Seal Filter Pack Backfill		
			GR EN SS ST CO DP				Grab Encore Split Spoon Shelby Tube Core Barrel Direct Push Lab Sample and ID	0.0	ID

NOTES:

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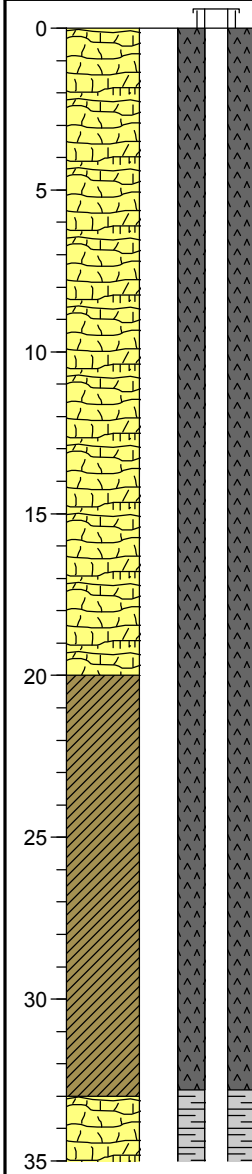
Client: Southern Company Services
Project: Plant Branch Well Install
Address: 1100 Milledgeville Rd, Milledgeville, GA

WELL LOG
Well No. PZ-70I
Page: 1 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):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Cascade Drilling**	Sampling Method(s):	**Core Barrel**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic 4x6**	DTW Post-Installation (ft):	**--**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**TSI-150**	Ground Surface Elevation:	**422.88 NAV88**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**C. Franklin**	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**



DEPTH (ft)	Sample Type	Recovery (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
0	GR		(0') PARTIALLY WEATHERED ROCK (PWR); reddish-brown, dry, stiff, low plasticity, micaceous with trace sand and relict rock structure.	Hand augered 0-10 feet bgs.	420
5					415
10	CB	90	(10') Same as above.		410
15			(14') PWR; reddish-brown, dry, stiff, low plasticity, micaceous with relict rock structure.		405
20	CB	60	(20') SANDY CLAY (CL); reddish-brown, soft, low plasticity, micaceous (saprolite).		400
25					395
30	CB	90	(30') Same as above.		390
35			(33') PWR; reddish-brown, low plasticity, micaceous with some rock fragments and relict rock structure.		

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).

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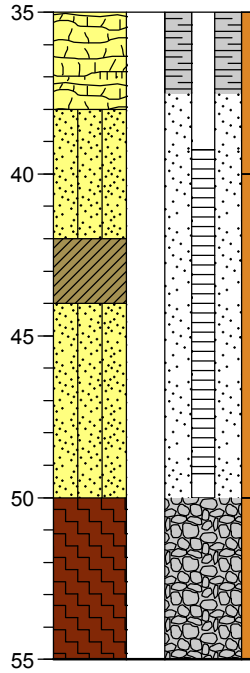
Client: Southern Company Services
Project: Plant Branch Well Install
Address: 1100 Milledgeville Rd, Milledgeville, GA

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):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Cascade Drilling**	Sampling Method(s):	**Core Barrel**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic 4x6**	DTW Post-Installation (ft):	**--**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**TSI-150**	Ground Surface Elevation:	**422.88 NAV88**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**C. Franklin**	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**



DEPTH (ft)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	ELEVATION (ft NAV88)
	(38') SILTY SAND (SM); reddish-brown, loose, trace clay (saprolite).	**Filter Pack:** 3.5 bags 20/40 sand **Top Seal:** One five gallon bucket of coated bentonite pellets	385
40	(40') SILTY SAND (SM); reddish-brown, loose, coarse sand with some gravel (saprolite).		
	(42') SANDY CLAY (CL); reddish-brown, moist, low to medium plasticity, relict rock structure (saprolite).		380
45	(44') SILTY SAND (SM); light brown, loose, trace gravel and trace clay (saprolite).		375
50	(50') GNEISS; competent with multiple fractures near 53 feet, fracture at 54.5 feet, banded, iron oxide staining.		370
55	(55') Boring terminated.		

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).

APPENDIX C

Well Development Form

Atlantic Coast Consulting, Inc.
Well Development Field Record

Job Name: _____ Job No. _____ Well No. PZ-70

Developed By: ~~Anna Schnittker~~ H. Auld Date of Installation: _____ Sheet 1 of 1

Started Dev. 8-29-22 / 1225 (Date / Time) Completed Dev. 8-29-22 / 1510 (Date / Time)

W.L. Before Dev. 28.63 / 8-29-22 / 1220 (BGS / Date / Time) W.L. After Dev. 34.30 / 8-29-22 / 1510 (BGS / Date / Time)

Well Depth Before Dev.: 52.98 BGS Well Depth After Dev.: 52.98 BGS

Water Column (H): 24.35 Ft. Well Dia.: 2 In. Well Volume: 3.90 Gal.

Screen Length: 10 Ft.

Total purged:

Date / Time	Volume Removed (Gal.)	Field Parameters: Specific Cond. (umhos/cm)	Temperature (°C)	pH (S.U.)	Turbidity (NTU)	Remarks
8-29-22/1315	20	469	24.2	6.36	389	Well pre-developed with a bailer
1332	24	387	24.8	6.23	946	
1340	28	371	24.9	6.18	75	
1349	32	358	26.3	6.17	477	Surged well w/ pump
1355	36	363	24.7	6.14	42	
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	~~60~~ 64	379	23.2	6.08	397	Surged well w/ pump
1450	72	373	21.9	6.02	11.6	
AM ~~1600~~ 1500	80	368	21.4	6.00	3.6	
1506	84	368	21.3	6.01	3.2	
		Total Volume Removed (gal):				

Development Method: 1) Bailed - purged 5 well volumes (first reading)
2) Whale pump - purged until under 5 NTUs

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 well volume = 3.90 gallons

APPENDIX D

Certified Well Survey Data

GEL ENGINEERING OF NC INC

Plant Branch Monitoring Wells

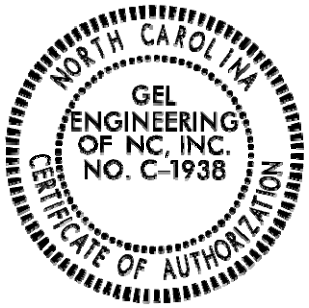
Field Surveys: 9/26/2022-9/26/2022

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

Benchmark	Northing	Easting	Elevation
GEL1	1162581.977	2556743.623	391.46
GEL2	1161860.379	2562295.003	380.25

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

10/3/2022



COA - LS003119
Exp. 12/31/2022

APPENDIX C

Well Maintenance and Repair Documentation Memoranda

Geosyntec consultants

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

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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.

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Plant Branch
August 2022 Well Inspection Form

		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
1 - Location/Identification												
a	Is the well visible and accessible?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the well properly identified with the correct well ID?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well require protection from traffic?	No	No	No	No	No	No	No	No	No	No	No
d	Is the drainage around the well acceptable? (No standing water, nor is well located in obvious drainage flow path)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2 - Protective Outer Casing		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Is the protective casing free from apparent damage?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of degradation or deterioration?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the casing have a functioning weep hole?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the annular space between casings filled with pea gravel or sand?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the well locked, and is the lock in good working condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3 - Surface Pad		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Is the well pad in good condition? (Not cracked or broken)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Does the well pad provide adequate surface seal and stability to the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Is the well pad in complete contact with the protective casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the well pad in complete contact with the ground surface? (Not undermined by erosion, animal burrows, and does not move when stepped on)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the pad surface clean? (Not covered by soil or debris)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4 - Internal Well Casing		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Does the well cap prevent entry of foreign material into the well?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	Is the casing free of kinks or bends, or any obstruction from foreign objects (such as bailers) ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c	Does the well have a venting hole near the top of casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d	Is the survey point clearly marked on the inner casing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
e	Is the depth of the well consistent with the original well log?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
f	Does the PVC casing move easily when touched or can it be taken apart by hand due to lack of grout or use of slip couplings in construction?	No	No	No	No	No	No	No	No	No	No	No
5 - Sampling (Groundwater Monitoring Wells Only):		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
a	Does the well recharge adequately when purged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b	If dedicated sampling equipment is installed, is it in good condition?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes
c	Does the well require redevelopment due to slow recharge or turbidity > 10 NTUs?	No	No	No	No	No	No	No	No	No	No	No
6 - Based on your professional judgment, is the well construction / location appropriate to:		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWC-17S	BRGWA-23S	BRGWC-25I	BRGWC-27I
	1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the w

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

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the w

	BRGWC-50	BRGWC-52I	PZ-1D	PZ-1I	PZ-1S	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-7S
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

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

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

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

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

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

6 - Based on your professional judgment, is the 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 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

ATLANTIC COAST CONSULTING, INC.

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the w

	PZ-16I	PZ-17I	PZ-18S	PZ-18I	PZ-19S	PZ-19I	PZ-20S	PZ-20I	PZ-21S	PZ-21I	PZ-23I
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

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

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

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

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

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

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

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

ATLANTIC COAST CONSULTING, INC.

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the 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 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

ATLANTIC COAST CONSULTING, INC.

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the w

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

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the w

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

7 - Corrective actions completed and date(s):

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

Plant Branch
August 2022 Well Inspection Form

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

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

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

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

5 - Sampling (Groundwater Monitoring Wells Only)

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

6 - Based on your professional judgment, is the w

	IW-C-2	IW-D-1	IW-D-2	IW-E-1
1) achieve the objectives of the facility Groundwater Monitoring Program, and 2) comply with the applicable regulatory requirements?	Yes	Yes	Yes	Yes

7 - Corrective actions completed and date(s):

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

APPENDIX D

Analytical Laboratory Results and Field Sampling Forms

LABORATORY ANALYTICAL REPORTS

Fall 2022

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 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.

Reviewed by _____

GEL LABORATORIES LLC
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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
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/6020B - PZ-52D "As 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 Received"												
Total Dissolved Solids		754	2.38	10.0	mg/L			CH6	09/08/22	1457	2313724	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	09/06/22	0910	2312379

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 3005A/6020B	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SM 2540C	

Notes:

GEL LABORATORIES LLC
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

QC Summary

Report Date: September 19, 2022

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

Contact: **Joju Abraham**

Workorder: **591887**

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%)			

QC Summary

Workorder: **591887**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2312380										
QC1205182699 LCS										
Boron	0.100			0.112	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
Cobalt	0.0500			0.0480	mg/L		96	(80%-120%)		
QC1205182698 MB										
Boron			U	ND	mg/L					09/14/22 17:25
Calcium			U	ND	mg/L					09/14/22 00:10
Cobalt			U	ND	mg/L					
QC1205182700 591881001 MS										
Boron	0.100	1.20		1.24	mg/L		N/A	(75%-125%)		09/14/22 17:31
Calcium	2.00	42.6		43.0	mg/L		N/A	(75%-125%)		09/14/22 00:21
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
Calcium	2.00	42.6		42.9	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	ug/L	4.58		(0%-20%)		09/14/22 00:32

QC Summary

Workorder: **591887**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	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

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

QC Summary

Workorder: **591887**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	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.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Technical Case Narrative
Georgia Power Company
SDG #: 591887

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
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.

Analyte	591887
	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).

GEL Sample ID#	Client Sample Identification
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(.242 - .367)* (+/-.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.

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	591887
	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: _____ of _____
Project # _____
GEL Quote #: _____
COC Number (1): _____
PO Number:

591887

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Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: ***GEL Project Manager: Erin Trent***

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: GA Power — Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Pond - PZ-52D — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Hunter Auld — Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	NI Metals * EPA 6020B	NI Dissolved Metals * EPA 6020B	<-- Preservative Type (6)
PZ-52D	09/01/22	1232	G	N	WG			3	✓	✓		field pH = 7.70

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	Auld	9/1/22	0910	1	[illegible]	9/2/22	910
2				2	[illegible]	9-2-22	
3				3			

TAT Requested: **Normal:** x **Rush:** _____ **Specify:** _____ **(Subject to Surcharge)**

Fax Results: [ ] Yes [x] No

Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4

Additional Remarks: * **Metals: B,Ca,Co**

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** 5 °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM ET

Client: GPCC	**SDG/AR/COC/Work Order:** 591881 / 591883 / 591887
Received By: MVH	**Date Received:** 09-02-2022
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 **CPM / mR/Hr** **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	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
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:** 10
4	Daily check performed and passed on IR temperature gun?	X			**Temperature Device Serial #:** IR2-21 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?	X			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:
10	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)
11	Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			X	
13	COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials EMP Date 09/06/22 Page 1 of 1

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	C780

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

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.

Sincerely,

Erin Trent
Project Manager

Purchase Order: GPC82177-0003
Enclosures

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 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.

Reviewed by Erin B Trent

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 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.

Reviewed by Erin B Trent

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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.

Reviewed by Erin B Trent

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

Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: PZ-70
Sample ID: 591881001
Matrix: WG
Collect Date: 01-SEP-22 10:55
Receive Date: 02-SEP-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.13			SU			EMK	09/01/22	1055	2313386	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Fluoride		1.43	0.0330	0.100	mg/L		1	JLD1	09/03/22	2210	2312366	2
Chloride		10.8	3.35	10.0	mg/L		50	JLD1	09/07/22	0709	2312366	3
Sulfate		172	6.65	20.0	mg/L		50					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	09/07/22	1121	2312733	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
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					
Beryllium	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	0.0100	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					
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	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
Titration and Ion Analysis												

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

Certificate of Analysis

Report Date: October 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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		37.8	1.45	4.00	mg/L			HH2	09/08/22	1127	2312490	9
Bicarbonate alkalinity (CaCO3)		37.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	09/06/22	0910	2312379
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	09/06/22	1255	2312730

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC
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-17S
Sample ID: 591351001
Matrix: WG
Collect Date: 24-AUG-22 11:37
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.62			SU			EOS1	08/24/22	1137	2310138	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
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-CVAA												
7470 Cold Vapor Mercury, 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 "As Received"												
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	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		25.7	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		1.29	0.0800	0.300	mg/L	1.00	1					
Sodium		24.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0157	2310153	6
Selenium	J	0.00208	0.00150	0.00500	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		370	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	7
Titration and Ion Analysis												

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		74.0	1.45	4.00	mg/L			HH2	09/07/22	1323	2310459	8
Bicarbonate alkalinity (CaCO3)		74.0	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-35S
Sample ID: 591351002
Matrix: WG
Collect Date: 24-AUG-22 13:58
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.05			SU			EOS1	08/24/22	1358	2310138	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.53	0.0670	0.200	mg/L		1	HXC1	08/30/22	1347	2310523	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-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1120	2310248	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1934	2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0339	0.000670	0.00400	mg/L	1.00	1					
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	1					
Manganese		0.0170	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		4.24	0.0800	0.300	mg/L	1.00	1					
Sodium		19.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	J	0.000210	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0215	2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		2.23	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1841	2310153	7
Calcium		68.5	1.60	4.00	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		507	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		50.6	1.45	4.00	mg/L			HH2	09/07/22	1332	2310459	9
Bicarbonate alkalinity (CaCO3)		50.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-36S
Sample ID: 591351003
Matrix: WG
Collect Date: 24-AUG-22 09:52
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.59			SU			EOS1	08/24/22	0952	2310138	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		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					
Sulfate		224	2.66	8.00	mg/L		20	HXC1	08/30/22	2314	2310523	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1121	2310248	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1937	2310153	5
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0296	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		48.1	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00713	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		20.5	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00295	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Potassium		3.78	0.0800	0.300	mg/L	1.00	1					
Sodium		40.6	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0219	2310153	6
Selenium	J	0.00246	0.00150	0.00500	mg/L	1.00	1					
Boron		1.10	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1844	2310153	7
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		418	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	8
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		20.6	1.45	4.00	mg/L			HH2	09/07/22	1334	2310459	9
Bicarbonate alkalinity (CaCO3)		20.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: FD-04
Sample ID: 591351004
Matrix: WG
Collect Date: 24-AUG-22 12:00
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
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-CVAA												
7470 Cold Vapor Mercury, Liquid "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												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	1940	2310153	4
Arsenic	U	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 Solids "As Received"												
Total Dissolved Solids		419	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	7
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		20.4	1.45	4.00	mg/L			HH2	09/07/22	1336	2310459	8
Bicarbonate alkalinity (CaCO3)		20.4	1.45	4.00	mg/L							

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Certificate of Analysis

Report Date: October 3, 2022

Company :	Georgia Power Company, Southern Company
Address :	241 Ralph McGill Blvd NE, Bin 10160
	Atlanta, Georgia 30308
Contact:	Joju Abraham
Project:	Branch CCR Groundwater ComplianceAP - E and APE

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 Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/30/22	0900	2310152
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/30/22	1252	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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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
Sample ID: 591351005
Matrix: WG
Collect Date: 24-AUG-22 14:40
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.75			SU			EOS1	08/24/22	1440	2310138	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
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-CVAA												
7470 Cold Vapor Mercury, 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												
SW846 3005A/6020B "As Received"												
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	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					
Potassium		3.79	0.0800	0.300	mg/L	1.00	1					
Sodium		22.8	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0233	2310153	6
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron		2.45	0.104	0.300	mg/L	1.00	20	BAJ	09/07/22	1850	2310153	7
Calcium		75.0	1.60	4.00	mg/L	1.00	20					
Manganese		2.97	0.0200	0.100	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		452	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	8
Titration and Ion Analysis												

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Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		28.6	1.45	4.00	mg/L			HH2	09/07/22	1339	2310459	9
Bicarbonate alkalinity (CaCO3)		28.6	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: EB-08
Sample ID: 591351006
Matrix: WQ
Collect Date: 24-AUG-22 13:25
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride	U	ND	0.0670	0.200	mg/L		1	HXC1	08/30/22	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-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/31/22	1126	2310248	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/07/22	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	1					
Lithium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Magnesium	U	ND	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00124	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					
Sodium	U	ND	0.0800	0.250	mg/L	1.00	1					
Thallium	U	ND	0.000600	0.00200	mg/L	1.00	1					
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/07/22	0237	2310153	4
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1	BAJ	09/08/22	0646	2310153	5
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/30/22	1449	2310249	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	J	2.40	1.45	4.00	mg/L			HH2	09/07/22	1342	2310459	7
Bicarbonate alkalinity (CaCO3)	J	2.40	1.45	4.00	mg/L							

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Company : Georgia Power Company, Southern Company
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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 Analysis												
SM 2320B Total Alkalinity "As Received"												
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-33S
Sample ID: 590857001
Matrix: WG
Collect Date: 23-AUG-22 14:45
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		4.67			SU			EOS1	08/23/22	1445	2308303	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
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-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1154	2308555	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00262	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0046	2308385	5
Barium		0.0409	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
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	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	1506	2308385	6
Beryllium		0.00241	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1236	2308385	7
Cadmium	J	0.000509	0.000300	0.00100	mg/L	1.00	1					
Magnesium		14.7	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Boron		0.975	0.104	0.300	mg/L	1.00	20	BAJ	09/03/22	1210	2308385	8
Calcium		119	1.60	4.00	mg/L	1.00	20					
Manganese		2.75	0.0200	0.100	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		614	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	9
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	J	3.40	1.45	4.00	mg/L			HH2	09/04/22	1352	2309339	10
Bicarbonate alkalinity (CaCO3)	J	3.40	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-37S
Sample ID: 590857002
Matrix: WG
Collect Date: 23-AUG-22 11:36
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.82			SU			EOS1	08/23/22	1136	2308303	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
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-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1155	2308555	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	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 Solids "As Received"												
Total Dissolved Solids		40.0	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	7
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		21.2	1.45	4.00	mg/L			HH2	09/04/22	1355	2309339	8
Bicarbonate alkalinity (CaCO3)		21.2	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: BRGWC-38S
Sample ID: 590857003
Matrix: WG
Collect Date: 23-AUG-22 16:00
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		3.97			SU			EOS1	08/23/22	1600	2308303	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		6.42	0.0670	0.200	mg/L		1	JLD1	08/25/22	2355	2308691	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	2308691	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	J	0.000117	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1157	2308555	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	J	0.00337	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0053	2308385	5
Barium		0.0141	0.000670	0.00400	mg/L	1.00	1					
Chromium	J	0.00398	0.00300	0.0100	mg/L	1.00	1					
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	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	1510	2308385	6
Beryllium		0.00854	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1239	2308385	7
Cadmium	J	0.000459	0.000300	0.00100	mg/L	1.00	1					
Calcium		37.1	0.0800	0.200	mg/L	1.00	1					
Magnesium		41.3	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	ND	0.000200	0.00100	mg/L	1.00	1					
Boron		1.67	0.104	0.300	mg/L	1.00	20	BAJ	09/03/22	1213	2308385	8
Manganese		1.80	0.0200	0.100	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		568	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	9
Titration and Ion Analysis												

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Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3	U	ND	1.45	4.00	mg/L			HH2	09/04/22	1356	2309339	10
Bicarbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: PZ-53D
Sample ID: 590857004
Matrix: WG
Collect Date: 23-AUG-22 13:55
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		7.18			SU			EOS1	08/23/22	1355	2308303	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		4.94	0.0670	0.200	mg/L		1	JLD1	08/26/22	0025	2308691	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	2308691	3
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1159	2308555	4
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0057	2308385	5
Barium		0.0547	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.294	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	1					
Potassium		6.44	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					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1511	2308385	6
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1242	2308385	7
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Magnesium		19.3	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.641	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00265	0.000200	0.00100	mg/L	1.00	1					
Boron		1.04	0.104	0.300	mg/L	1.00	20	BAJ	09/03/22	1216	2308385	8
Calcium		76.4	1.60	4.00	mg/L	1.00	20					
Sodium		52.0	1.60	5.00	mg/L	1.00	20					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		543	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	9
Titration and Ion Analysis												

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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
Sample ID: 590857004
Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		82.8	1.45	4.00	mg/L			HH2	09/04/22	1358	2309339	10
Bicarbonate alkalinity (CaCO3)		82.8	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

Client Sample ID: PZ-13S
Sample ID: 590857005
Matrix: WG
Collect Date: 23-AUG-22 13:15
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.46			SU			EOS1	08/23/22	1315	2308303	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		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-CVAA												
7470 Cold Vapor Mercury, Liquid "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												
SW846 3005A/6020B "As Received"												
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	6
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	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
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 Solids "As Received"												
Total Dissolved Solids		130	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	8
Titration and Ion Analysis												

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: October 3, 2022

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

Atlanta, Georgia 30308
Contact: Joju Abraham
Project: Branch CCR Groundwater ComplianceAP - E and APE

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		21.4	1.45	4.00	mg/L			HH2	09/04/22	1359	2309339	9
Bicarbonate alkalinity (CaCO3)		21.4	1.45	4.00	mg/L							
Carbonate alkalinity (CaCO3)	U	ND	1.45	4.00	mg/L							

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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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: FB-04
Sample ID: 590857006
Matrix: WQ
Collect Date: 23-AUG-22 12:45
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		0.329	0.0670	0.200	mg/L		1	JLD1	08/26/22	0125	2308691	1
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate	U	ND	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470 Cold Vapor Mercury, Liquid "As Received"												
Mercury	U	ND	0.0000670	0.000200	mg/L	1.00	1	JP2	08/26/22	1206	2308555	2
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0104	2308385	3
Barium	U	ND	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	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	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					
Antimony	U	ND	0.00100	0.00300	mg/L	1.00	1	BAJ	09/03/22	1515	2308385	4
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1220	2308385	5
Boron	U	ND	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	ND	0.0800	0.200	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					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids	U	ND	2.38	10.0	mg/L			CH6	08/26/22	1619	2309058	6
Titration and Ion Analysis												
SM 2320B Total Alkalinity "As Received"												
Alkalinity, Total as CaCO3		33.2	1.45	4.00	mg/L			HH2	09/04/22	1400	2309339	7
Bicarbonate alkalinity (CaCO3)		33.2	1.45	4.00	mg/L							

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

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

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	PC1	08/26/22	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

QC Summary

Report Date: October 3, 2022

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%)			

QC Summary

Workorder: **591881**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2312380										
QC1205182699 LCS										
Antimony	0.0500			0.0483	mg/L		96.6	(80%-120%)	PRB	09/14/22 00:14
Arsenic	0.0500			0.0477	mg/L		95.3	(80%-120%)		
Barium	0.0500			0.0501	mg/L		100	(80%-120%)		
Beryllium	0.0500			0.0506	mg/L		101	(80%-120%)		
Boron	0.100			0.112	mg/L		112	(80%-120%)		09/14/22 17:27
Cadmium	0.0500			0.0490	mg/L		98	(80%-120%)		09/14/22 00:14
Calcium	2.00			1.95	mg/L		97.7	(80%-120%)		
Chromium	0.0500			0.0489	mg/L		97.8	(80%-120%)		
Cobalt	0.0500			0.0480	mg/L		96	(80%-120%)		
Iron	2.00			1.99	mg/L		99.4	(80%-120%)		
Lead	0.0500			0.0494	mg/L		98.7	(80%-120%)		
Lithium	0.0500			0.0471	mg/L		94.1	(80%-120%)		
Magnesium	2.00			2.13	mg/L		106	(80%-120%)		
Manganese	0.0500			0.0496	mg/L		99.2	(80%-120%)		09/14/22 17:27
Molybdenum	0.0500			0.0489	mg/L		97.7	(80%-120%)		09/13/22 22:07

QC Summary

Workorder: **591881**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
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 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 17:25
Cadmium			U	ND	mg/L					09/14/22 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					

QC Summary

Workorder: **591881**

Parmname	NOM		Sample	Qual	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					
Manganese				U	ND	mg/L					09/14/22 17:25
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											
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%)		

QC Summary

Workorder: **591881**

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

QC Summary

Workorder: **591881**

Parmname	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%)		

QC Summary

Workorder: **591881**

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

QC Summary

Workorder: **591881**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	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 DUP										
Mercury	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 MS										
Mercury 0.00200	U	ND		0.00203	mg/L		102	(75%-125%)		09/07/22 10:52
QC1205183557 591729001 SDILT										
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		09/07/22 10:54
Solids Analysis										
Batch 2313724										
QC1205185482 592010003 DUP										
Total Dissolved Solids		158		155	mg/L	1.92		(0%-5%)	CH6	09/08/22 14:57

QC Summary

Workorder: **591881**

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%)	CH6	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.

QC Summary

Workorder: **591881**

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

N1 See case narrative

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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

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

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

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

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

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

QC Summary

Report Date: October 3, 2022

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

Contact: **Joju Abraham**

Workorder: **591351**

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

QC Summary

Workorder: **591351**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2310153										
QC1205178580 LCS										
Antimony	0.0500			0.0540	mg/L		108	(80%-120%)	BAJ	09/07/22 18:17
Arsenic	0.0500			0.0568	mg/L		114	(80%-120%)		
Barium	0.0500			0.0523	mg/L		105	(80%-120%)		
Beryllium	0.0500			0.0563	mg/L		113	(80%-120%)		09/07/22 01:53
Boron	0.100			0.108	mg/L		108	(80%-120%)		09/07/22 18:17
Cadmium	0.0500			0.0568	mg/L		114	(80%-120%)		
Calcium	2.00			2.13	mg/L		106	(80%-120%)		
Chromium	0.0500			0.0512	mg/L		102	(80%-120%)		
Cobalt	0.0500			0.0513	mg/L		103	(80%-120%)		
Iron	2.00			2.04	mg/L		102	(80%-120%)		
Lead	0.0500			0.0528	mg/L		106	(80%-120%)		
Lithium	0.0500			0.0505	mg/L		101	(80%-120%)		
Magnesium	2.00			2.14	mg/L		107	(80%-120%)		
Manganese	0.0500			0.0508	mg/L		102	(80%-120%)		
Molybdenum	0.0500			0.0534	mg/L		107	(80%-120%)		

QC Summary

Workorder: **591351**

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

QC Summary

Workorder: **591351**

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

QC Summary

Workorder: **591351**

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

QC Summary

Workorder: **591351**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS												
Batch 2310153												
Beryllium	0.0500	U	ND		0.0546	mg/L	2.52	109	(0%-20%)	BAJ	09/07/22	02:04
Boron	0.100		0.0273		0.134	mg/L	0.174	107	(0%-20%)		09/07/22	18:26
Cadmium	0.0500	U	ND		0.0544	mg/L	4.28	109	(0%-20%)			
Calcium	2.00		43.6		45.7	mg/L	3.85	N/A	(0%-20%)			
Chromium	0.0500		0.0127		0.0636	mg/L	2.93	102	(0%-20%)			
Cobalt	0.0500	U	ND		0.0494	mg/L	1.65	98.7	(0%-20%)			
Iron	2.00	U	ND		2.06	mg/L	1.04	102	(0%-20%)			
Lead	0.0500	U	ND		0.0512	mg/L	0.258	102	(0%-20%)			
Lithium	0.0500	U	ND		0.0515	mg/L	2.49	101	(0%-20%)			
Magnesium	2.00		25.7		27.9	mg/L	3.37	N/A	(0%-20%)			
Manganese	0.0500	U	ND		0.0506	mg/L	0.0711	100	(0%-20%)			
Molybdenum	0.0500	U	ND		0.0558	mg/L	0.308	111	(0%-20%)			
Potassium	2.00		1.29		3.38	mg/L	0.0861	105	(0%-20%)			
Selenium	0.0500	J	0.00208		0.0521	mg/L	1.07	100	(0%-20%)		09/07/22	02:04
Sodium	2.00		24.6		27.1	mg/L	2.51	N/A	(0%-20%)		09/07/22	18:26

QC Summary

Workorder: **591351**

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

QC Summary

Workorder: **591351**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 2310153										
Molybdenum	U	ND	U	ND	ug/L	N/A		(0%-20%)	BAJ	09/07/22 18:54
Potassium		1290	J	250	ug/L	2.87		(0%-20%)		
Selenium	J	2.08	U	ND	ug/L	N/A		(0%-20%)		09/07/22 02:11
Sodium		24600		4790	ug/L	2.6		(0%-20%)		09/07/22 18:54
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		
Metals Analysis-Mercury										
Batch 2310248										
QC1205178784 590142001 DUP										
Mercury	U	ND	U	ND	mg/L	N/A			JP2	08/31/22 10:55
QC1205178783 LCS										
Mercury 0.00200				0.00200	mg/L		99.9	(80%-120%)		08/31/22 10:52
QC1205178782 MB										
Mercury			U	ND	mg/L					08/31/22 10:47
QC1205178785 590142001 MS										
Mercury 0.00200	U	ND		0.00195	mg/L		96.6	(75%-125%)		08/31/22 10:57
QC1205178786 590142001 SDILT										
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		08/31/22 10:59
Solids Analysis										
Batch 2310249										
QC1205178791 591355007 DUP										
Total Dissolved Solids		1990		2040	mg/L	2.54		(0%-5%)	CH6	08/30/22 14:49

QC Summary

Workorder: **591351**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Solids Analysis											
Batch 2310249											
QC1205178789 LCS											
Total Dissolved Solids	300			302	mg/L		101	(95%-105%)	CH6	08/30/22	14:49
QC1205178788 MB											
Total Dissolved Solids			U	ND	mg/L					08/30/22	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	09/07/22	13:27
Bicarbonate alkalinity (CaCO3)		74.0		74.8	mg/L	1.08		(0%-20%)			
Carbonate alkalinity (CaCO3)	U	ND	U	ND	mg/L	N/A					
QC1205179131 LCS											
Alkalinity, Total as CaCO3	100			103	mg/L		103	(90%-110%)		09/07/22	13:17
QC1205179133 591351001 MS											
Alkalinity, Total as CaCO3	100	74.0		175	mg/L		101	(80%-120%)		09/07/22	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.

QC Summary

Workorder: **591351**

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

N1 See case narrative

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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

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

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

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

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

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

QC Summary

Report Date: October 3, 2022

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

Contact: **Joju Abraham**

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

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

QC Summary

Workorder: **590857**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis-Mercury											
Batch 2308555											
QC1205175116 MB											
Mercury				U	ND	mg/L				JP2	08/26/22 11:05
QC1205175119 589727024 MS											
Mercury	0.00200	U	ND		0.00222	mg/L		110	(75%-125%)		08/26/22 11:17
QC1205175120 589727024 SDILT											
Mercury		U	ND	U	ND	ug/L	N/A		(0%-10%)		08/26/22 11:19
Solids Analysis											
Batch 2309029											
QC1205176100 590857001 DUP											
Total Dissolved Solids			614		616	mg/L	0.325		(0%-5%)	CH6	08/26/22 15:30
QC1205176099 LCS											
Total Dissolved Solids	300				300	mg/L		100	(95%-105%)		08/26/22 15:30
QC1205176098 MB											
Total Dissolved Solids				U	ND	mg/L					08/26/22 15:30
Batch 2309058											
QC1205176171 590900002 DUP											
Total Dissolved Solids			501		500	mg/L	0.2		(0%-5%)	CH6	08/26/22 16:19
QC1205176170 LCS											
Total Dissolved Solids	300				301	mg/L		100	(95%-105%)		08/26/22 16:19
QC1205176169 MB											
Total Dissolved Solids				U	ND	mg/L					08/26/22 16:19
Titration and Ion Analysis											
Batch 2309339											
QC1205176799 590838001 DUP											
Alkalinity, Total as CaCO3			32.6		32.2	mg/L	1.23		(0%-20%)	HH2	09/04/22 13:40

QC Summary

Workorder: **590857**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Titration and Ion Analysis											
Batch 2309339											
Bicarbonate alkalinity (CaCO3)			32.6		32.2	mg/L	1.23		(0%-20%)	HH2	09/04/22 13:40
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A				
QC1205176801 590857001 DUP											
Alkalinity, Total as CaCO3		J	3.40	J	3.60	mg/L	5.71 ^		(+/-4.00)		09/04/22 13:53
Bicarbonate alkalinity (CaCO3)		J	3.40	J	3.60	mg/L	5.71 ^		(+/-4.00)		
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A				
QC1205176798 LCS											
Alkalinity, Total as CaCO3	100				104	mg/L		104	(90%-110%)		09/04/22 13:37
QC1205176800 590838001 MS											
Alkalinity, Total as CaCO3	100		32.6		136	mg/L		104	(80%-120%)		09/04/22 13:42
QC1205176802 590857001 MS											
Alkalinity, Total as CaCO3	100	J	3.40		107	mg/L		104	(80%-120%)		09/04/22 13:54

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.

QC Summary

Workorder: **590857**

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

N1 See case narrative

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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

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

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

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

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

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Technical Case Narrative
Georgia Power Company
SDG #: 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.

Analyte	591881
	001
Boron	10X
Manganese	10X

Product: **Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**
Analytical Method: SW846 7470A
Analytical Procedure: GL-MA-E-010 REV# 38
Analytical Batch: 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.

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(.242 - .367)* (+/-.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.

Analyte	591881 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)

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.

Technical Case Narrative
Georgia Power Company
SDG #: 591351

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2310153

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2310152

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

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.

Analyte	591351			
	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).

GEL Sample ID#	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

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.

Analyte	591351				
	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).

GEL Sample ID#	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.

Technical Case Narrative
Georgia Power Company
SDG #: 590857

Metals

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 35
Analytical Batch: 2308385

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batch: 2308382

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

GEL Sample ID#	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

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.

Analyte	590857		
	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).

GEL Sample ID#	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.

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).

GEL Sample ID#	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

because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	590857			
	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).

GEL Sample ID#	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).

GEL Sample ID#	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.

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).

GEL Sample ID#	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.

Page: _____ of _____
Project # _____
GEL Quote #: _____
COC Number (1): _____
PO Number:

591881
591883

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: GA Power Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Ponds - E Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Hunter Auld Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Total & Bicarb Alk SM 2320B	NI Metals * EPA 6020B, 6010D	NI Radium 226 & 228 SW-846 9315, 9320	<-- Preservative Type (6)
PZ-70	09/01/22	1055	G	N	WG			7	✓	✓	✓	✓	field pH = 6.13
													field pH =
													field pH =
													field pH =
													field pH =
													field pH =
													field pH =
													field pH =
													field pH =
													field pH =

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Hall	9/2/22	0910	[signature]	9/2/22	910
2				[signature]	9/2/22	
3						

TAT Requested: Normal: _x_ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: [ ] Yes [x] No

Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4

Additional Remarks: * **Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg**

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* *Cooler Temp:* 5 °C

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM ET

Client: GPCC	**SDG/AR/COC/Work Order:** 591881/591883/591887
Received By: MVH	**Date Received:** 09-02-2022
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	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
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:** 10
4	Daily check performed and passed on IR temperature gun?	X			**Temperature Device Serial #:** IR2-21 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?	X			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:
10	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)
11	Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			X	
13	COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials GMR Date 09/06/22 Page 1 of 1

GL-CHL-SR-001 Rev 7

Page: _____ of _____
Project # _____
GEL Quote #: _____
COC Number [1]: _____
PO Number:

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

591351
591353

Client Name: GA Power — Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Ponds E — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Taylor Goble / Anna Schnittker — Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Total & Bicarb Alk SM 2320B	NI Metals * EPA 6020B, 6010D	NI Radium 226 & 228 SW-846 9315, 9320	<-- Preservative Type (6)	Comments
BRGWC-175	08/24/22	1137	G	N	WG			7	✓	✓	✓	✓		field pH = 6.62
BRGWC-355	08/24/22	1358	G	N	WG			7	✓	✓	✓	✓		field pH = 6.05
BRGWC-365	08/24/22	0952	G	N	WG			7	✓	✓	✓	✓		field pH = 5.59
FD-04	08/24/22	—	G	N	WG			7	✓	✓	✓	✓		field pH = NA
BRGWC-345	08/24/22	1440	G	N	WG			7	✓	✓	✓	✓		field pH = 5.75
EB-04	08/24/22	1325	G	N	WQ			7	✓	✓	✓	✓		field pH = NA
														field pH =
														field pH =
														field pH =
														field pH =

TAT Requested: Normal: _x_ Rush: _____ Specify: _____ (Subject to Surcharge)

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	8/29/22	1515	[signature]	8/29/22	1515
2						
3						

Fax Results: [ ] Yes [x] No
Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4
Additional Remarks: * **Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg**
For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* *Cooler Temp:* _____ °C
Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CDCC	**SDG/AR/COC/Work Order:** 591351 / 591333 ET
Received By: Thyasia Tatum	**Date Received:** 8/29/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier (Other)

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 **CPM / mR/Hr** **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			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 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius **TEMP:** 1C
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?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			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?	✓			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?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 8/31/22 Page 1 of 1

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590857, 590859

Page: _____ of _____
Project # _____
GEL Quote #: _____
COC Number (1): _____
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: GA Power Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Ponds Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Taylor Goble/Anna Schnitker Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Total & Bicarb Alk SM 2320B	NI	NI	<-- Preservative Type (6)
											Metals * EPA 6020B, 6010D	Radium 226 & 228 SW-846 9315, 9320	
BRGWC-335	08/23/22	1445	G	N	WG			7	✓	✓	✓	✓	field pH = 4.67
BRGWC-375	08/23/22	1136	G	N	WG			7	✓	✓	✓	✓	field pH = 5.42
BRGWC-385	08/23/22	1600	G	N	WG			7	✓	✓	✓	✓	field pH = 3.97
PZ-53D	08/23/22	1355	G	N	WG			7	✓	✓	✓	✓	field pH = 7.18
PZ-135	08/23/22	1315	G	N	WG			7	✓	✓	✓	✓	field pH = 5.46
FB-04	08/23/22	1245	G	N	WG			7	✓	✓	✓	✓	field pH = NA
													field pH =
													field pH =
													field pH =
													field pH =

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Taylor Goble	8-24-22	0745		8/24/22	0745
2		8/24/22	127		8/24/22	127
3						

TAT Requested: Normal: x Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: [ ] Yes [x] No

Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4

Additional Remarks: * **Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg**

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] Yes [ ] No *Cooler Temp:* _____ °C

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

590851, 590855, ET 590854 590857 590858

Client: GPCC	SDG/AR/COC/Work Order: 590838, 590840, 590845,
Received By: Thyasia Tatum	Date Received: 8/24/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services (Courier) Other

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			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 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4	Daily check performed and passed on IR temperature gun?	✓			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?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			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?	✓			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?	✓		✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials EMM Date 09/07/22 Page 1 of 1

GL-CHL-SR-001 Rev 7

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; lbmidkif@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
GEL Laboratories LLC 40 YEARS
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: erin.trent@gel.com | Website: www.gel.com
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

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 <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>; Hartley, Lauren <LAUCOKER@SOUTHERNCO.COM>; Hodges, Ben <JOHHODGE@SOUTHERNCO.COM>; 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 <Erin.Trent@gel.com>
Sent: Friday, September 02, 2022 5:18 PM
To: Betsy McDaniel <betsy.mcdaniel@atlcc.net>; 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>; Adria Reimer <areimer@geosyntec.com>; Anthony Szwast <anthony.szwast@geosyntec.com>; cnelson@geosyntec.com; Abraham, Joju <JABRAHAM@SOUTHERNCO.COM>; Jurinko, Kristen Nichole <KNJURINK@SOUTHERNCO.COM>; Hartley, Lauren <LAUCOKER@SOUTHERNCO.COM>; Singleton, Robert <ROSINGLE@SOUTHERNCO.COM>; 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

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.

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: erin.trent@gel.com | Website: www.gel.com [gel.com]
Analytical Testing

[gellaboratories.com] [linkedin.com]

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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 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.

Reviewed by 

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 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.

Reviewed by 

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

GPCC001 Georgia Power Company

Client SDG: 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.

Reviewed by 

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-33S
Sample ID: 590859001
Matrix: WG
Collect Date: 23-AUG-22
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.835	+/-1.09	1.85	+/-1.11	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.94	+/-1.16	1.85	+/-1.19		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.10	+/-0.413	0.341	+/-0.446	1.00	pCi/L			LXP1	09/16/22	1006	2309179	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	85.7	(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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-37S
Sample ID: 590859002
Matrix: WG
Collect Date: 23-AUG-22
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.08	+/-1.44	2.45	+/-1.47	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	2.37	+/-1.49	2.45	+/-1.53		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		1.29	+/-0.385	0.219	+/-0.442	1.00	pCi/L			LXP1	09/16/22	1006	2309179	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	80.1	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-38S
Sample ID: 590859003
Matrix: WG
Collect Date: 23-AUG-22
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.71	+/-1.32	1.92	+/-1.48	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
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, Liquid "As Received"														
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

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

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

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: PZ-53D
Sample ID: 590859004
Matrix: WG
Collect Date: 23-AUG-22
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
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 Calculation "See Parent Products"														
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, Liquid "As Received"														
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

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

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

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: PZ-13S
Sample ID: 590859005
Matrix: WG
Collect Date: 23-AUG-22
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.879	+/-1.16	1.97	+/-1.18	3.00	pCi/L			JXC9	09/16/22	1055	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.83	+/-1.20	1.97	+/-1.23		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.956	+/-0.316	0.198	+/-0.371	1.00	pCi/L			LXP1	09/16/22	1007	2309179	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	79.9	(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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: FB-04
Sample ID: 590859006
Matrix: WQ
Collect Date: 23-AUG-22
Receive Date: 24-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.64	+/-1.23	1.95	+/-1.30	3.00	pCi/L			JXC9	09/16/22	1056	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.10	+/-1.26	1.95	+/-1.33		pCi/L		1	NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
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

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

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

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-17S
Sample ID: 591353001
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	-2.32	+/-1.31	2.83	+/-1.31	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.152	+/-1.33	2.83	+/-1.33		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.152	+/-0.211	0.365	+/-0.213	1.00	pCi/L			LXP1	09/15/22	0920	2310752	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-35S
Sample ID: 591353002
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.43	+/-1.23	1.78	+/-1.37	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
Radium-226+Radium-228 Calculation "See Parent Products"														
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, Liquid "As Received"														
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

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	79.5	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
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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-36S
Sample ID: 591353003
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.704	+/-1.05	1.81	+/-1.06	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
Radium-226+Radium-228 Calculation "See Parent Products"														
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, Liquid "As Received"														
Radium-226		0.673	+/-0.263	0.191	+/-0.294	1.00	pCi/L			LXP1	09/15/22	0920	2310752	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: FD-04
Sample ID: 591353004
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
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-228 Calculation "See Parent Products"														
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, Liquid "As Received"														
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

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	82.6	(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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: BRGWC-34S
Sample ID: 591353005
Matrix: WG
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.62	+/-0.934	1.34	+/-1.02	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
Radium-226+Radium-228 Calculation "See Parent Products"														
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, Liquid "As Received"														
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

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	79.8	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Georgia Power Company, Southern
Address : Company
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Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: EB-08
Sample ID: 591353006
Matrix: WQ
Collect Date: 24-AUG-22
Receive Date: 29-AUG-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.416	+/-0.862	1.54	+/-0.868	3.00	pCi/L			JXC9	09/20/22	1002	2310792	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	0.972	+/-0.900	1.54	+/-0.913		pCi/L		1	NXL1	09/23/22	0955	2310789	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.556	+/-0.258	0.298	+/-0.284	1.00	pCi/L			LXP1	09/15/22	0920	2310752	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2310792	78.5	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

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

Atlanta, Georgia 30308

Report Date: December 7, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAPE

Client Sample ID: PZ-70
Sample ID: 591883001
Matrix: WG
Collect Date: 01-SEP-22
Receive Date: 02-SEP-22
Collector: Client

Project: GPCC00101
Client ID: GPCC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.802	+/-1.15	1.96	+/-1.16	3.00	pCi/L			JE1	09/27/22	0923	2312614	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum	U	1.57	+/-1.19	1.96	+/-1.22		pCi/L		1	NXL1	09/29/22	1056	2312610	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.771	+/-0.340	0.383	+/-0.361	1.00	pCi/L			LXP1	09/28/22	0911	2312595	3

The following Analytical Methods were performed

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

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

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **590859**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2309177										
QC1205176411 590840001 DUP										
Radium-228	U	0.281	U	0.509	pCi/L	0		N/A	JXC9	09/16/22 10:54
	Uncert:	+/-1.08		+/-0.796						
	TPU:	+/-1.08		+/-0.806						
QC1205176412 LCS										
Radium-228	44.1			39.6	pCi/L		89.9	(75%-125%)	JXC9	09/16/22 10:54
	Uncert:			+/-3.28						
	TPU:			+/-10.4						
QC1205176410 MB										
Radium-228			U	-0.160	pCi/L				JXC9	09/16/22 10:54
	Uncert:			+/-1.37						
	TPU:			+/-1.37						
Rad Ra-226										
Batch 2309179										
QC1205176418 590840001 DUP										
Radium-226	U	0.250	U	0.114	pCi/L	0		N/A	LXP1	09/16/22 10:41
	Uncert:	+/-0.237		+/-0.177						
	TPU:	+/-0.242		+/-0.178						
QC1205176420 LCS										
Radium-226	26.6			20.1	pCi/L		75.8	(75%-125%)	LXP1	09/16/22 10:41
	Uncert:			+/-1.38						
	TPU:			+/-4.51						
QC1205176417 MB										
Radium-226				0.319	pCi/L				LXP1	09/16/22 10:41
	Uncert:			+/-0.220						
	TPU:			+/-0.227						
QC1205176419 590840001 MS										
Radium-226	132 U	0.250		103	pCi/L		78	(75%-125%)	LXP1	09/16/22 10:41
	Uncert:	+/-0.237		+/-7.73						
	TPU:	+/-0.242		+/-17.8						

Notes:

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

The Qualifiers in this report are defined as follows:

**	Analyte is a Tracer compound
<	Result is less than value reported
>	Result is greater than value reported
BD	Results are either below the MDC or tracer recovery is low
FA	Failed analysis.
H	Analytical holding time was exceeded

QC Summary

Workorder: **590859**

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	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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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	09/20/22 10:02
	Uncert:	+/-1.31		+/-1.05						
	TPU:	+/-1.31		+/-1.07						
QC1205179816 LCS										
Radium-228	44.1			40.7	pCi/L		92.4	(75%-125%)	JXC9	09/20/22 10:02
	Uncert:			+/-3.20						
	TPU:			+/-10.7						
QC1205179814 MB										
Radium-228			U	0.428	pCi/L				JXC9	09/20/22 10:02
	Uncert:			+/-0.992						
	TPU:			+/-0.998						
Rad Ra-226										
Batch 2310752										
QC1205179719 591353001 DUP										
Radium-226	U	0.152		0.436	pCi/L	96.4		(0% - 100%)	LXP1	09/15/22 10:25
	Uncert:	+/-0.211		+/-0.289						
	TPU:	+/-0.213		+/-0.297						
QC1205179721 LCS										
Radium-226	26.5			20.8	pCi/L		78.2	(75%-125%)	LXP1	09/15/22 10:25
	Uncert:			+/-1.40						
	TPU:			+/-4.47						
QC1205179718 MB										
Radium-226			U	0.312	pCi/L				LXP1	09/15/22 10:25
	Uncert:			+/-0.270						
	TPU:			+/-0.276						
QC1205179720 591353001 MS										
Radium-226	132 U	0.152		103	pCi/L		77.8	(75%-125%)	LXP1	09/15/22 10:25
	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

QC Summary

Workorder: **591353**

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	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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QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **591883**

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						
	TPU:			+/-10.9						
QC1205183301 MB										
Radium-228			U	0.716	pCi/L				JE1	09/27/2209:23
	Uncert:			+/-1.07						
	TPU:			+/-1.09						
Rad Ra-226										
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										
Radium-226			U	0.258	pCi/L				LXP1	09/28/2210:14
	Uncert:			+/-0.245						
	TPU:			+/-0.248						
QC1205183272 591613003 MS										
Radium-226	135	1.03		106	pCi/L		77.4	(75%-125%)	LXP1	09/28/2210:14
	Uncert:	+/-0.384		+/-7.23						
	TPU:	+/-0.425		+/-18.3						

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

QC Summary

Workorder: **591883**

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	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.

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.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2309179

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

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.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 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).

GEL Sample ID#	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.

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

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.

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.

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2312595

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

GEL Sample ID#	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.

590857, 590859

Page: _____ of _____
Project # _____
GEL Quote #: _____
COC Number (1): _____
PO Number:

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: GA Power Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Ponds Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Taylor Goble/Anna Schnitker Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Total & Bicarb Alk SM 2320B	NI Metals * EPA 6020B, 6010D	NI Radium 226 & 228 SW-846 9315, 9320	<-- Preservative Type (6)
BRGWC-335	08/23/22	1445	G	N	WG			7	✓	✓	✓	✓	field pH = 4.67
BRGWC-375	08/23/22	1136	G	N	WG			7	✓	✓	✓	✓	field pH = 5.42
BRGWC-385	08/23/22	1600	G	N	WG			7	✓	✓	✓	✓	field pH = 3.97
PZ-53D	08/23/22	1355	G	N	WG			7	✓	✓	✓	✓	field pH = 7.14
PZ-135	08/23/22	1315	G	N	WG			7	✓	✓	✓	✓	field pH = 5.46
FB-04	08/23/22	1245	G	N	WG			7	✓	✓	✓	✓	field pH = NA
													field pH =
													field pH =
													field pH =
													field pH =

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Taylor Goble	8-24-22	0745		8/24/22	0745
2		8/24/22	127		8/24/22	127
3						

TAT Requested: Normal: x Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: [ ] Yes [x] No

Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4

Additional Remarks: * Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] Yes [ ] No *Cooler Temp:* _____ °C

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: GPCC	SDG/AR/COC/Work Order: 590838, 590840, 590845, 590851, 590855, 590856, 590857, 59085[illegible]
Received By: Thyasia Tatum	Date Received: 8/24/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services (Courier) Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): Ø CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			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 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 2°C
4	Daily check performed and passed on IR temperature gun?	✓			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?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			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?	✓			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?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials EMM Date 09/07/22 Page 1 of 1

GL-CHL-SR-001 Rev 7

Page: _____ of _____
Project # _____
GEL Quote #: _____
COC Number [1]: _____
PO Number:

GEL Laboratories LLC
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

591351
591353

Client Name: GA Power — Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Ponds E — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Taylor Goble / Anna Schnittker — Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Total & Bicarb Alk SM 2320B	NI Metals* EPA 6020B, 6010D	NI Radium 226 & 228 SW-846 9315, 9320	<-- Preservative Type (6)	Comments
BRGWC-175	08/24/22	1137	G	N	WG			7	✓	✓	✓	✓		field pH = 6.62
BRGWC-355	08/24/22	1358	G	N	WG			7	✓	✓	✓	✓		field pH = 6.05
BRGWC-365	08/24/22	0952	G	N	WG			7	✓	✓	✓	✓		field pH = 5.59
FD-04	08/24/22	—	G	N	WG			7	✓	✓	✓	✓		field pH = NA
BRGWC-345	08/24/22	1440	G	N	WG			7	✓	✓	✓	✓		field pH = 5.75
EB-04	08/24/22	1325	G	N	WQ			7	✓	✓	✓	✓		field pH = NA
														field pH =
														field pH =
														field pH =
														field pH =

TAT Requested: Normal: _x_ Rush: _____ Specify: _____ (Subject to Surcharge)

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	8/29/22	1515	[signature]	8/29/22	1515
2						
3						

Fax Results: [ ] Yes [x] No
Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4
Additional Remarks: * **Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg**
For Lab Receiving Use Only: *Custody Seal Intact?* [ ] *Yes* [ ] *No* *Cooler Temp:* _____ °C
Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CDCC	**SDG/AR/COC/Work Order:** 590859 | 590333 ET
Received By: Thyasia Tatum	**Date Received:** 8/29/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier (Other)

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): (0) CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			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 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: (0) *all temperatures are recorded in Celsius TEMP: 1C
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?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			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?	✓			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?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 8/31/22 Page 1 of 1

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Page: _____ of _____
Project # _____
GEL Quote #: _____
COC Number (1): _____
PO Number:

591881
591883

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

Chain of Custody and Analytical Request

GEL Work Order Number: *GEL Project Manager: Erin Trent*

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: GA Power — Phone # 404-506-7116
Project/Site Name: Plant Branch Ash Ponds - E — Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: Hunter Auld — Send Results To: SCS & Geosyntec Contacts

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm/dd/yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive (If yes, please supply isotopic info.)	Should this sample be considered: (7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Total & Bicarb Alk SM 2320B	Metals * EPA 6020B, 6010D	Radium 226 & 228 SW-846 9315, 9320	NI	NI	<-- Preservative Type (6)
PZ-70	09/01/22	1055	G	N	WG			7	✓	✓	✓	✓			field pH = 6.13
															field pH =
															field pH =
															field pH =
															field pH =
															field pH =
															field pH =
															field pH =
															field pH =
															field pH =

Comments
Note: extra sample is required for sample specific QC

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 HAuld	9/2/22	0910	1	9/2/22	910
2			2	9/2/22	
3			3		

TAT Requested: Normal: x Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: [ ] Yes [x] No

Select Deliverable: [ ] C of A [ ] QC Summary [ ] level 1 [x] Level 2 [ ] Level 3 [ ] Level 4

Additional Remarks: * **Metals: B,Ca,Sb,As,Ba,Be,Cd,Cr,Co,Pb,Li,Mo,Se,Tl,Fe,Mg,Mn,K,Na,Hg**

For Lab Receiving Use Only: *Custody Seal Intact?* [ ] Yes [ ] No *Cooler Temp:* 5 °C

> *For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)*

Sample Collection Time Zone: [x] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **WD**=Drinking Water, **WG**=Groundwater, **WS**=Surface Water, **WW**=Waste Water, **WL**=Leachate, **SO**=Soil, **SE**=Sediment, **SL**=Sludge, **WQ**=Water Quality Control Matrix

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

RCRA Metals
As = Arsenic **Hg**= Mercury
Ba = Barium **Se**= Selenium
Cd = Cadmium **Ag**= Silver
Cr = Chromium **MR**= Misc. RCRA metals
Pb = Lead

Characteristic Hazards
FL = Flammable/Ignitable
CO = Corrosive
RE = Reactive

TSCA Regulated
PCB = Polychlorinated biphenyls

Listed Waste
LW= Listed Waste
(F,K,P and U-listed wastes.)
Waste code(s):

Other
OT= Other / Unknown
(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)
Description:

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM ET

Client: GPCC	**SDG/AR/COC/Work Order:** 591881 / 591883 / 591887
Received By: MVH	**Date Received:** 09-02-2022
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		X	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		X	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	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
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: 10
4	Daily check performed and passed on IR temperature gun?	X			**Temperature Device Serial #:** IR2-21 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?	X			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:
10	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)
11	Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			X	
13	COC form is properly signed in relinquished/received sections?	X			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials GMR Date 09/06/22 Page 1 of 1

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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

VALIDATION REPORTS

Fall 2022

Geosyntec consultants

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 (ºC), both within and outside of the EPA Region 4 criteria of 4ºC $\pm$ 2ºC. Since the samples were received between 0-6ºC and based on professional judgment, no qualifications were applied to the data. No sample preservation issues were noted by the laboratory.

The sample collection times were not listed on the chain of custody (COC) for field duplicate samples, FD-01, FD-02 FD-03 and FD-04. The laboratory logged the samples in with the collection time of 12:00.

591355 and 590855: Incorrect error corrections were observed on the COCs, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

590838 and 590845: The year was not documented on the COC for the relinquished by date for the second sample transfer.

591881 and 591887: The relinquished by signature, date and time and the received by time for the second sample transfer were not documented on the COC.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by US EPA methods 3005A/6020B. Mercury was evaluated separately in Section 2.0, below.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
⊗ Method Blank
⊗ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
⊗ Field Blank
⊗ Equipment Blank
✓ Field Duplicate
⊗ Serial Dilution
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 2308385, 2310153, 2310155 and 2312380). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

591881: Molybdenum was detected in the method blank in batch 2312380 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the molybdenum concentration in sample PZ-70 was J+ qualified as estimated with a high bias.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
PZ-70	Molybdenum	0.00142	NA	0.00142	J+	3

mg/L- milligram per liter
NA-not applicable
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four sample set specific MS/MSD pairs were reported, using samples BRGWA-2S, PZ-51D, PZ-70 and BRGWC-17S. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exception.

590838: The magnesium recovery in the MS using sample BRGWA-2S was high and outside the laboratory specified acceptance criteria and the magnesium recovery in the post digestion spike (PDS) was within the laboratory specified acceptance criteria. Therefore, the magnesium concentration in sample BRGWA-2S was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2S	Magnesium	4.86	NA	4.86	J	4

mg/L- milligram per liter
NA-not applicable

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. Metals were not detected in the field blanks above the MDLs, with the following exceptions.

Sodium (0.565 mg/L) and calcium (0.25 mg/L) were detected in FB-01 at concentrations greater than the RLs and magnesium was detected in FB-01 at an estimated concentration greater than the MDL and less than the RL. Iron was detected in FB-04 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated magnesium and iron concentrations in the associated samples were U qualified as not detected at the RLs and based on professional and technical judgment the iron concentrations in samples BRGWA-23S, BRGWC-47 and BRGWC-25I, and sodium and calcium concentrations in the associated samples greater than the RLs and less than ten times the field blank concentration were J+ qualified as estimated with high biases.

Manganese (0.00513 mg/L) was detected in FB-03 at a concentration greater than the RL and sodium and boron were detected in FB-03 at estimated concentrations greater than the MDLs and less than the RLs. Based on the concentration of sodium in the associated samples and professional and technical judgment, no qualifications were applied to the sodium data. However, the estimated manganese concentration in the associated samples were U qualified as not detected at the RL, based on professional and technical judgment the boron concentration in samples EB-07, EB-06 and BRGWC-32S and the manganese concentrations greater than the RLs and less than the times the RLs were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2I	Iron	0.183	NA	0.183	J+	3
BRGWA-2S	Iron	0.0763	J	0.100	U	3
BRGWA-2S	Sodium	3.36	NA	3.36	J+	3
BRGWA-5I	Sodium	4.93	NA	4.93	J+	3
BRGWA-5S	Iron	0.151	NA	0.151	J+	3
BRGWA-5S	Sodium	4.03	NA	4.03	J+	3
BRGWA-6S	Iron	0.0701	J	0.100	U	3
BRGWA-6S	Sodium	2.44	NA	2.44	J+	3
EB-05	Sodium	0.703	NA	0.703	J+	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
EB-05	Magnesium	0.0152	J	0.0300	U	3
EB-05	Calcium	0.313	NA	0.313	J+	3
BRGWA-23S	Iron	0.114	NA	0.114	J+	3
BRGWC-47	Iron	0.101	NA	0.101	J+	3
BRGWA-12S	Sodium	5.41	NA	5.41	J+	3
BRGWC-25I	Iron	0.193	NA	0.193	J+	3
BRGWC-33S	Iron	0.0381	J	0.100	U	3
BRGWC-37S	Sodium	4.51	NA	4.51	J+	3
EB-06	Manganese	0.00523	NA	0.00523	J+	3
EB-07	Manganese	0.00387	J	0.00500	U	3
EB-07	Boron	0.0159	NA	0.0159	J+	3
BRGWC-32S	Manganese	0.0107	NA	0.0107	J+	3

mg/L- milligram per liter
J-the result is less than RL but greater than the MDL and the concentration is an approximate value
NA-not applicable

1.7 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. Metals were not detected in the equipment blanks above the MDLs, with the following exceptions.

Barium and magnesium were detected in EB-05 at estimated concentrations greater than the MDLs and less than the RLs and sodium (0.703 mg/L) and calcium (0.313 mg/L) were detected in EB-05 at concentrations greater than the RLs. Since the magnesium concentration in EB-05 was U qualified due to field blank contamination and based on the barium concentrations in the associated samples and professional and technical judgment, no additional qualifications were applied to the barium and magnesium data. Also, based on professional and technical judgment, no additional qualifications were applied to the sodium concentrations in the associated samples that were qualified based on field blank contamination. In addition, since the calcium concentrations in the associated samples were greater than ten times the equipment blank concentration, no qualifications were applied to the calcium data. However, the sodium concentration in sample BRGWA-2I was J+ qualified as estimated with high bias.

Manganese was detected in EB-08 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated manganese concentration in the associated sample was U qualified as not detected at the RL.

Manganese (0.00523 mg/L) was detected in EB-06 at a concentration greater than the RL. Manganese was detected in EB-07 at an estimated concentration greater than the MDL and less

than the RL and boron (0.0159 mg/L) was detected in EB-07 at a concentration greater than the RL. Since the associated manganese and boron results were qualified due to field blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2I	Sodium	5.73	NA	5.73	J+	3
BRGWC-36S	Manganese	0.00295	J	0.00500	U	3
FD-04	Manganese	0.00286	J	0.00500	U	3

mg/L- milligram per liter
J-the result is less than RL but greater than the MDL and the concentration is an approximate value
NA-not applicable

1.8 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision (RPD $\leq$ 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively.

1.9 Serial Dilution

Two sample set specific serial dilutions were reported for metals using samples PZ-70, BRGWC-17S, BRGWC-33S, BRGWA-2S and PZ-51D. The percent difference (%D) results were within the method specified acceptance criteria, with the following exception.

590838: The %D of magnesium in the serial dilution using sample BRGWA-2S was greater than 10% and the sample concentration was greater than 50 times the MDL. Therefore, the magnesium concentration in sample BRGWA-2S was J qualified as estimated.

Two batch serial dilutions were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2S	Magnesium	4.86	NA	4.86	J	8

mg/L- milligram per liter
NA-not applicable

1.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.11 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

2.0 MERCURY

The samples were analyzed for mercury by US EPA Method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Time
✓ Method Blank
⊗ Matrix Spike
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Field Blank
✓ Equipment Blank
✓ Field Duplicate
✓ Serial Dilution
✓ Sensitivity
✓ Electronic Data Deliverable Review

2.1 Overall Assessment

The mercury data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five method blanks were reported (batches 2308549, 2308555, 2310246, 2310248 and 2312733). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike

MSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS was reported using sample PZ-58I.

591355: The mercury recovery in the MS was low and outside laboratory specified acceptance criteria and the recovery of mercury in the PDS was also low and outside of laboratory specified acceptance criteria. Therefore, the mercury result in sample PZ-58I was UJ qualified as estimated below the RL.

Four batch MSs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
PZ-58I	Mercury	0.000067	U	0.000067	UJ	4

mg/L- milligram per liter
U-not detected at or above the MDL

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One sample set specific MS was reported using sample PZ-58I. The RPD result was within the laboratory specified acceptance criteria.

Four batch laboratory duplicates were reported for mercury. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.7 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. Mercury was not detected in the field blanks above the MDL.

2.8 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. Mercury was not detected in the equipment blanks above the MDL.

2.9 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision (RPD < 20% or the difference between the concentrations < RL) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively.

2.10 Serial Dilution

One sample set specific serial dilution was performed on sample PZ-58I. The %D results were within the method specified acceptance criteria. Four batch serial dilutions were also reported for mercury. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.11 Sensitivity

The samples were reported to the MDL. Elevated non-detect results were not reported.

2.12 Electronic Data Deliverable Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

3.0 WET CHEMISTRY

The samples were analyzed for anions by US EPA method 300.0, TDS by SM 2540C and alkalinity by SM 2320B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable or not applicable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

✓ Overall Assessment
✓ Holding Times
✓ Method Blank
⊗ Matrix Spike
✓ Laboratory Control Sample
✓ Laboratory Duplicate
⊗ Field Blank
✓ Equipment Blank
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this laboratory report are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

3.2 Holding Times

The holding time for the anion (fluoride, chloride, sulfate) analyses of a water sample are 28 days from sample collection to analysis. The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding times were met.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five method blanks were reported for anions (batches 2310523, 2310658, 2310688, 2308691 and 2312366). Six method blanks were reported for TDS (batches 2308573, 2309029, 2309058, 2310249, 2313724 and 2310760). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike

Six sample set specific MSs were reported for anions, using samples BRGWA-2S, BRGWC-17S, BRGWC-29I, FD-02, BRGWC-52I, and BRGWC-33S. Six sample set specific MSs were reported for total alkalinity, using samples BRGWA-2S, BRGWC-17S, BRGWC-52I, PZ-51D and FD-03, BRGWC-33S. The recovery results were within the laboratory specified acceptance criteria, with the following exceptions

590838: The recovery of sulfate in the MS using sample BRGWA-2S was high and outside the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample BRGWA-2S was J+ qualified as estimated with a high bias.

591355: The recoveries of chloride in the MSs using samples BRGWC-29I, FD-02 and BRGWC-52I were high and outside the laboratory specified acceptance criteria. Therefore, the chloride concentrations in samples BRGWC-29I, FD-02 and BRGWC-52I were J+ qualified as estimated with high biases.

Batch MSs were also reported for alkalinity and anions. Since the batch QC results do not affect the samples in this data set, qualifications were not applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-2S	Sulfate	0.452	NA	0.452	J+	4
BRGWC-29I	Chloride	5.84	NA	5.84	J+	4
BRGWC-52I	Chloride	6.27	NA	6.27	J+	4
FD-02	Chloride	4.20	NA	4.20	J+	4

mg/L- milligram per liter
NA-not applicable

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). An LCS was reported for each analytical batch per analysis. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Six sample set specific laboratory duplicates were reported for anions, using samples BRGWA-2S, BRGWC-29I, FD-02, BRGWC-17S, BRGWC-33S and BRGWC-52I. Six sample set specific laboratory duplicates were reported for alkalinity, using samples BRGWA-2S, PZ-51D, FD-03, BRGWC-52I, BRGWC-17S and BRGWC-33S. Three sample set specific laboratory duplicates were reported for TDS using samples BRGWC-50, BRGWC-32S and BRGWC-33S.

Batch laboratory duplicates were reported for TDS, alkalinity and anions. Since the batch QC results do not affect the samples in this data set, qualifications were not applied to the data. The RPD results were within the laboratory specified acceptance criteria.

3.7 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. The wet chemistry parameters were not detected in the field blanks above the MDLs with the following exceptions.

Chloride was detected in FB-01 at an estimated concentration greater than the MDL and less than the RL and alkalinity (31.0 mg/L) was detected in FB-01 at a concentration greater than the RL. Chloride (0.329 mg/L) and alkalinity (33.2 mg/L) were detected in FB-04 at concentrations greater than the RLs. Therefore, the estimated total alkalinity and bicarbonate alkalinity concentrations in the associated sample were U qualified as not detected at the RLs, the total alkalinity and bicarbonate alkalinity concentrations in the associated samples greater than the RLs and less than the field blank concentrations were U qualified as not detected at the reported concentrations and the chloride, total alkalinity and bicarbonate alkalinity concentrations in the associated samples greater than the RLs and less than ten times the RLs were J+ qualified as estimated with high biases.

Chloride (0.207 mg/L) was detected in FB-02 at a concentration greater than the RL and alkalinity was detected in FB-02 at an estimated concentration greater than the MDL and less than the RL. Since the chloride concentrations in the associated samples were greater than ten times the field blank concentration, no qualifications were applied to the chloride data. However, the estimated total alkalinity and bicarbonate alkalinity concentrations in the associated sample were U qualified as not detected at the RL.

Fluoride and alkalinity were detected in FB-03 at estimated concentrations greater than the MDLs and less than the RLs. Therefore, the estimated chloride, total alkalinity and bicarbonate alkalinity concentrations in the associated samples were U qualified as not detected at the RLs and based on professional and technical judgment the fluoride concentrations in samples BRGWC-27I,

BRGWC-32S, BRGWC-45, BRGWC-52I, FD-03, PZ-44, PZ-50D, PZ-57I and PZ-63I were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
BRGWA-23S	Chloride	3.16	NA	3.16	J+	3
BRGWC-37S	Chloride	1.97	NA	1.97	J+	3
EB-07	Fluoride	0.0758	J	0.100	U	3
BRGWC-27I	Fluoride	0.234	NA	0.234	J+	3
BRGWC-32S	Fluoride	0.138	NA	0.138	J+	3
BRGWC-45	Fluoride	0.166	NA	0.166	J+	3
RGWC-52I	Fluoride	0.157	NA	0.157	J+	3
FD-03	Fluoride	0.163	NA	0.163	J+	3
PZ-44	Fluoride	0.184	NA	0.184	J+	3
PZ-50D	Fluoride	0.106	NA	0.106	J+	3
PZ-57I	Fluoride	0.235	NA	0.235	J+	3
PZ-63I	Fluoride	0.235	NA	0.235	J+	3
EB-05	Alkalinity, Total as 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

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.

3.10 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

**DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team**

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample duplicate
RPD - Relative percent difference

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Memorandum

Date:	November 7, 2022
To:	Adria Reimer
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverables – GEL Laboratories, LLC Work Orders 590840, 590851, 590856, 590859, 591353 and 591358**

SITE: Plant Branch CCR Groundwater Compliance Upgradient, APBCD and AP-E

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of thirty-eight groundwater samples, four equipment blanks, four field blanks and four field duplicate samples, collected 23-25 August 2022 and 1 September 2022, as part of the Plant Branch on-site sampling event.

The samples were analyzed at GEL Laboratories LLC, Charleston, SC, for the following analytical tests:

- Radium-226 by Modified United States (US) Environmental Protection Agency (EPA) Method 9315
- Radium-228 by Modified US EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below and based on the information provided, the data as qualified are usable for supporting project objectives. Qualified data should be used within the limitations of the qualifications.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- American Nuclear Society Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation (ANSI/ANS-41.5-2012), February 15, 2012.

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
590840001	BRGWA-2S
590840002	BRGWA-2I
590840003	BRGWA-5S
590840004	BRGWA-5I
590840005	BRGWA-6S
590851001	BRGWA-23S
590851002	BRGWC-47
590851003	EB-05
590856001	BRGWA-12I
590856002	FB-01
590856003	BRGWA-12S
590856004	BRGWC-25I
590859001	BRGWC-33S
590859002	BRGWC-37S
590859003	BRGWC-38S
590859004	PZ-53D
590859005	PZ-13S
590859006	FB-04
591353001	BRGWC-17S
591353002	BRGWC-35S
591353003	BRGWC-36S
591353004	FD-04
591353005	BRGWC-34S
591353006	EB-08
591358001	FD-01

Laboratory ID	Client ID
591358002	PZ-58I
591358003	PZ-60I
591358004	FB-02
591358005	BRGWC-29I
591358006	BRGWC-30I
591358007	BRGWC-50
591358008	FD-03
591358009	BRGWC-45
591358010	PZ-44
591358011	PZ-51I
591358012	PZ-51D
591358013	PZ-61I
591358014	PZ-51S
591358015	FD-02
591358016	PZ-50D
591358017	EB-06
591358018	PZ-62I
591358019	PZ-59I
591358020	BRGWC-27I
591358021	FB-03
591358022	PZ-63I
591358023	PZ-57I
591358024	BRGWC-32S
591358025	EB-07
591358026	BRGWC-52I

No sample preservation issues were noted by the laboratory.

The sample collection times were not listed on the chain of custody (COC) for field duplicate samples, FD-01, FD-02 FD-03 and FD-04. Collection times were not documented in the laboratory reports.

591358: : Incorrect error corrections were observed on the COC, instead of the proper procedure of a single strike through, correction, and date and initials of person making the corrections.

590840 and 590851: The year was not documented on the COCs for the relinquished by date for the second sample transfer.

1.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by modified US EPA method 9315, modified radium-228 by US EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

⊗ Overall Assessment
✓ Holding Times
⊗ Method Blank
✓ Matrix Spike
✓ Laboratory Control Sample
✓ Laboratory Duplicate
✓ Tracers and Carriers
⊗ Equipment Blank
✓ Field Blank
⊗ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverables Review

1.1 Overall Assessment

1.1.1 Completeness

The radiochemistry data reported in this data set are considered usable for supporting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.1.2 Analysis Anomaly

590851: The radium-228 result in sample BRGWA-23S was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample BRGWA-23S was UJ qualified as estimated less than the minimum detectable concentration (MDC).

590856: The radium-228 result in sample BRGWC-25I was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample BRGWC-25I was UJ qualified as estimated less than the MDC.

591353: The radium-228 result in sample BRGWC-17S was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample BRGWC-17S was UJ qualified as estimated less than the MDC.

591358: The radium-228 result in sample PZ-51I was more negative than the sample's 1.96 sigma uncertainty. Therefore, the radium-228 result in sample PZ-51I was UJ qualified as estimated less than the MDC.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
BRGWA-23S	Radium-228	-4.51	U	-4.51	UJ	13
BRGWC-25I	Radium-228	-1.62	U	-1.62	UJ	13
BRGWC-17S	Radium-228	-2.32	U	-2.32	UJ	13
PZ-51I	Radium-228	-3.03	U	-3.03	UJ	13

pCi/L-picocuries per liter
U-not detected at or above the MDC
* Validation qualifiers are defined in Attachment 1 at the end of this report
**Reason codes are defined in Attachment 2 at the end of this report

1.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-226 data (batches 2309179, 2310752 and 2310764). Three method blanks were reported for the radium-228 data (batches 2309177, 2310792 and 2310793). Radium-226 and radium-228 were not detected in the method blanks above the MDCs.

590840, 590851, 590856 and 590859: Radium-226 (0.319 pCi/L) was detected in the method blank in batch 2309179 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentrations in samples BRGWA-5S, BRGWA-23S, BRGWC-47, BRGWA-12I, BRGWA-12S, BRGWC-25I, FB-04, BRGWC-33S, BRGWC-37S, BRGWC-38S, PZ-13S and PZ-53D were J+ qualified as estimated with high biases and the radium-226 and total radium concentrations in FB-01 were U qualified as not detected at the MDCs.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRGWA-5S	Radium-226	0.735	NA	0.735	J+	3

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRGWA-5S	Radium-226+228 Sum	0.735	NA	0.735	J+	3
BRGWA-23S	Radium-226	1.59	NA	1.59	J+	3
BRGWA-23S	Radium-226+228 Sum	1.59	NA	1.59	J+	3
BRGWC-47	Radium-226	1.29	NA	1.29	J+	3
BRGWC-47	Radium-226+228 Sum	3.74	NA	3.74	J+	3
BRGWA-12I	Radium-226	0.558	NA	0.558	J+	3
BRGWA-12I	Radium-226+228 Sum	0.558	NA	0.558	J+	3
BRGWA-12S	Radium-226	0.360	NA	0.360	J+	3
BRGWA-12S	Radium-226+228 Sum	1.69	NA	1.69	J+	3
BRGWC-25I	Radium-226	1.90	NA	1.90	J+	3
BRGWC-25I	Radium-226+228 Sum	1.90	NA	1.90	J+	3
FB-04	Radium-226	0.458	NA	0.458	J+	3
FB-04	Radium-226+228 Sum	2.10	NA	2.10	J+	3
BRGWC-33S	Radium-226	1.10	NA	1.10	J+	3
BRGWC-33S	Radium-226+228 Sum	1.94	NA	1.94	J+	3
BRGWC-37S	Radium-226	1.29	NA	1.29	J+	3
BRGWC-37S	Radium-226+228 Sum	2.37	NA	2.37	J+	3
BRGWC-38S	Radium-226	0.407	NA	0.407	J+	3
BRGWC-38S	Radium-226+228 Sum	3.12	NA	3.12	J+	3
PZ-13S	Radium-226	0.956	NA	0.956	J+	3
PZ-13S	Radium-226+228 Sum	1.83	NA	1.83	J+	3
PZ-53D	Radium-226	0.695	NA	0.695	J+	3
PZ-53D	Radium-226+228 Sum	3.04	NA	3.04	J+	3
FB-01	Radium-226	0.320	NA	0.320	U	3
FB-01	Radium-226+228 Sum	1.60	NA	1.60	U	3

pCi/L-picocuries per liter
NA-not applicable

1.4 Matrix Spike

Three sample set specific MSs were reported for radium-226 using samples BRGWA-2S, BRGWC-17S and FD-01 . The recovery results were within the laboratory specified acceptance criteria.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCSs were reported for radium-226 and three LCSs were reported for radium-228. The recovery results were within the laboratory specified acceptance criteria.

1.6 Laboratory Duplicate

Two sample set specific laboratory duplicates were reported for radium-228 using samples BRGWA-2S and BRGWC-17S and three sample set specific laboratory duplicates were reported for radium-226 using samples BRGWA-2S, BRGWC-17S and FD-01. The relative error ratio (RER) results were within the laboratory specified acceptance criteria.

1.7 Tracers and Carriers

Tracers were reported for radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

1.8 Equipment Blank

Four equipment blanks, EB-05, EB-06, EB-07 and EB-08 were collected with the sample set. Radium-226 and Radium-228 were not detected in the equipment blanks above the MDCs, with the following exceptions.

Radium-226 (0.286 pCi/L) was detected in EB-06 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentrations in samples FD-03, BRGWC-27I, BRGWC-32S, BRGWC-45, BRGWC-52I, PZ-44, PZ-50D, PZ-57I, PZ-59I, PZ-62I and PZ-63I were J+ qualified as estimated with high biases.

Radium-226 (0.556 pCi/L) was detected in EB-08 at a concentration greater than the MDC. Therefore, the radium-226 and total radium concentrations in samples FD-04, BRGWC-35S, BRGWC-36S, FD-01, BRGWC-50, PZ-51D, PZ-51I, PZ-51S and PZ-60I and total radium concentrations in samples BRGWC-30I and PZ-61I were J+ qualified as estimated with high biases and the radium-226 and total radium concentrations in samples FD-02, BRGWC-29I and PZ-58I and radium-226 concentrations in samples BRGWC-30I and PZ-61I were U qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
FD-03	Radium-226	0.561	NA	0.561	J+	3
FD-03	Radium-226+228 Sum	2.44	NA	2.44	J+	3
BRGWC-27I	Radium-226	0.488	NA	0.488	J+	3
BRGWC-27I	Radium-226+228 Sum	1.79	NA	1.79	J+	3
BRGWC-32S	Radium-226	0.462	NA	0.462	J+	3
BRGWC-32S	Radium-226+228 Sum	1.32	NA	1.32	J+	3
BRGWC-45	Radium-226	0.491	NA	0.491	J+	3
BRGWC-45	Radium-226+228 Sum	1.65	NA	1.65	J+	3
BRGWC-52I	Radium-226	1.57	NA	1.57	J+	3

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
BRGWC-52I	Radium-226+228 Sum	4.97	NA	4.97	J+	3
PZ-44	Radium-226	0.287	NA	0.287	J+	3
PZ-44	Radium-226+228 Sum	1.60	NA	1.60	J+	3
PZ-50D	Radium-226	0.640	NA	0.640	J+	3
PZ-50D	Radium-226+228 Sum	2.26	NA	2.26	J+	3
PZ-57I	Radium-226	0.395	NA	0.395	J+	3
PZ-57I	Radium-226+228 Sum	0.773	NA	0.773	J+	3
PZ-59I	Radium-226	0.366	NA	0.366	J+	3
PZ-59I	Radium-226+228 Sum	1.02	NA	1.02	J+	3
PZ-62I	Radium-226	0.674	NA	0.674	J+	3
PZ-62I	Radium-226+228 Sum	1.88	NA	1.88	J+	3
PZ-63I	Radium-226	0.882	NA	0.882	J+	3
PZ-63I	Radium-226+228 Sum	1.52	NA	1.52	J+	3
FD-04	Radium-226	2.52	NA	2.52	J+	3
FD-04	Radium-226+228 Sum	3.24	NA	3.24	J+	3
BRGWC-35S	Radium-226	0.669	NA	0.669	J+	3
BRGWC-35S	Radium-226+228 Sum	3.10	NA	3.10	J+	3
BRGWC-36S	Radium-226	0.673	NA	0.673	J+	3
BRGWC-36S	Radium-226+228 Sum	1.38	NA	1.38	J+	3
FD-01	Radium-226	0.571	NA	0.571	J+	3
FD-01	Radium-226+228 Sum	1.89	NA	1.89	J+	3
FD-02	Radium-226	0.403	NA	0.403	U	3
FD-02	Radium-226+228 Sum	1.20	NA	1.20	U	3
BRGWC-29I	Radium-226	0.368	NA	0.368	U	3
BRGWC-29I	Radium-226+228 Sum	1.97	NA	1.97	U	3
BRGWC-30I	Radium-226	0.542	NA	0.542	U	3
BRGWC-30I	Radium-226+228 Sum	3.26	NA	3.26	J+	3
BRGWC-50	Radium-226	0.649	NA	0.649	J+	3
BRGWC-50	Radium-226+228 Sum	1.87	NA	1.87	J+	3
PZ-51D	Radium-226	0.823	NA	0.823	J+	3
PZ-51D	Radium-226+228 Sum	3.33	NA	3.33	J+	3
PZ-51I	Radium-226	0.625	NA	0.625	J+	3
PZ-51I	Radium-226+228 Sum	0.625	NA	0.625	J+	3
PZ-51S	Radium-226	0.878	NA	0.878	J+	3
PZ-51S	Radium-226+228 Sum	1.20	NA	1.20	J+	3
PZ-58I	Radium-226	0.322	NA	0.322	U	3
PZ-58I	Radium-226+228 Sum	1.16	NA	1.16	U	3
PZ-60I	Radium-226	0.704	NA	0.704	J+	3
PZ-60I	Radium-226+228 Sum	3.50	NA	3.50	J+	3
PZ-61I	Radium-226	0.488	NA	0.488	U	3
PZ-61I	Radium-226+228 Sum	2.91	NA	2.91	J+	3

pCi/L-picocuries per liter
NA-not applicable

1.9 Field Blank

Four field blanks, FB-01, FB-02, FB-03 and FB-04 were collected with the sample set. Radium-226 and Radium-228 were not detected in the field blanks above the MDCs, with the following exceptions.

Radium-226 (0.320 pCi/L) was detected in FB-01 at a concentration greater than the MDC. Since the radium-226 concentration in FB-01 was U qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

Radium-226 (0.458 pCi/L) was detected in FB-04 at a concentration greater than the MDC. Since the radium-226 concentrations in the associated samples were qualified due to method blank contamination and based on professional and technical judgment, no additional qualifications were applied to the data.

1.10 Field Duplicate

Four field duplicate samples, FD-01, FD-02, FD-03 and FD-04 were collected with the sample set. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicates and the original samples, PZ-58I, PZ-51S, BRGWC-45 and BRGWC-36S, respectively, with the following exception.

The RER of radium-226 in field duplicate pair BRGWC-36S/FD-04 was greater than 3; therefore, the radium-226 and total radium concentrations in field duplicate pair BRGWC-36S/FD-04 were J qualified as estimated.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	RER	Validation Result (pCi/L)	Validation Qualifier	Reason Code
FD-04	Radium-226	2.52	NA	4.7	2.52	J	7
BRGWC-36S	Radium-226	0.673	NA		0.673	J	7
FD-04	Radium-226+228 Sum	3.24	NA	NA	3.24	J	7
BRGWC-36S	Radium-226+228 Sum	1.38	NA		1.38	J	7

pCi/L-picocuries per liter
RER-replicate error ratio
NA-not applicable

1.11 Sensitivity

The samples were reported to the MDCs. Elevated non-detect results were not reported.

1.12 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDDs were reviewed against the information provided by the associated level II reports at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II reports and the EDDs.

**DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team**

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to "not detected at or above the reported result".

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample duplicate
RPD - Relative percent difference

FIELD SAMPLING REPORTS

Fall 2022

Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:25:17 AM
Project: Plant Branch Ash Ponds
Operator Name: Jordan Berisford

Location Name: BRGWA-2I **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 56 ft** **Total Depth: 66.96 ft** **Initial Depth to Water: 12.55 ft**	**Pump Type: QED Bladder pump** **Tubing Type: Poly** **Pump Intake From TOC: 59 ft** **Estimated Total Volume Pumped: 5.6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 125 ml/min** **Final Draw Down: 12 in**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Cloudy, sample time-1010

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
8/23/2022 9:25 AM	00:00	7.27 pH	22.54 °C	11.00 µS/cm	8.44 mg/L	2.61 NTU	253.6 mV	12.55 ft	125.00 ml/min
8/23/2022 9:30 AM	05:00	6.75 pH	21.94 °C	120.34 µS/cm	1.91 mg/L	1.77 NTU	89.6 mV	13.10 ft	125.00 ml/min
8/23/2022 9:35 AM	10:00	6.55 pH	20.93 °C	116.96 µS/cm	1.58 mg/L	2.05 NTU	84.3 mV	13.50 ft	125.00 ml/min
8/23/2022 9:40 AM	15:00	6.61 pH	20.77 °C	117.42 µS/cm	1.37 mg/L	1.69 NTU	86.9 mV	13.50 ft	125.00 ml/min
8/23/2022 9:45 AM	20:00	6.64 pH	20.79 °C	117.44 µS/cm	1.33 mg/L	1.83 NTU	82.8 mV	13.50 ft	125.00 ml/min
8/23/2022 9:50 AM	25:00	6.64 pH	20.75 °C	117.74 µS/cm	1.26 mg/L	1.12 NTU	86.9 mV	13.50 ft	125.00 ml/min
8/23/2022 9:55 AM	30:00	6.65 pH	20.81 °C	117.27 µS/cm	1.16 mg/L	1.65 NTU	82.4 mV	13.50 ft	125.00 ml/min
8/23/2022 10:00 AM	35:00	6.66 pH	20.80 °C	117.44 µS/cm	1.05 mg/L	1.27 NTU	81.8 mV	13.50 ft	125.00 ml/min
8/23/2022 10:05 AM	40:00	6.66 pH	20.84 °C	118.00 µS/cm	0.97 mg/L	1.08 NTU	86.2 mV	13.50 ft	125.00 ml/min
8/23/2022 10:10 AM	45:00	6.67 pH	20.93 °C	118.47 µS/cm	0.91 mg/L	1.22 NTU	81.8 mV	13.50 ft	125.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 8/23/2022 10:30:04 AM
Project: Plant Branch Ash Ponds
Operator Name: Jordan Berisford

Location Name: BRGWA-2S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 37 ft** **Total Depth: 47.39 ft** **Initial Depth to Water: 12.72 ft**	**Pump Type: QED Bladder pump** **Tubing Type: Poly** **Pump Intake From TOC: 42 ft** **Estimated Total Volume Pumped: 5.6 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 225 ml/min** **Final Draw Down: 1 in**	**Instrument Used: Aqua TROLL 400** **Serial Number: 850751**

Test Notes:
Cloudy, sample time-1055

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 100	+/- 10	+/- 0.3	
8/23/2022 10:30 AM	00:00	6.71 pH	22.32 °C	122.72 µS/cm	1.24 mg/L	1.11 NTU	82.0 mV	12.72 ft	225.00 ml/min
8/23/2022 10:35 AM	05:00	6.04 pH	20.71 °C	56.96 µS/cm	2.13 mg/L	0.89 NTU	61.3 mV	12.80 ft	225.00 ml/min
8/23/2022 10:40 AM	10:00	5.95 pH	20.40 °C	57.02 µS/cm	1.77 mg/L	0.64 NTU	58.6 mV	12.80 ft	225.00 ml/min
8/23/2022 10:45 AM	15:00	5.95 pH	20.53 °C	55.52 µS/cm	2.87 mg/L	0.55 NTU	65.0 mV	12.80 ft	225.00 ml/min
8/23/2022 10:50 AM	20:00	5.94 pH	20.57 °C	54.65 µS/cm	2.77 mg/L	0.83 NTU	66.6 mV	12.80 ft	225.00 ml/min
8/23/2022 10:55 AM	25:00	5.95 pH	20.61 °C	55.77 µS/cm	3.00 mg/L	0.48 NTU	68.3 mV	12.80 ft	225.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:40:06 AM
Project: Plant Branch Ash Ponds
Operator Name: A. Schnittker

Location Name: BRGWA-5I **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 53.82 ft** **Total Depth: 63.82 ft** **Initial Depth to Water: 12.08 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: Poly** **Pump Intake From TOC: 58 ft** **Estimated Total Volume Pumped: 8.3 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 275 ml/min** **Final Draw Down: 3 in**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Sample time 1015. Overcast 80s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/23/2022 9:40 AM	00:00	6.25 pH	19.62 °C	141.33 µS/cm	5.44 mg/L	5.23 NTU	81.6 mV	12.08 ft	275.00 ml/min
8/23/2022 9:45 AM	05:00	6.25 pH	19.61 °C	142.04 µS/cm	5.43 mg/L	5.19 NTU	71.4 mV	12.30 ft	275.00 ml/min
8/23/2022 9:50 AM	10:00	6.25 pH	19.55 °C	141.67 µS/cm	5.45 mg/L	5.11 NTU	67.6 mV	12.30 ft	275.00 ml/min
8/23/2022 9:55 AM	15:00	6.25 pH	19.59 °C	141.73 µS/cm	5.46 mg/L	4.10 NTU	66.5 mV	12.30 ft	275.00 ml/min
8/23/2022 10:00 AM	20:00	6.24 pH	19.14 °C	141.26 µS/cm	5.45 mg/L	4.05 NTU	65.7 mV	12.30 ft	275.00 ml/min
8/23/2022 10:05 AM	25:00	6.24 pH	18.97 °C	141.33 µS/cm	5.47 mg/L	2.77 NTU	65.2 mV	12.30 ft	275.00 ml/min
8/23/2022 10:10 AM	30:00	6.24 pH	18.97 °C	141.26 µS/cm	5.47 mg/L	3.75 NTU	64.7 mV	12.30 ft	275.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:26:43 AM
Project: Plant Branch Ash Ponds
Operator Name: H Auld

Location Name: BRGWA-5S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 33 ft** **Total Depth: 43.01 ft** **Initial Depth to Water: 12.13 ft**	**Pump Type: Bladder pump** **Tubing Type: Poly** **Pump Intake From TOC: 38 ft** **Estimated Total Volume Pumped: 5.3 liter** **Flow Cell Volume: 90 ml** **Final Flow Rate: 150 ml/min** **Final Draw Down: 1.6 in**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883530**

Test Notes:
Sampled at 1000 on 8-23-22. Cloudy 70s.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 10	+/- 300	+/- 0.3	
8/23/2022 9:26 AM	00:00	6.34 pH	21.42 °C	132.45 µS/cm	3.38 mg/L	10.00 NTU	84.2 mV	12.13 ft	150.00 ml/min
8/23/2022 9:31 AM	05:00	6.28 pH	20.31 °C	125.12 µS/cm	2.22 mg/L	3.50 NTU	75.2 mV	12.25 ft	150.00 ml/min
8/23/2022 9:36 AM	10:00	6.29 pH	20.13 °C	129.89 µS/cm	1.97 mg/L	3.90 NTU	76.2 mV	12.25 ft	150.00 ml/min
8/23/2022 9:41 AM	15:00	6.33 pH	20.14 °C	132.68 µS/cm	1.79 mg/L	3.80 NTU	73.3 mV	12.25 ft	150.00 ml/min
8/23/2022 9:46 AM	20:00	6.34 pH	20.10 °C	134.01 µS/cm	1.70 mg/L	2.70 NTU	74.4 mV	12.25 ft	150.00 ml/min
8/23/2022 9:51 AM	25:00	6.32 pH	20.06 °C	133.97 µS/cm	1.66 mg/L	3.10 NTU	84.7 mV	12.25 ft	150.00 ml/min
8/23/2022 9:56 AM	30:00	6.36 pH	20.09 °C	134.88 µS/cm	1.63 mg/L	3.00 NTU	74.7 mV	12.25 ft	150.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 8/23/2022 9:20:13 AM
Project: Plant Branch Ash Ponds
Operator Name: Taylor Goble

Location Name: BRGWA-6S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 42.9 ft** **Total Depth: 52.9 ft** **Initial Depth to Water: 26.95 ft**	**Pump Type: Dedicated Bladder Pump** **Tubing Type: Poly** **Pump Intake From TOC: 47 ft** **Estimated Total Volume Pumped: 6600 ml** **Flow Cell Volume: 90 ml** **Final Flow Rate: 220 ml/min** **Final Draw Down: 0.57 ft**	**Instrument Used: Aqua TROLL 400** **Serial Number: 883536**

Test Notes:
Sampled at 0950. Mostly cloudy 75 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 2	+/- 5 %	+/- 10 %	+/- 10	+/- 25	+/- 0.3	
8/23/2022 9:20 AM	00:00	6.49 pH	20.39 °C	57.64 µS/cm	6.90 mg/L	4.05 NTU	84.9 mV	26.95 ft	220.00 ml/min
8/23/2022 9:25 AM	05:00	6.46 pH	20.30 °C	56.89 µS/cm	6.94 mg/L	2.27 NTU	65.6 mV	27.33 ft	220.00 ml/min
8/23/2022 9:30 AM	10:00	6.50 pH	20.21 °C	56.29 µS/cm	6.92 mg/L	1.60 NTU	67.8 mV	27.50 ft	220.00 ml/min
8/23/2022 9:35 AM	15:00	6.52 pH	20.11 °C	56.40 µS/cm	6.94 mg/L	1.66 NTU	69.9 mV	27.52 ft	220.00 ml/min
8/23/2022 9:40 AM	20:00	6.49 pH	20.05 °C	56.54 µS/cm	6.86 mg/L	1.85 NTU	72.6 mV	27.52 ft	220.00 ml/min
8/23/2022 9:45 AM	25:00	6.51 pH	20.04 °C	56.73 µS/cm	6.95 mg/L	1.74 NTU	75.2 mV	27.52 ft	220.00 ml/min
8/23/2022 9:50 AM	30:00	6.51 pH	20.04 °C	56.92 µS/cm	7.04 mg/L	1.71 NTU	77.0 mV	27.52 ft	220.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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**	**Instrument Used: Aqua TROLL 400** **Serial Number: 728566**

Test Notes:
Sample time 1440. Overcast 80s. EB-8 here at 1325.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 100	+/- 5 %	+/- 10 %	+/- 10	+/- 100	+/- 5	
8/24/2022 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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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 4:40 PM	01:15:00	7.67 pH	24.60 °C	1,078.9 µS/cm	3.86 mg/L	1.94 NTU	69.2 mV	27.00 ft	100.00 ml/min
8/23/2022 4:45 PM	01:20:00	7.67 pH	26.64 °C	1,068.4 µS/cm	4.45 mg/L	1.33 NTU	71.4 mV	28.10 ft	100.00 ml/min
8/23/2022 4:50 PM	01:25:00	7.70 pH	22.49 °C	1,046.5 µS/cm	4.45 mg/L	1.77 NTU	73.4 mV	29.20 ft	100.00 ml/min
8/23/2022 4:55 PM	01:30:00	7.69 pH	22.06 °C	1,071.7 µS/cm	4.10 mg/L	1.74 NTU	72.7 mV	30.10 ft	100.00 ml/min
8/23/2022 5:00 PM	01:35:00	7.69 pH	23.14 °C	1,081.1 µS/cm	3.88 mg/L	1.73 NTU	71.3 mV	31.10 ft	100.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

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	pH	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 11:05 AM	01:15:00	7.44 pH	23.43 °C	1,028.8 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:

Low-Flow Test Report:

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	pH	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:

Low-Flow Test Report:

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	pH	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 10:38 AM	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
9/1/2022 10:43 AM	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
9/1/2022 10:48 AM	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
9/1/2022 10:53 AM	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

Samples

Sample ID:	Description:

CALIBRATION REPORTS

Fall 2022

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: J. Bernstein

WATER LEVEL: Solinst

WATER LEVEL S/N: 267304

INSTRUMENT S/N: 850751

INSTRUMENT TYPE: AquaTroll

CAL. SOLUTION/S:

ID: pH 4	LOT #: 2147032	EXP. DATE:	4/23
ID: pH 7	LOT #: 2138002	EXP. DATE:	4/23
ID: pH 10	LOT #: 2008056	EXP. DATE:	4/23
ID: cond	LOT #: 1616805	EXP. DATE:	11/22
ID: ORP	LOT #: 2114613	EXP. DATE:	4/23
ID:	LOT #:	EXP. DATE:	
ID:	LOT #:	EXP. DATE:	

Midday pH check

Must be less that .10

(6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 8/23/22

RDO: 100% sat. = 100.3

PH: 4.00 = 4.06 | 7.00 = 7.02 | 10.00 = 9.91 | *Midday pH check* 7.0 = 7.04

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1441

ORP (mV) 228 = 228

Calibration Date: 8/24/22

RDO: 100% sat. = 99.9

PH: 4.00 = 4.03 | 7.00 = 7.04 | 10.00 = 9.84 | *Midday pH check* 7.0 = 7.06

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1423

ORP (mV) 228 = 229

Calibration Date: 8/25/22

RDO: 100% sat. = 99.6

PH: 4.00 = 4.00 | 7.00 = 6.99 | 10.00 = 10.18 | *Midday pH check* 7.0 = 7.02

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1406

ORP (mV) 228 = 230

Calibration Date:

RDO: 100% sat. = | *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

Calibration Date:

RDO: 100% sat. = | *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: J. Benefield

INSTRUMENT S/N: 17120C063767

INSTRUMENT TYPE: Hach 2100Q

CAL. SOLUTION:

0 NTU - LOT #	PI1L76	EXP. DATE: N/A
10 NTU - LOT #	21201L2	EXP. DATE: 11/22
20 NTU - LOT #	41267	EXP. DATE: 11/22

Calibration Date: 8/23/22

Calibation Solution	Instrument Reading	
0.0	0.27	NTU
10.0	10.2	NTU
20.0	20.6	NTU

Calibration Date: 8/24/22

Calibation Solution	Instrument Reading	
0.0	0.14	NTU
10.0	9.98	NTU
20.0	~~2.0~~ 20.4	NTU

Calibration Date: 8/25/22

Calibation Solution	Instrument Reading	
0.0	0.17	NTU
10.0	10.1	NTU
20.0	20.5	NTU

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:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: H. Auld

WATER LEVEL: Solinst

WATER LEVEL S/N: 49832

INSTRUMENT S/N: 883530

INSTRUMENT TYPE: AquaTroll

CAL. SOLUTION/S:

ID: pH 4	LOT #: 2GE870	EXP. DATE: 8/24	
ID: pH 7	LOT #: 21010086	EXP. DATE: 8/2022	
ID: pH 10	LOT #: 20080056	EXP. DATE: 04/23	
ID: Cond.	LOT #: 2GB1062	EXP. DATE: 02/23	
ID: ORP	LOT #: 21140143	EXP. DATE: 04/23	
ID:	LOT #:	EXP. DATE:	
ID:	LOT #:	EXP. DATE:	

Midday pH check

Must be less that .10

(6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 8-23-22

RDO: 100% sat. = ~~81%~~ 106 %

PH: 4.00 = 4.07 | 7.00 = 7.01 | 10.00 = 9.99 | *Midday pH check* 7.0 = 7.03

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1660

ORP (mV) 228 = 226

Calibration Date: 8-24-22

RDO: 100% sat. = 98.4

PH: 4.00 = 4.01 | 7.00 = 6.94 | 10.00 = 9.91 | *Midday pH check* 7.0 = 7.01

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1390

ORP (mV) 228 = 230

Calibration Date: 8-25-22

RDO: 100% sat. = 98.9 %

PH: 4.00 = 4.02 | 7.00 = 6.99 | 10.00 = 9.97 | *Midday pH check* 7.0 = 7.04

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1428

ORP (mV) 228 = 229

Calibration Date:

RDO: 100% sat. = | *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

Calibration Date:

RDO: 100% sat. = | *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: H. Auld

INSTRUMENT S/N: 12050C017705

INSTRUMENT TYPE: Hach 2100Q

CAL. SOLUTION:

0 NTU - LOT # —	EXP. DATE:	New DI
10 NTU - LOT # AZ122	EXP. DATE:	8/23
20 NTU - LOT # AZ124	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

Calibration Date: 8-24-22

Calibation Solution	Instrument Reading	
0.0	0.2	NTU
10.0	9.91	NTU
20.0	19.2	NTU

Calibration Date: 8-25-22

Calibation Solution	Instrument Reading	
0.0	0.3	NTU
10.0	19.6	NTU
20.0	20.9	NTU

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:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: A Schmiffler

WATER LEVEL: Solinst

WATER LEVEL S/N: 377060

INSTRUMENT S/N: 728566

INSTRUMENT TYPE: AquaTroll

CAL. SOLUTION/S:

ID: pH 4	LOT #: 16K617	EXP. DATE: 11/23	
ID: pH 7	LOT #: 26C169	EXP. DATE: 3/24	
ID: pH 10	LOT #: 166429	EXP. DATE: 7/23	
ID: Cond	LOT #: 26F806	EXP. DATE: 6/23.	
ID: ORP	LOT #: 21140143	EXP. DATE: 4/23	
ID:	LOT #:	EXP. DATE:	
ID:	LOT #:	EXP. DATE:	

Midday pH check

Must be less that .10

(6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 8/23/22

RDO: 100% sat. = 96.46 — *Midday pH check*

PH: 4.00 = 3.89 | 7.00 = 7.00 | 10.00 = 9.98 | 7.0 = 6.98

PH Recal (if needed): 4.00 = NA | 7.00 = NA | 10.00 = NA | 7.0= NA post recal check

CONDUCTIVITY: 1413 = 1142

ORP (mV) 228 = 229.4

Calibration Date: 8/24/22

RDO: 100% sat. = 104.38 — *Midday pH check*

PH: 4.00 = 4.05 | 7.00 = 7.04 | 10.00 = 10.01 | 7.0 = 6.99

PH Recal (if needed): 4.00 = NA | 7.00 = NA | 10.00 = NA | 7.0= NA post recal check

CONDUCTIVITY: 1413 = 1422

ORP (mV) 228 = 233

Calibration Date: 8/25/22

RDO: 100% sat. = 99.0 — *Midday pH check*

PH: 4.00 = 4.00 | 7.00 = 7.02 | 10.00 = 9.96 | 7.0 = 7.00

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: 1413 = 1447.6

ORP (mV) 228 = 228.3

Calibration Date:

RDO: 100% sat. = — *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

Calibration Date:

RDO: 100% sat. = — *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: A Schmitthenner

INSTRUMENT S/N: 11090C012353

INSTRUMENT TYPE: Hach 2100Q

CAL. SOLUTION:

0 NTU - LOT #	N/A	EXP. DATE: Fresh DI
10 NTU - LOT #	A2122	EXP. DATE: 8/23
20 NTU - LOT #	A2124	EXP. DATE: 8/23

Calibration Date: 8/23/22

Calibation Solution	Instrument Reading	
0.0	0.57	NTU
10.0	10.1	NTU
20.0	20.8	NTU

Calibration Date: 8/24/22

Calibation Solution	Instrument Reading	
0.0	0.28	NTU
10.0	10.7	NTU
20.0	19.5	NTU

Calibration Date: 8/25/22

Calibation Solution	Instrument Reading	
0.0	0.23	NTU
10.0	9.88	NTU
20.0	20.5	NTU

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:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: T. Goble

WATER LEVEL: Solinst

WATER LEVEL S/N: 236986

INSTRUMENT S/N: 883536

INSTRUMENT TYPE: AquaTroll

CAL. SOLUTION/S:

ID: pH 4	LOT #: 21470032	EXP. DATE: 4/23		
ID: pH 7	LOT #: 21380102	EXP. DATE: 4/23		
ID: pH 10	LOT #: 20080056	EXP. DATE: 4/23		
ID: Cond	LOT #: 21470032	EXP. DATE: 4/23		
ID: ORP	LOT #: 2119043	EXP. DATE: 4/23		
ID:	LOT #:	EXP. DATE:		
ID:	LOT #:	EXP. DATE:		

Midday pH check

Must be less that .10

(6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 8-23-22

RDO: 100% sat. = 102.18 — *Midday pH check*

PH: 4.00 = 4.12 | 7.00 = 7.01 | 10.00 = 9.93 | 7.0 = 7.04

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check NA

CONDUCTIVITY: 4490 = 4410

ORP (mV) 228 = 217.7

Calibration Date: 8-24-22

RDO: 100% sat. = 101.93 — *Midday pH check*

PH: 4.00 = 4.03 | 7.00 = 7.01 | 10.00 = 10.09 | 7.0 = 7.02

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check NA

CONDUCTIVITY: 4490 = 4468

ORP (mV) 228 = 227.1

Calibration Date: 8-25-22

RDO: 100% sat. = 100.14 — *Midday pH check*

PH: 4.00 = 4.03 | 7.00 = 6.99 | 10.00 = 9.97 | 7.0 = 7.02

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check NA

CONDUCTIVITY: 4490 = 4470

ORP (mV) 228 =

Calibration Date:

RDO: 100% sat. = — *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

Calibration Date:

RDO: 100% sat. = — *Midday pH check*

PH: 4.00 = | 7.00 = | 10.00 = | 7.0 =

PH Recal (if needed): 4.00 = | 7.00 = | 10.00 = | 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: T. Goble

INSTRUMENT S/N: 15040C040490

INSTRUMENT TYPE: Hach 2100Q

CAL. SOLUTION:

0 NTU - LOT #	—	EXP. DATE:	New DT
10 NTU - LOT #	2961401	EXP. DATE:	10/22
20 NTU - LOT #	2684801	EXP. DATE:	10/22

Calibration Date: 8-23-22

Calibation Solution	Instrument Reading	
0.0	0.31	NTU
10.0	10.9	NTU
20.0	21.2	NTU

100 = 101

800 = 795

Calibration Date: 8-24-22

Calibation Solution	Instrument Reading	
0.0	0.27	NTU
10.0	10.8	NTU
20.0	20.2	NTU

100 = 101

<100 = 802

Calibration Date: 8-25-22

Calibation Solution	Instrument Reading	
0.0	0.24	NTU
10.0	10.6	NTU
20.0	20.0	NTU

100 = 100

800 = 803

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:

Calibation Solution	Instrument Reading	
0.0		NTU
10.0		NTU
20.0		NTU

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: H. Auld

INSTRUMENT S/N: 12050C017705

INSTRUMENT TYPE: Hach 2100Q

CAL. SOLUTION:

0 NTU - LOT # —	EXP. DATE:	New DI
10 NTU - LOT # A2122	EXP. DATE:	8/23
20 NTU - LOT # A2124	EXP. DATE:	8/23

Calibration Date: 8/29/22

Calibation Solution	Instrument Reading	
0.0	0.3	NTU
10.0	10.0	NTU
20.0	19.9	NTU

Calibration Date: 9/1/22

Calibation Solution	Instrument Reading	
0.0	0.3	NTU
10.0	9.9	NTU
20.0	20.2	NTU

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:

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

ATLANTIC COAST CONSULTING, INC.

Daily Instrument Calibration Log

SITE: Plant Branch

TECHNICIAN: H. Ailel

WATER LEVEL: Solinst

WATER LEVEL S/N: 48832

INSTRUMENT S/N: 883530

INSTRUMENT TYPE: AquaTroll

CAL. SOLUTION/S:

ID	LOT #	EXP. DATE
pH 4	26E870	8/24
pH 7	2101008B	~~8/22~~ 9/22 (HA)
pH 10	2008005B	04/23
Cond.	26B1062	02/23
ORP	21140143	04/23

Midday pH check

Must be less that .10

(6.90-7.10 range)

Recalibrate if not within range

Calibration Date: 8/29/22

RDO: 100% sat. = 106.4 %

PH: 4.00 = 4.01 7.00 = 7.00 10.00 = 9.96 — *Midday pH check* 7.0 = NA

PH Recal (if needed): 4.00 = 7.00 = 10.00 = — 7.0= post recal check

CONDUCTIVITY: 1413 = 1561

ORP (mV) 228 = 224

Calibration Date: 9/1/22

RDO: 100% sat. = 103.8 %

PH: 4.00 = 4.02 7.00 = 6.99 10.00 = 9.98 — *Midday pH check* 7.0 = NA

PH Recal (if needed): 4.00 = 7.00 = 10.00 = — 7.0= post recal check

CONDUCTIVITY: 1413 = 1497

ORP (mV) 228 = 226

Calibration Date:

RDO: 100% sat. =

PH: 4.00 = 7.00 = 10.00 = — *Midday pH check* 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. =

PH: 4.00 = 7.00 = 10.00 = — *Midday pH check* 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. =

PH: 4.00 = 7.00 = 10.00 = — *Midday pH check* 7.0 =

PH Recal (if needed): 4.00 = 7.00 = 10.00 = — 7.0= post recal check

CONDUCTIVITY: =

ORP (mV) =

APPENDIX E

Statistical Analyses Report

GROUNDWATER STATS CONSULTING

February 28, 2023

Southern Company Services
Attn: Mr. Joju Abraham
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308-3374

Re: Plant Branch 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
- **Downgradient wells:** BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-37S, and BRGWC-38S
- **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% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

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.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Test Evaluation

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.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for fluoride, making this constituent eligible for interwell analyses. Variation was noted for boron, calcium, chloride, pH, sulfate and TDS. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

Evaluation of Appendix III Parameters – August/September 2022

Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through September 2022 (Figure D). Background

(upgradient) well data were re-assessed for potential outliers during this analysis and no new values were flagged. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The August/September 2022 sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present. 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

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test 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

Trend Test Evaluation – Appendix IV

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

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 Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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-37S	0.0187	n/a	8/23/2022	0.015ND	No	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-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 Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	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

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-2I (bg)	0.001506	18	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	-3	-58	No	16	87.5	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	-6	-58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-8	-58	No	16	56.25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	2	58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-17S	-0.001021	-29	-63	No	17	41.18	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-33S	-0.01268	-18	-58	No	16	0	n/a	n/a	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**
Boron (mg/L)	BRGWC-36S	0.03171	58	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-38S	-0.04809	-40	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.5425	43	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	0.073	30	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	0.03321	5	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.5076	-36	-58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	**BRGWA-6S (bg)**	**0.1657**	**69**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**BRGWC-17S**	**1.937**	**71**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	BRGWC-33S	-2.525	-38	-58	No	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-35S	2.067	57	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-36S	-0.4386	-29	-58	No	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-2I (bg)	-0.04825	-38	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2S (bg)	-0.02501	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**BRGWA-5I (bg)**	**-0.2006**	**-67**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	BRGWA-5S (bg)	-0.07499	-48	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-6S (bg)	-0.01997	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-17S	0.1812	53	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-33S	0.1438	8	58	No	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-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
Fluoride (mg/L)	BRGWA-2I (bg)	0	-17	-68	No	18	50	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	49	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	54	68	No	18	72.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	0	-20	-68	No	18	38.89	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0	55	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-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
Fluoride (mg/L)	BRGWC-38S	0.008753	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**
pH, Field (S.U.)	**BRGWA-2S (bg)**	**-0.0368**	**-71**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH, Field (S.U.)	BRGWA-5I (bg)	-0.02765	-47	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	**BRGWA-5S (bg)**	**-0.05383**	**-81**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH, Field (S.U.)	BRGWA-6S (bg)	0	0	63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-33S	-0.01085	-46	-74	No	19	0	n/a	n/a	0.01	NP
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	1	63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-37S	0.009624	10	53	No	15	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**

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	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 Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	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

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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	18	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: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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.	N	%NDs	Normality	Xform	Alpha	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

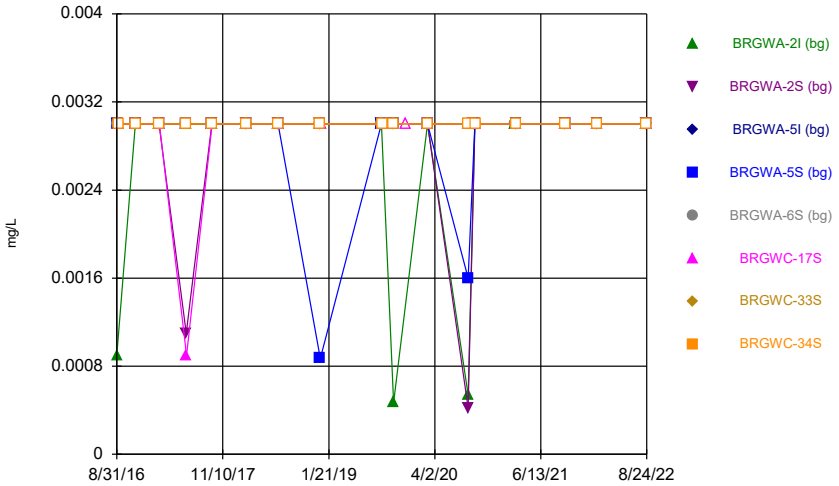
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:21 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Beryllium (mg/L)	BRGWA-2I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-2S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-6S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	**BRGWC-38S**	**-0.0004476**	**-77**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Cobalt (mg/L)	BRGWA-2I (bg)	0	-16	-63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	**BRGWA-2S (bg)**	**-0.0004021**	**-70**	**-63**	**Yes**	**17**	**11.76**	**n/a**	**n/a**	**0.01**	**NP**
Cobalt (mg/L)	BRGWA-5I (bg)	-0.0001378	-49	-53	No	15	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5S (bg)	0	26	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-6S (bg)	0	9	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	**BRGWC-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**

FIGURE A.

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

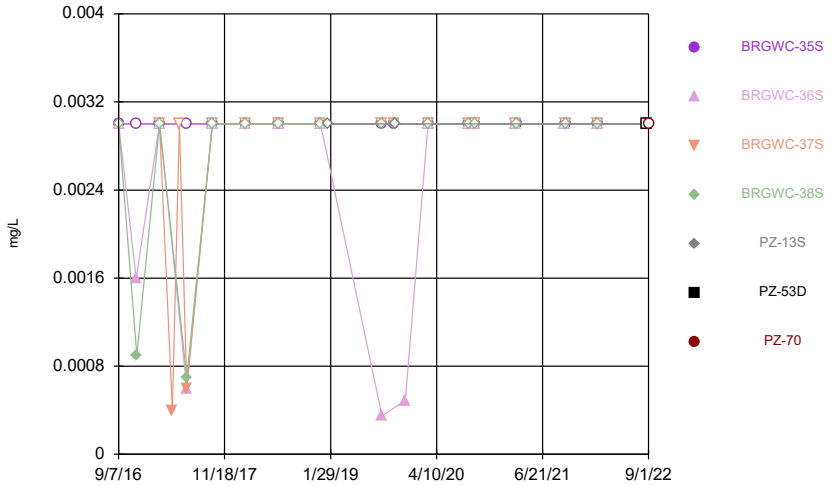
Time Series



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.

Time Series



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.

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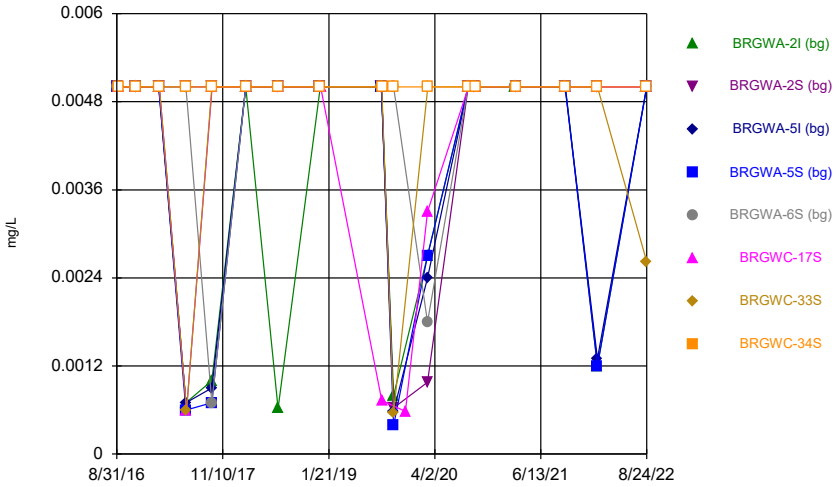
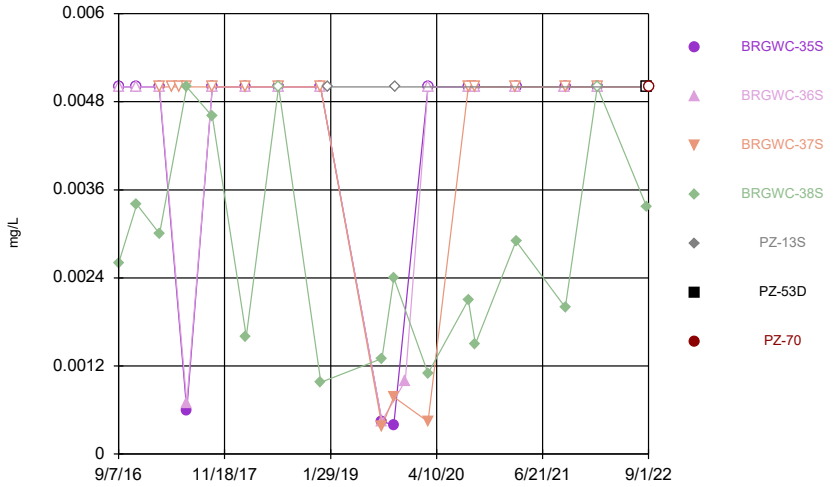


Constituent: Arsenic Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

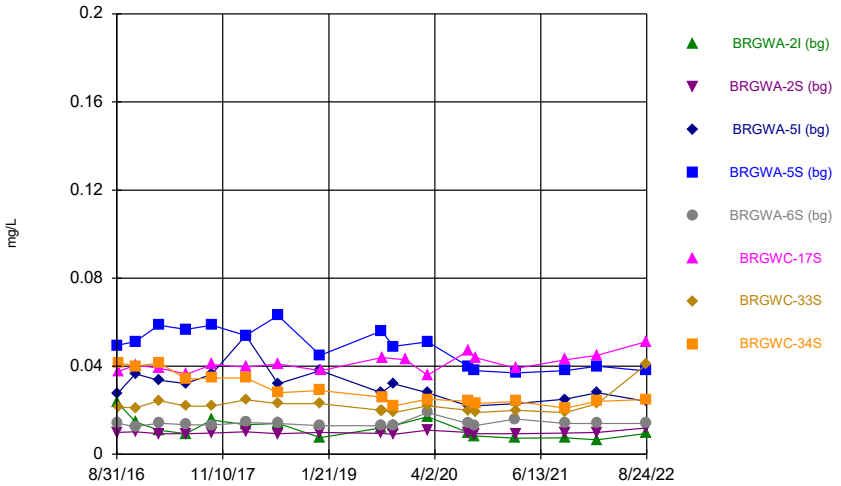
Time Series



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

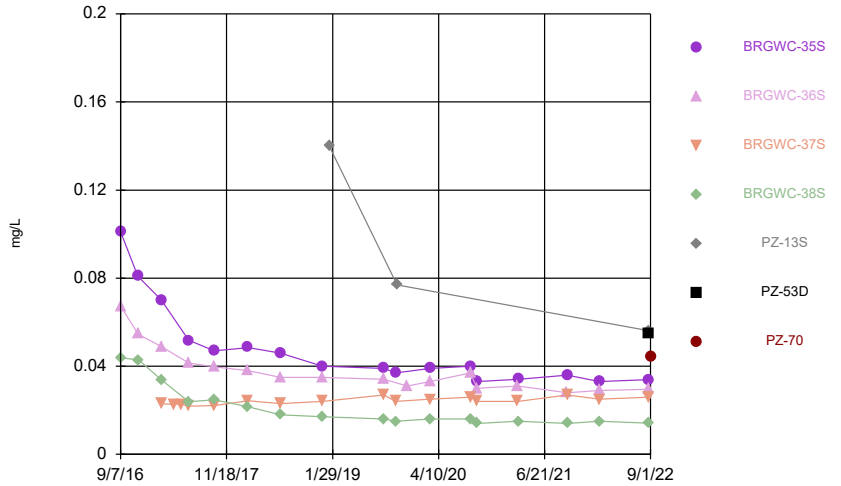
Time Series



Constituent: Barium 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



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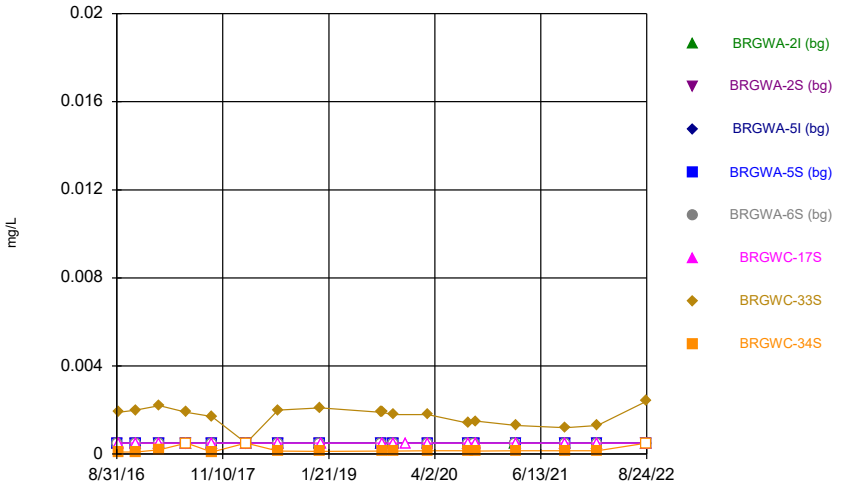
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

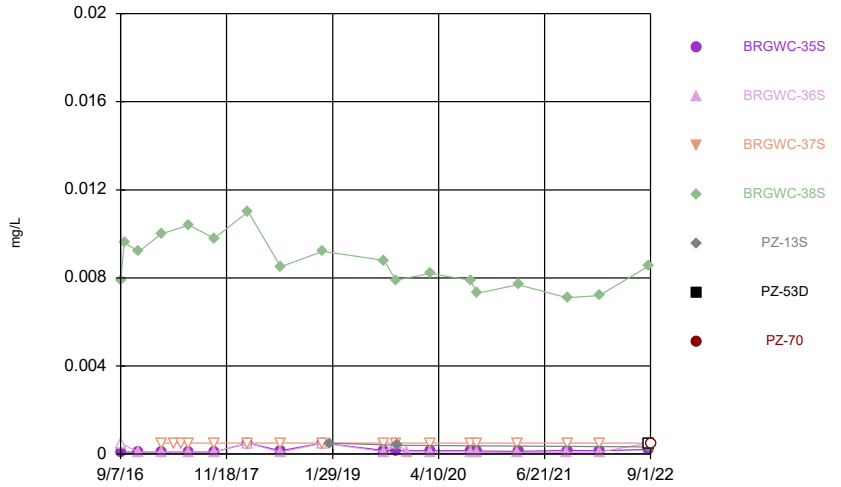
Time Series



Constituent: Beryllium 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.

Time Series



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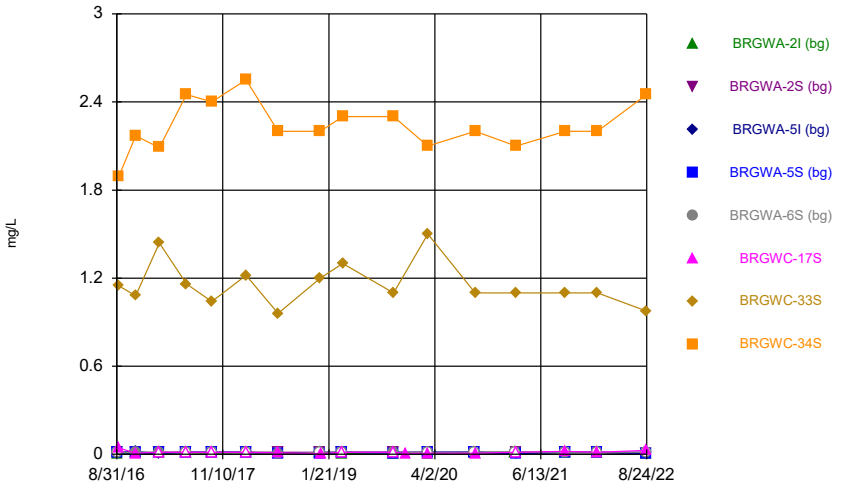
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

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
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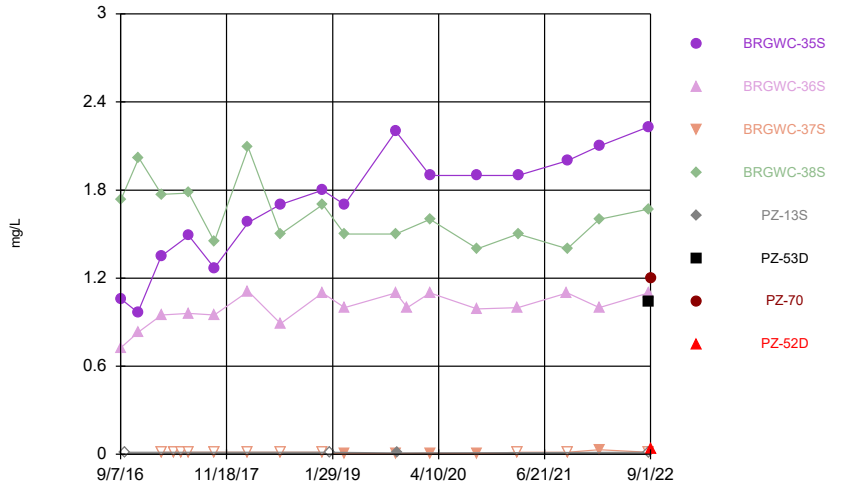
Time Series



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Plant Branch Client: Southern Company Data: Plant Branch AP

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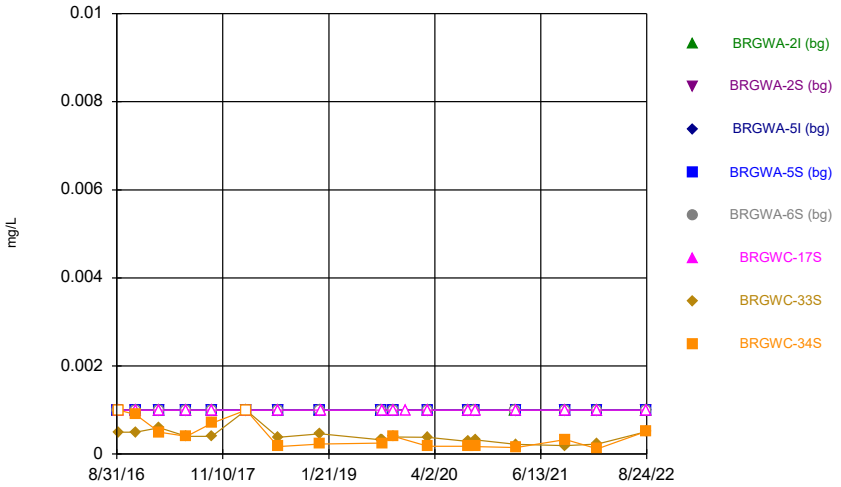
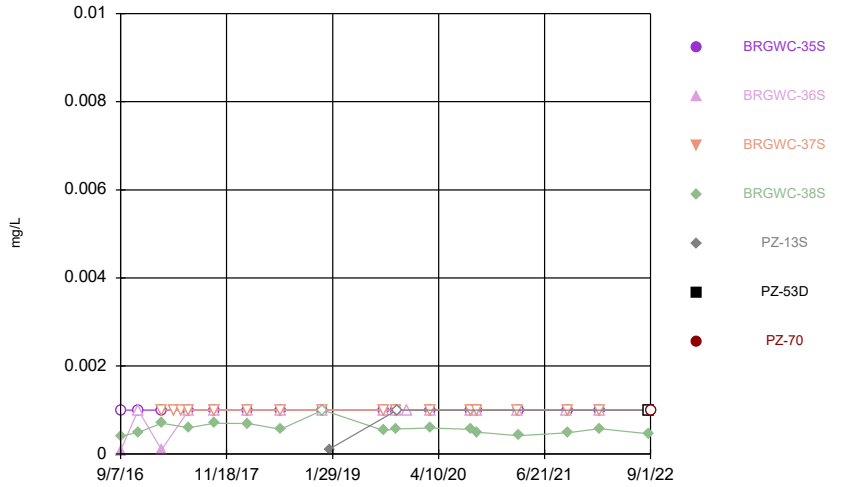


Constituent: Cadmium Analysis Run 11/4/2022 11:27 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

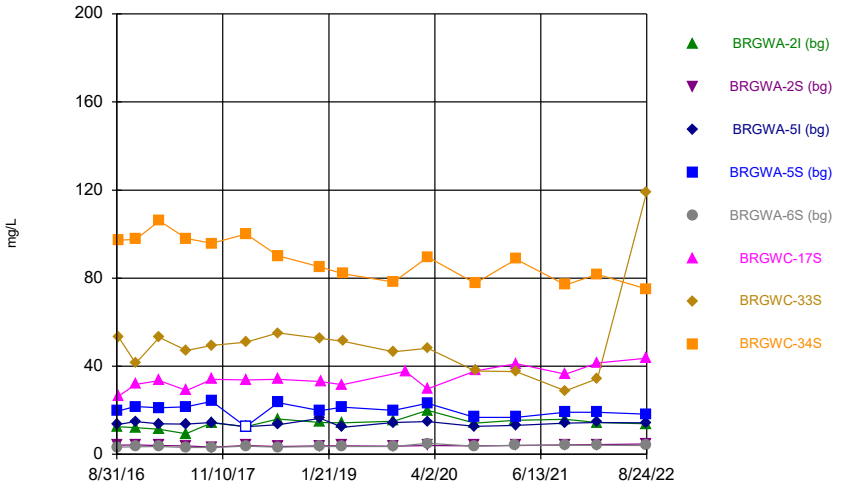
Time Series



Constituent: Cadmium 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.

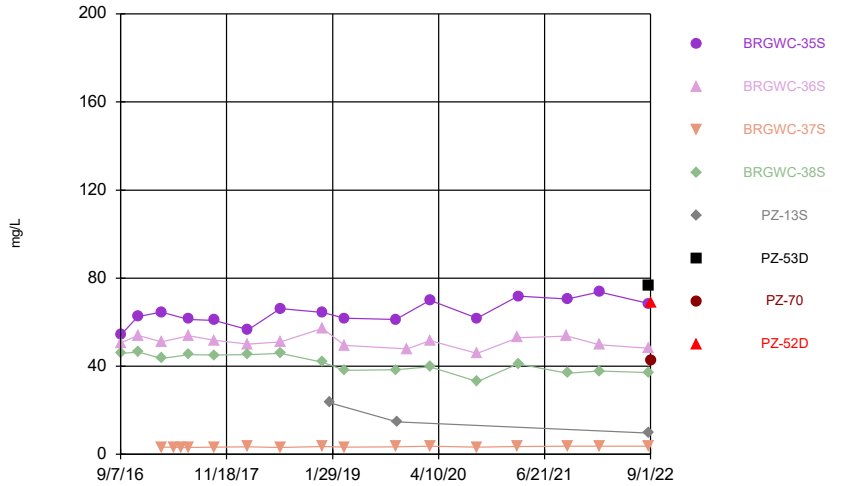
Time Series



Constituent: Calcium 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

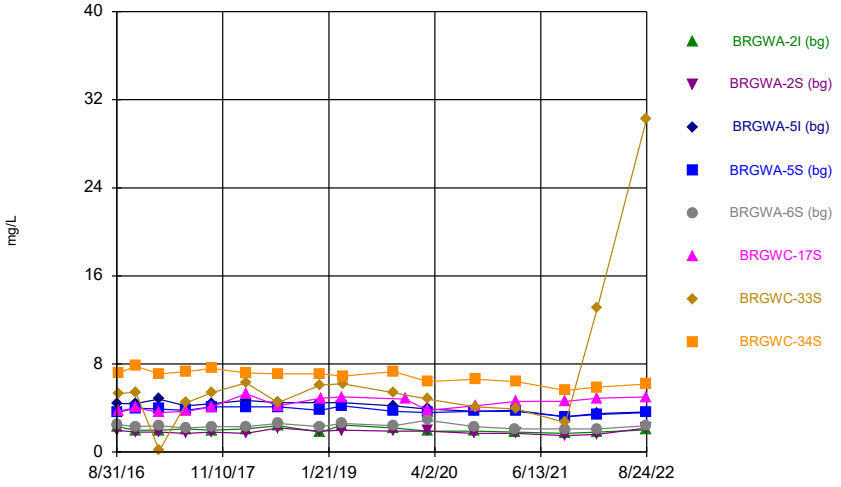
Time Series



Constituent: Calcium 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

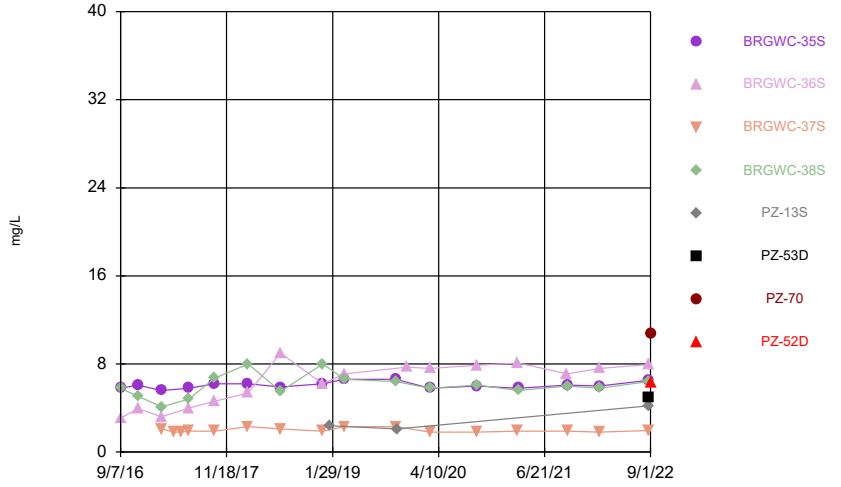
Time Series



Constituent: 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

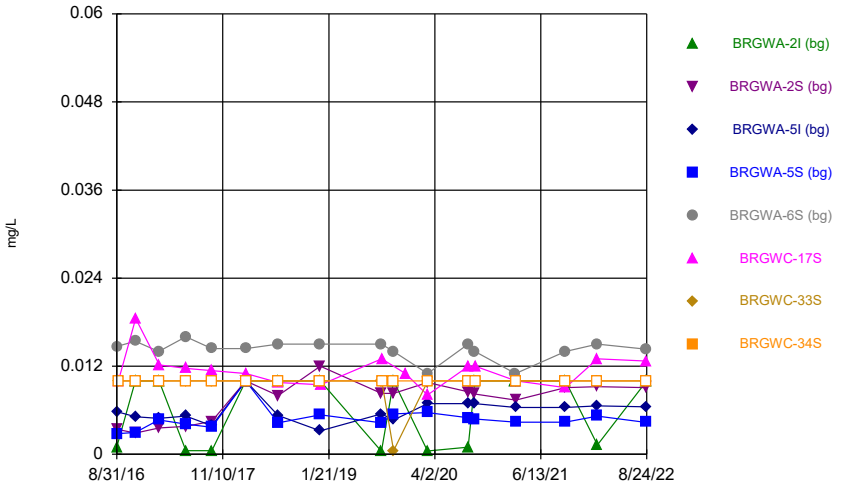
Time Series



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
Hollow symbols indicate censored values.

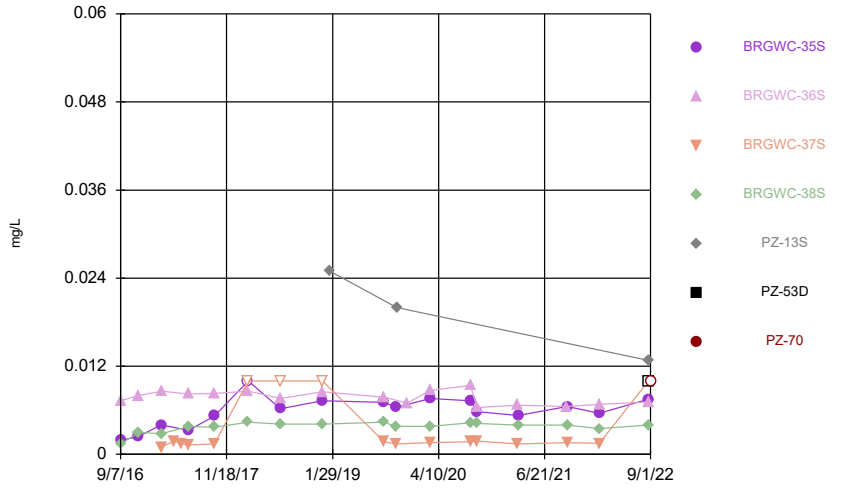
Time Series



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.

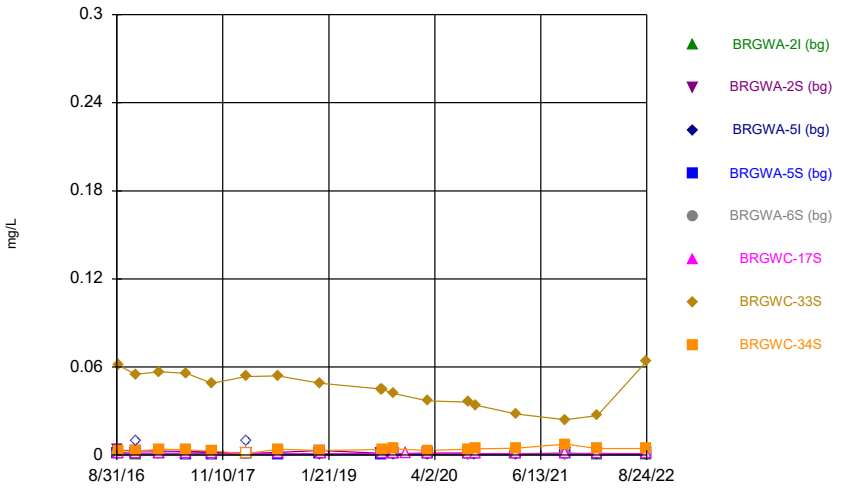
Time Series



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.

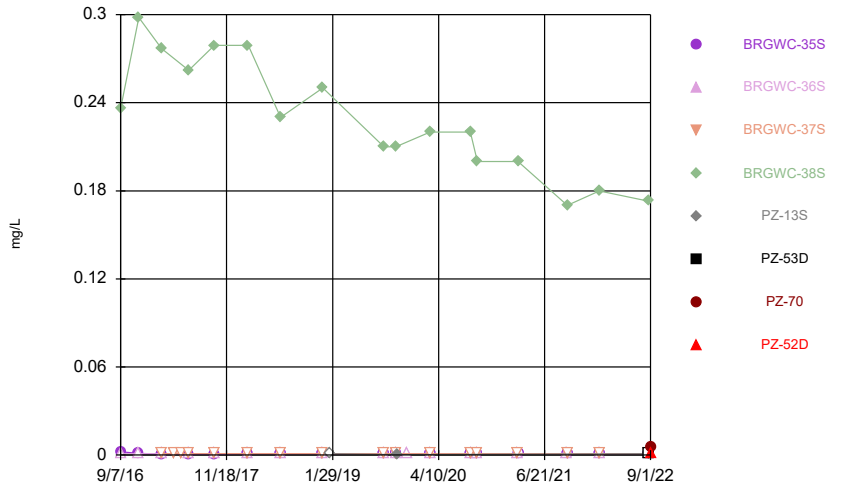
Time Series



Constituent: Cobalt 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.

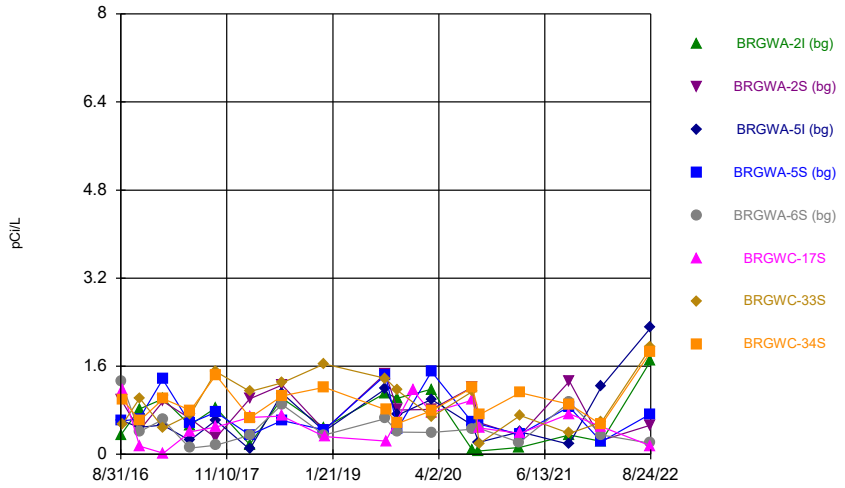
Time Series



Constituent: Cobalt 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

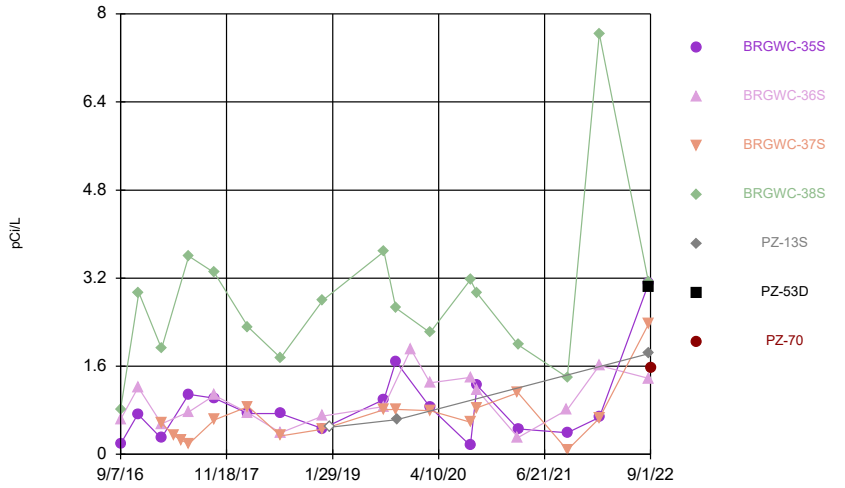
Time Series



Constituent: Combined Radium 226 + 228 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.

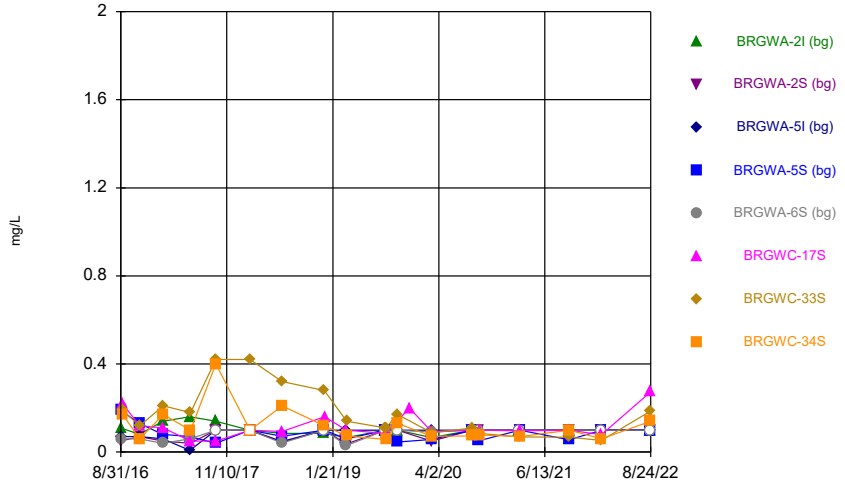
Time Series



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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

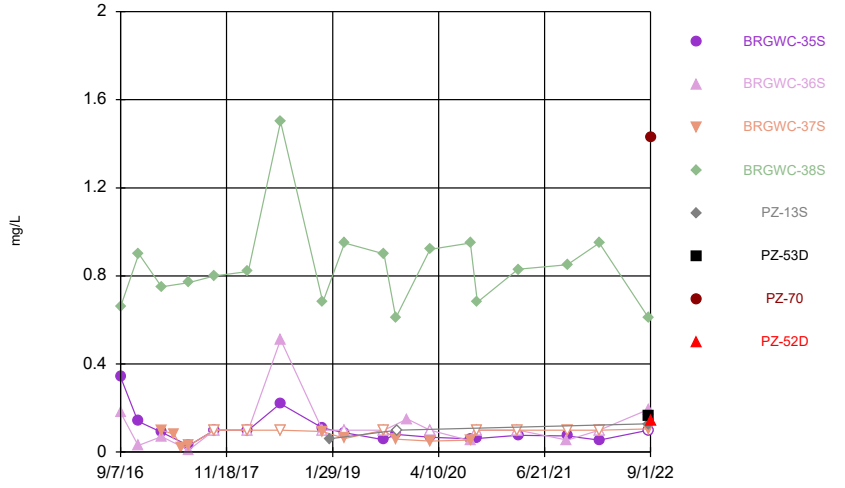
Time Series



Constituent: Fluoride 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.

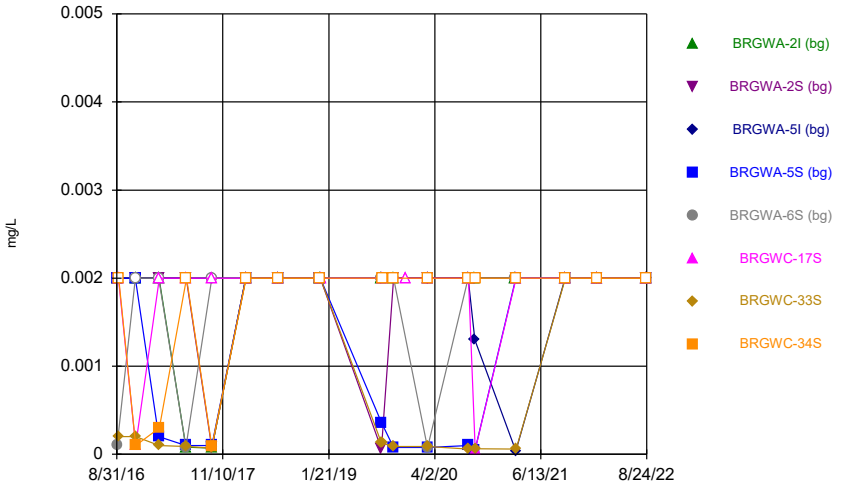
Time Series



Constituent: Fluoride 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.

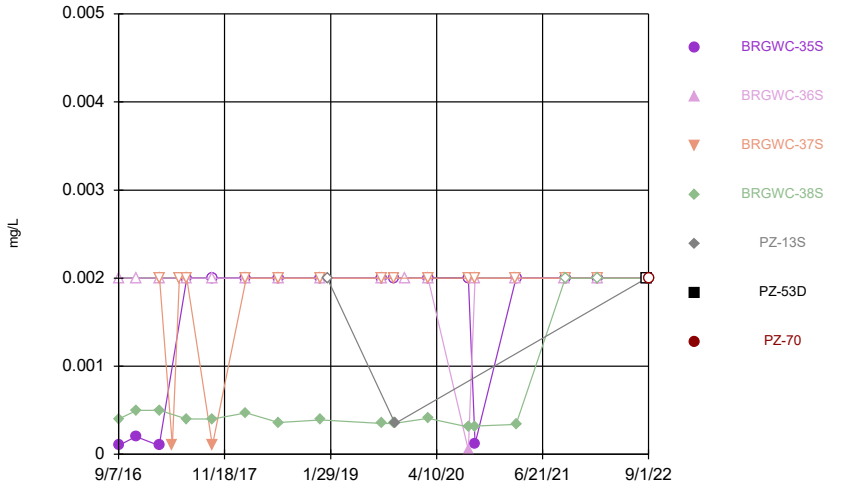
Time Series



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.

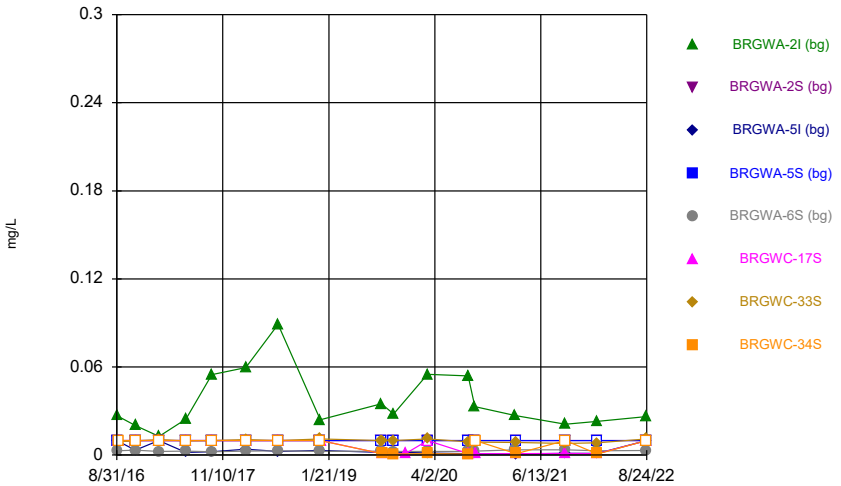
Time Series



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.

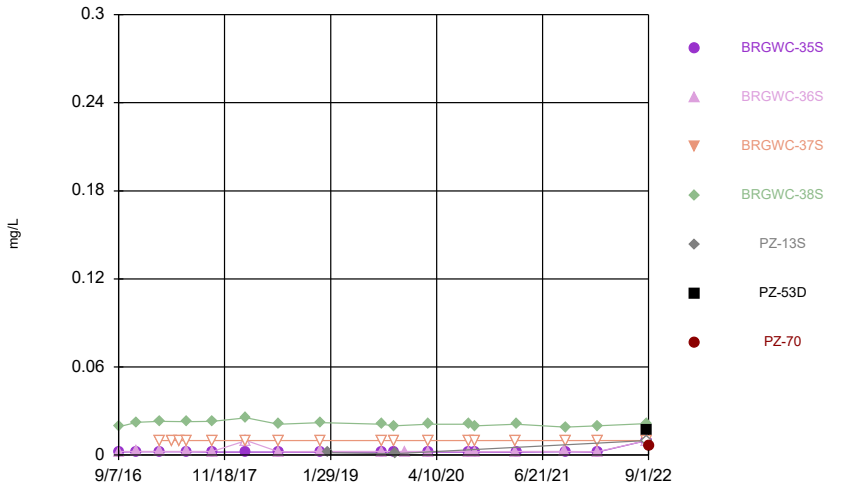
Time Series



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.

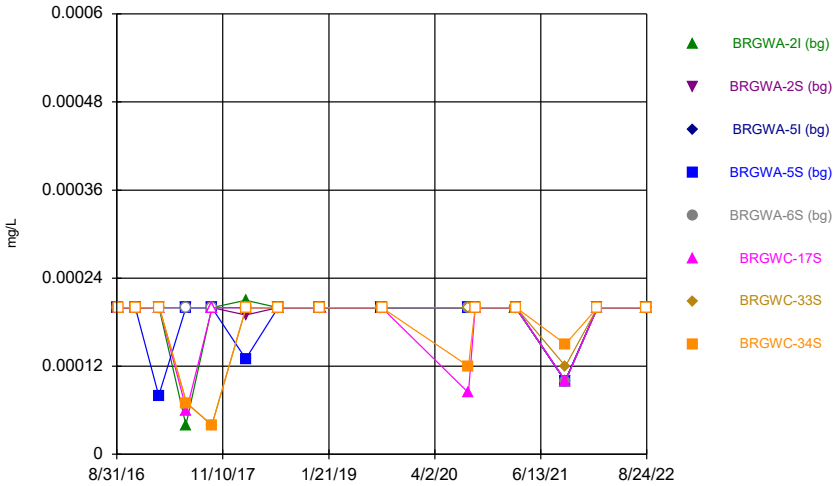
Time Series



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.

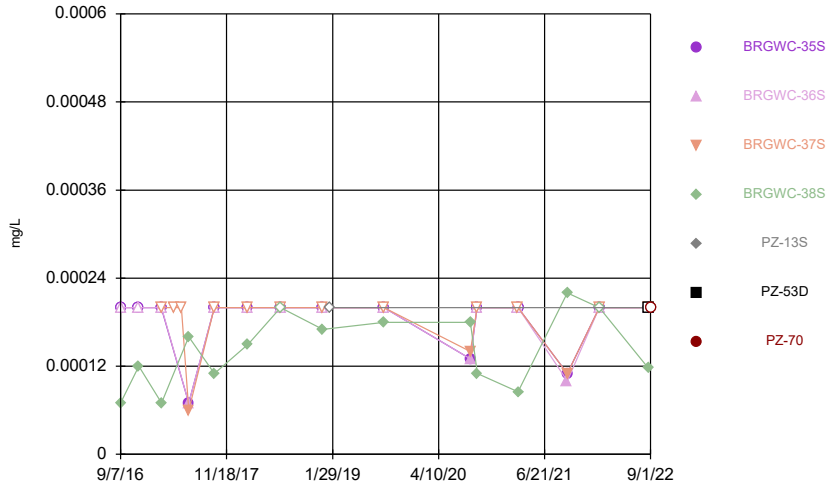
Time Series



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.

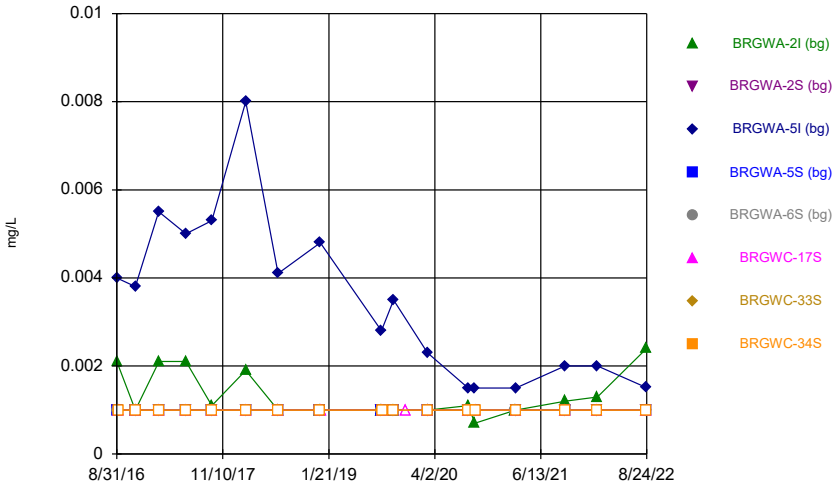
Time Series



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.

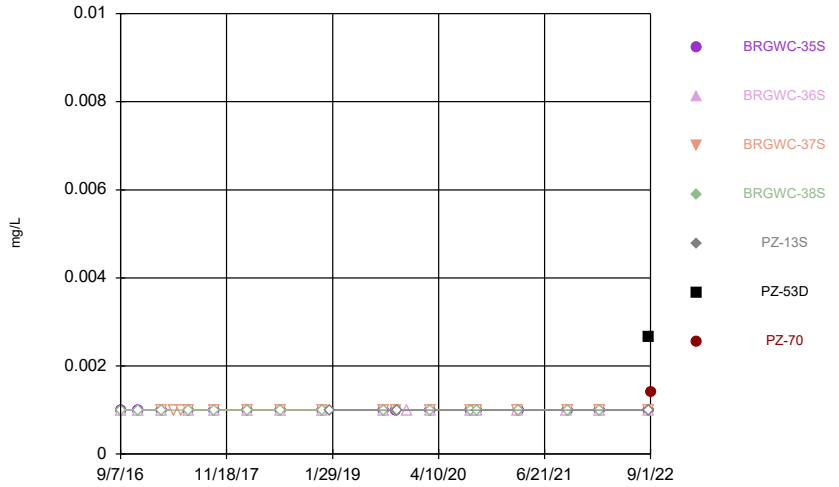
Time Series



Constituent: Molybdenum 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.

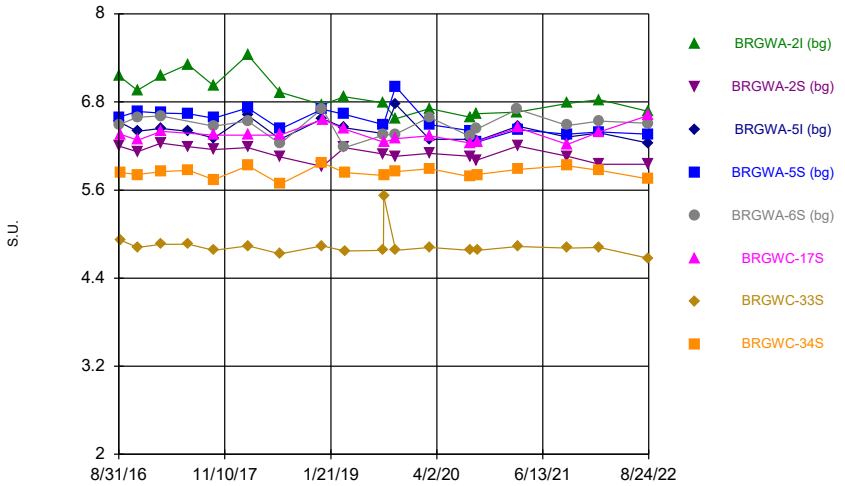
Time Series



Constituent: Molybdenum 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

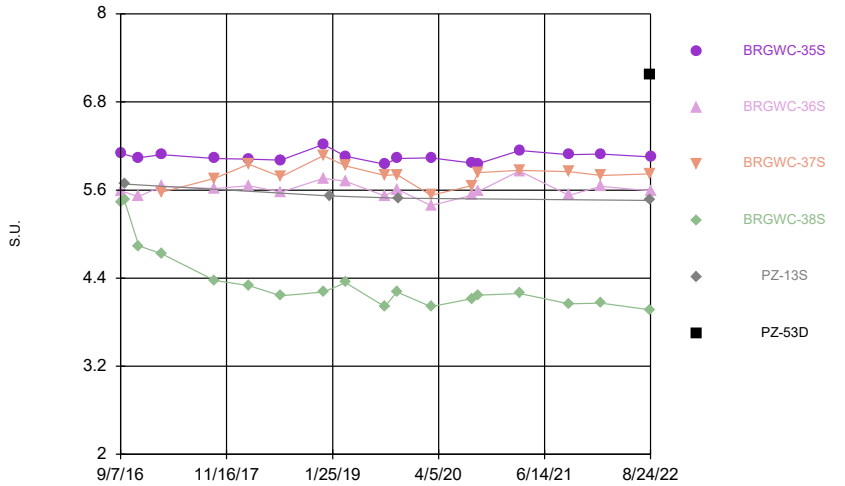
Time Series



Constituent: pH, Field 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

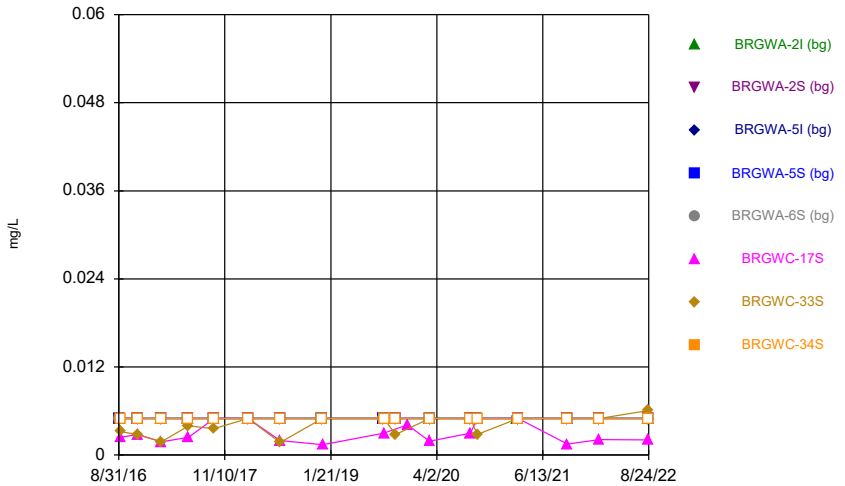
Time Series



Constituent: pH, Field 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.

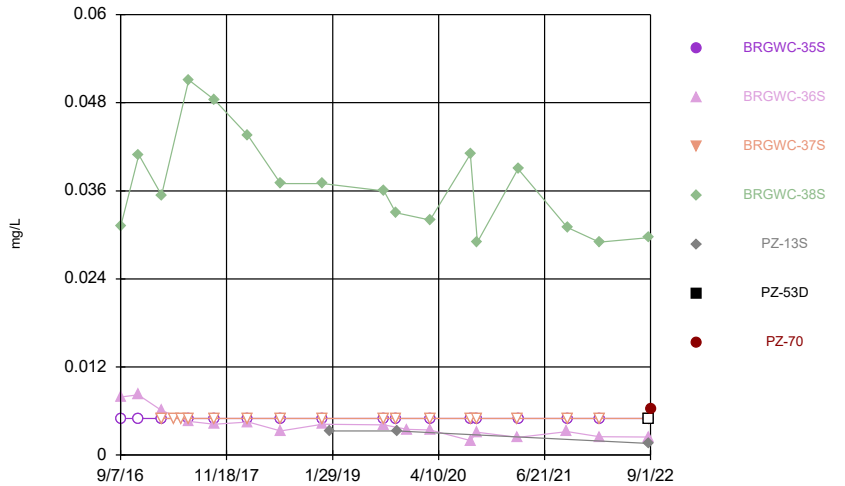
Time Series



Constituent: Selenium 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.

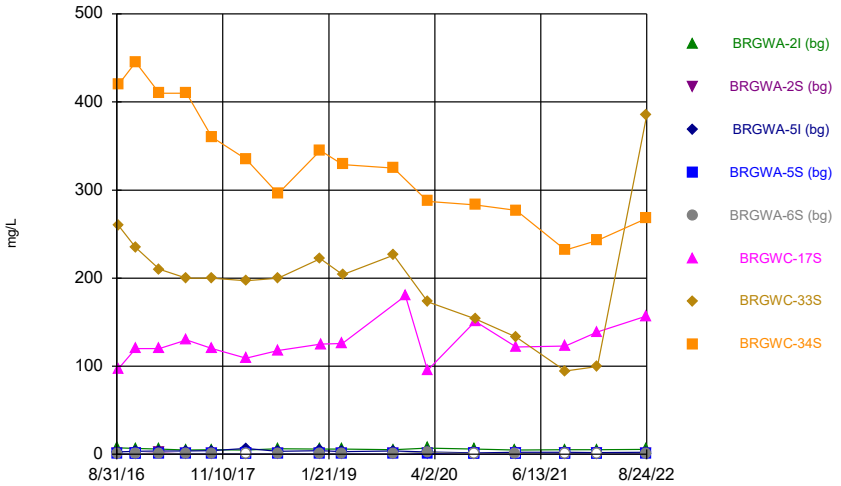
Time Series



Constituent: Selenium 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.

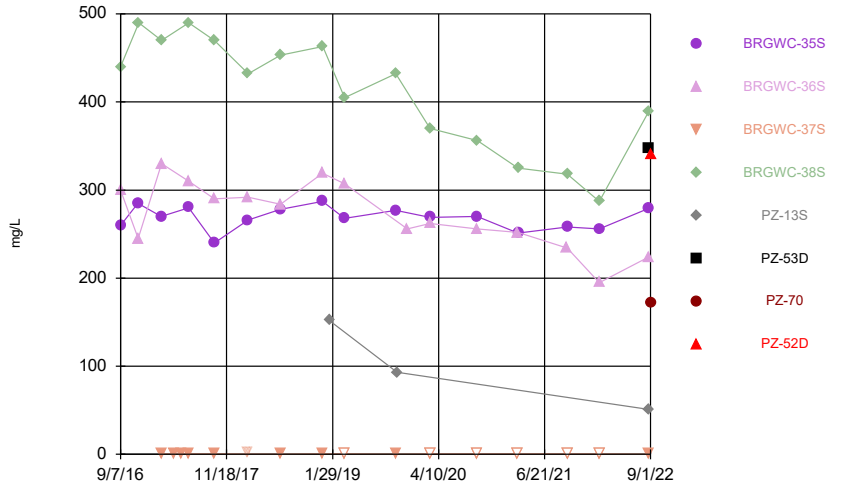
Time Series



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.

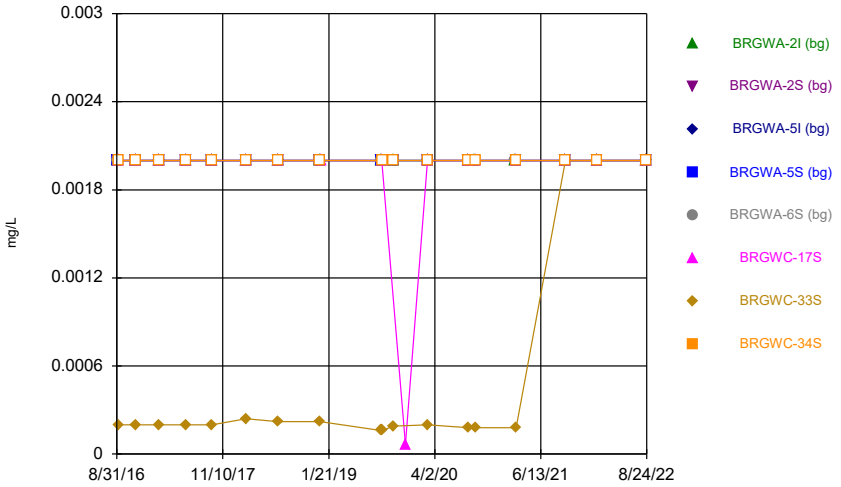
Time Series



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.

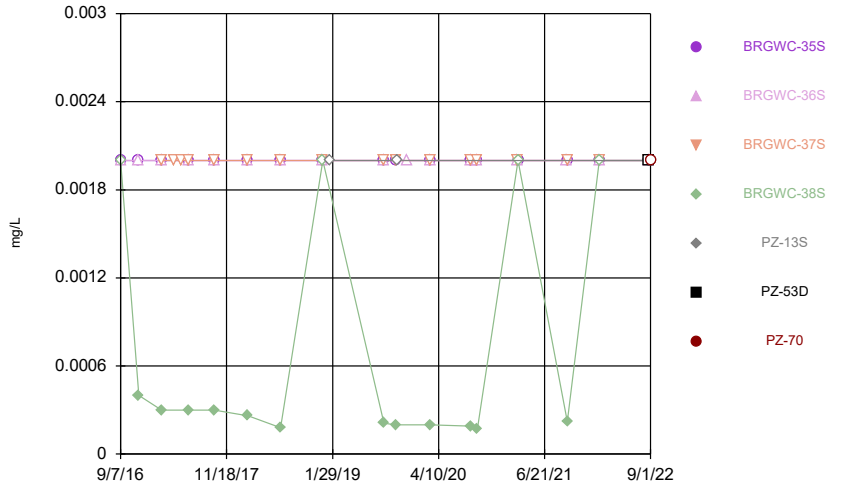
Time Series



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
Hollow symbols indicate censored values.

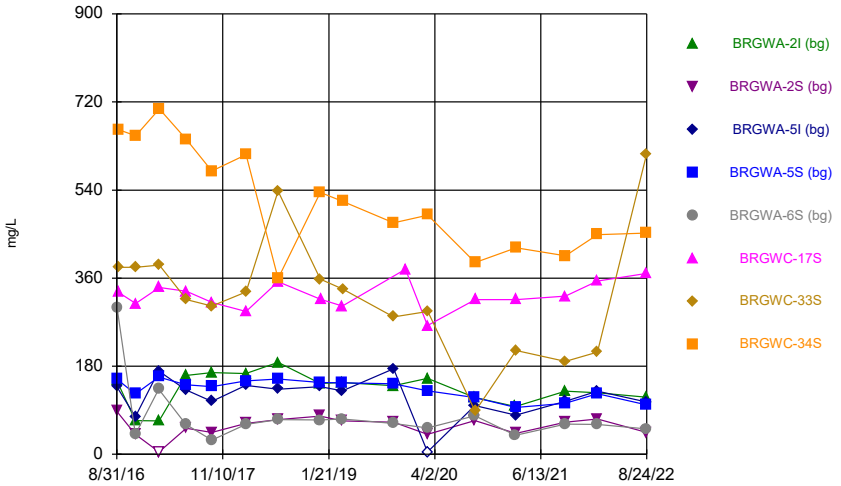
Time Series



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
Hollow symbols indicate censored values.

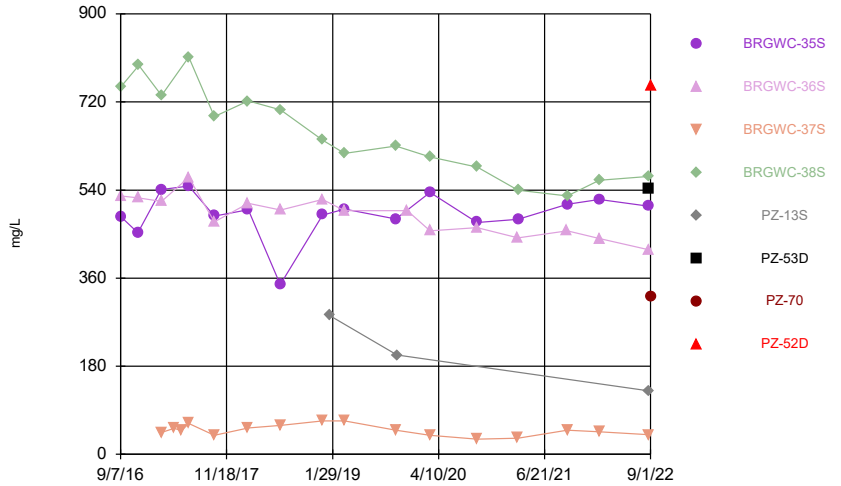
Time Series



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

Time Series

Constituent: Antimony (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	0.0009 (J)	<0.003	<0.003	<0.003				
9/1/2016					<0.003			
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

Time Series

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

Time Series

Constituent: Arsenic (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						<0.005	<0.005	
9/8/2016								<0.005
11/15/2016				<0.005	<0.005			
11/16/2016	<0.005	<0.005	<0.005					
11/17/2016						<0.005	<0.005	<0.005
2/20/2017			<0.005	<0.005	<0.005			
2/21/2017	<0.005	<0.005						
2/22/2017						<0.005	<0.005	<0.005
6/12/2017	0.0007 (J)		0.0007 (J)	0.0006 (J)	<0.005			
6/13/2017		<0.005						
6/14/2017							0.0006 (J)	<0.005
6/15/2017						0.0006 (J)		
9/26/2017	0.001 (J)	<0.005	0.0009 (J)	0.0007 (J)	0.0007 (J)			
9/27/2017							<0.005	<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	0.00062 (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

Time Series

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

Time Series

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

Time Series

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

Time Series

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

Time Series

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

Time Series

Constituent: Boron (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	0.0072 (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							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							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						<0.015		
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

Time Series

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

Time Series

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)

Time Series

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

Time Series

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

Time Series

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

Time Series

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

Time Series

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

Time Series

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)				
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			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

Time Series

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

Time Series

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							0.037	0.0031 (J)
8/18/2020	<0.001	0.0014 (J)	0.00048 (J)	<0.001	0.00061 (J)			
8/19/2020						<0.001	0.036	0.0041 (J)
9/15/2020	<0.001	0.001 (J)	0.0005 (J)	<0.001	<0.001			
9/16/2020						<0.001	0.034	0.0042 (J)
3/1/2021	<0.001				<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)	<0.001			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

Time Series

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

Time Series

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

Time Series

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

Time Series

Constituent: Fluoride (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	0.11 (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						<0.1	0.42	<0.1
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)		
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

Time Series

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

Time Series

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

Time Series

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

Time Series

Constituent: Lithium (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	0.0268 (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

Time Series

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)

Time Series

Constituent: Mercury (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	<0.0002	<0.0002	<0.0002	<0.0002				
9/1/2016					<0.0002			
9/7/2016						<0.0002	<0.0002	
9/8/2016								<0.0002
11/15/2016				<0.0002	<0.0002			
11/16/2016	<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

Time Series

Constituent: Mercury (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	<0.0002	<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

Time Series

Constituent: Molybdenum (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	0.0021 (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	<0.001	<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	<0.001	<0.001	0.0041 (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
12/19/2018						<0.001		
8/27/2019	<0.001	<0.001	0.0028 (J)	<0.001	<0.001		<0.001	
8/28/2019						<0.001	<0.001	<0.001
10/15/2019	<0.001	<0.001	0.0035 (J)	<0.001	<0.001			
10/16/2019							<0.001	<0.001
12/3/2019						<0.001		
3/3/2020	<0.001	<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	<0.001				<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

Time Series

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

Time Series

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

	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-17S	BRGWC-33S	BRGWC-34S
8/31/2016	7.16	6.2	6.53	6.59				
9/1/2016					6.49			
9/7/2016						6.36	4.92	
9/8/2016								5.84
11/15/2016				6.67	6.59			
11/16/2016	6.96	6.12	6.4					
11/17/2016						6.28	4.82	5.81
2/20/2017			6.44	6.65	6.61			
2/21/2017	7.15	6.24						
2/22/2017						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

Time Series

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				

Time Series

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

Time Series

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

Time Series

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

Time Series

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

Time Series

Constituent: Thallium (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					<0.002			
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

Time Series

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

Time Series

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

Time Series

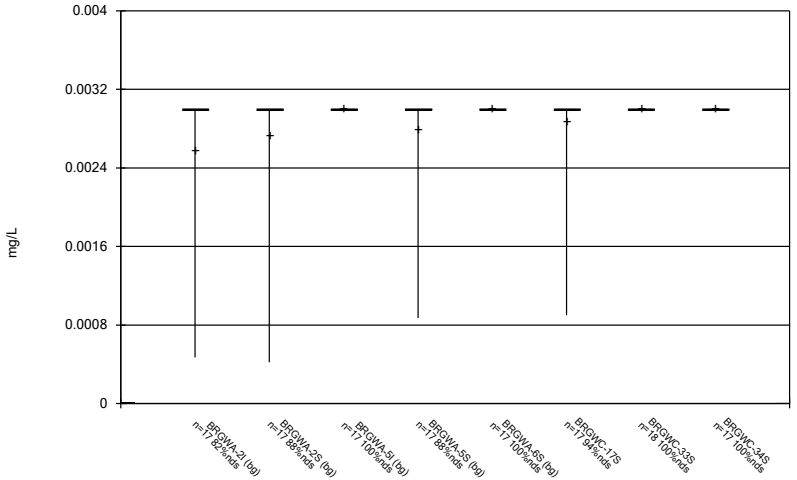
Constituent: Total Dissolved Solids (mg/L) Analysis Run 11/4/2022 11:34 AM View: Pond E

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.

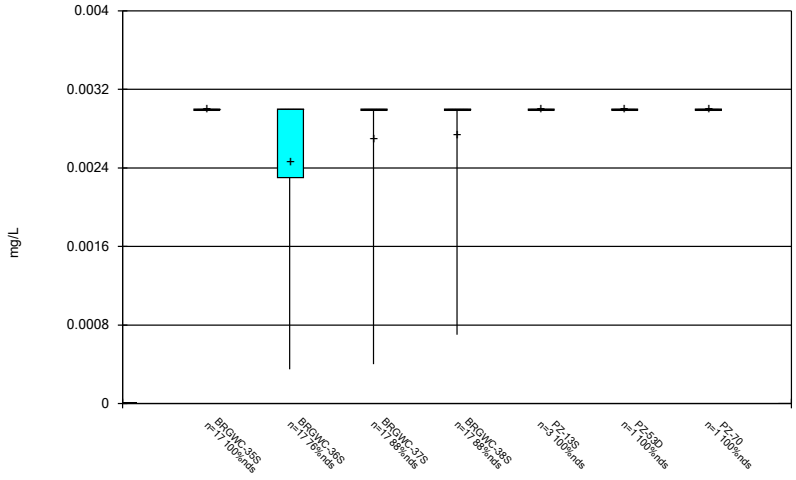
Box & Whiskers Plot



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

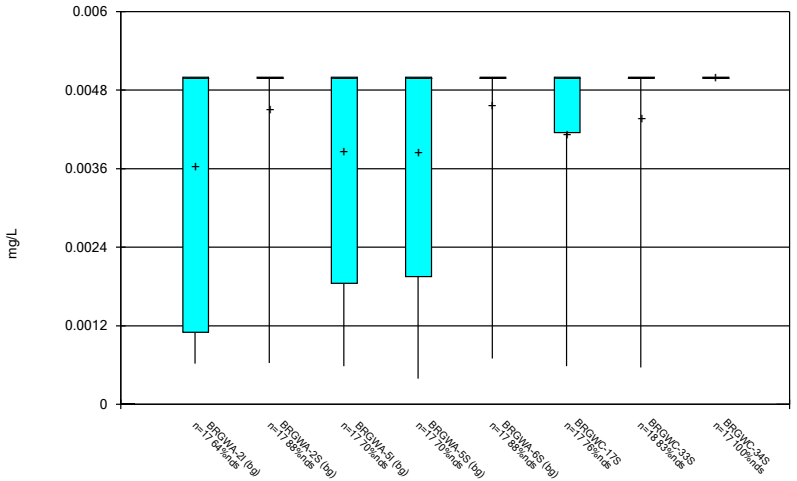
Box & Whiskers Plot



Constituent: 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

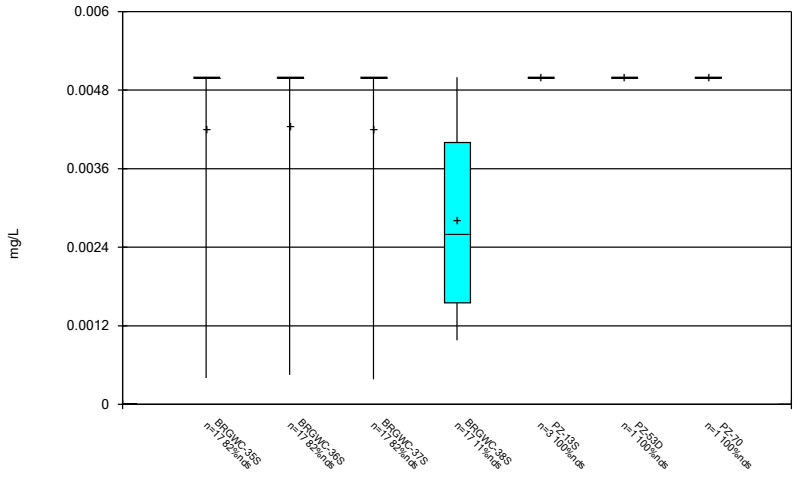
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 11/4/2022 11:35 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

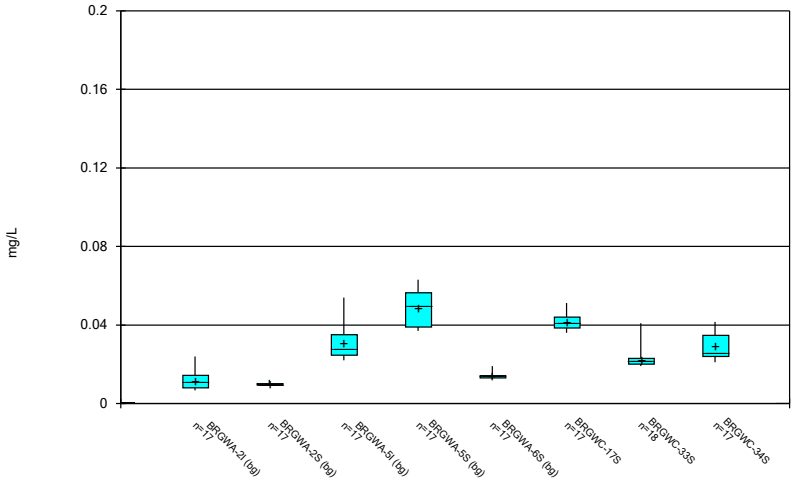
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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

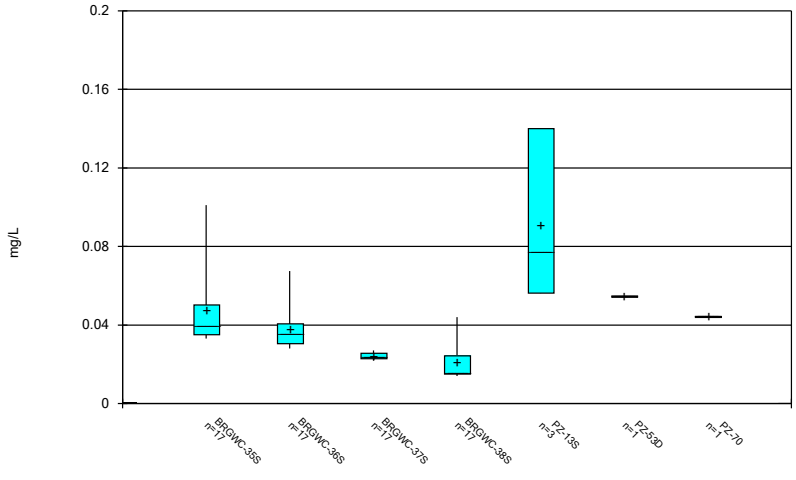
Box & Whiskers Plot



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

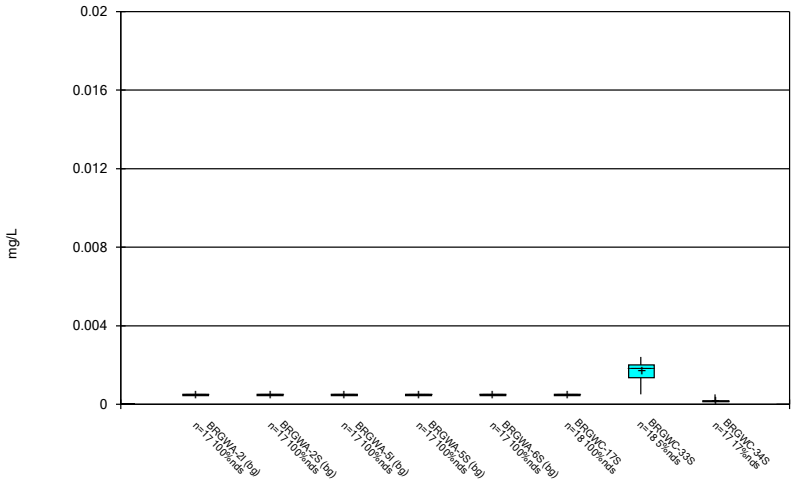
Box & Whiskers Plot



Constituent: 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

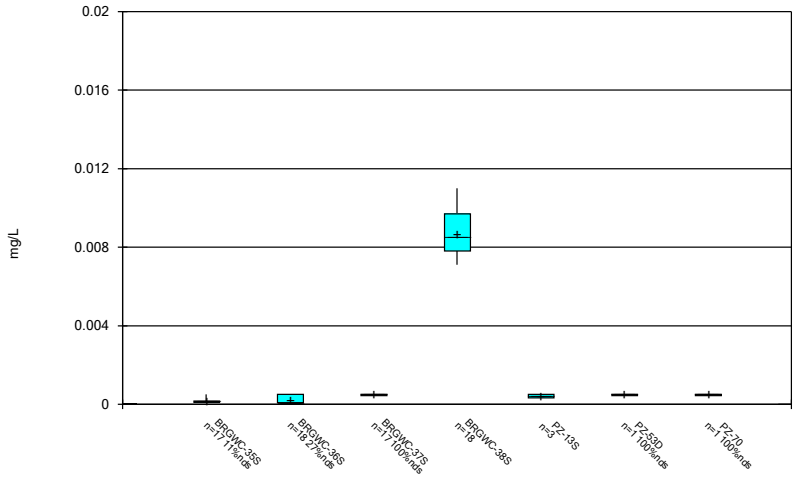
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

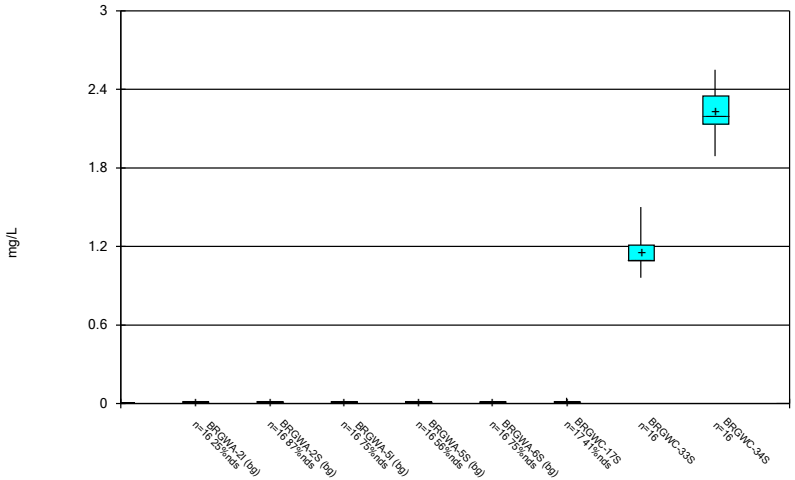
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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

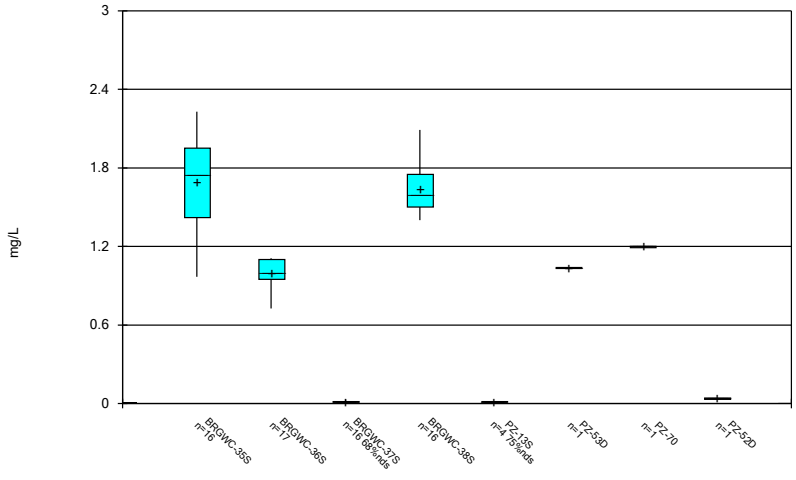
Box & Whiskers Plot



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

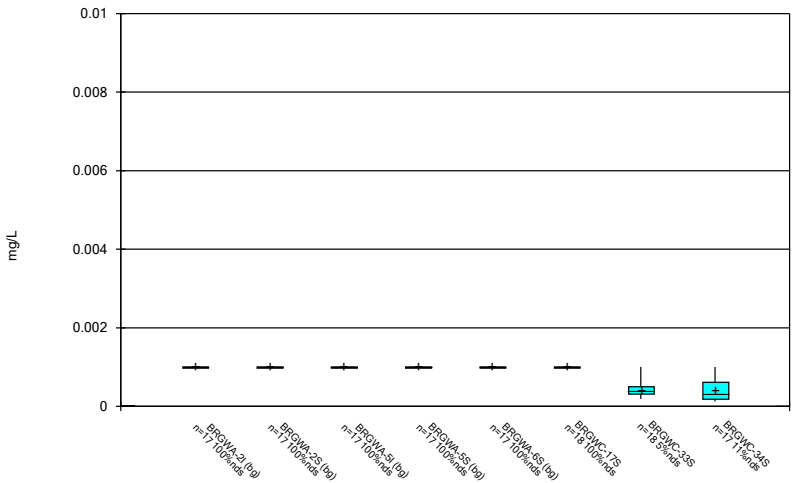
Box & Whiskers Plot



Constituent: 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

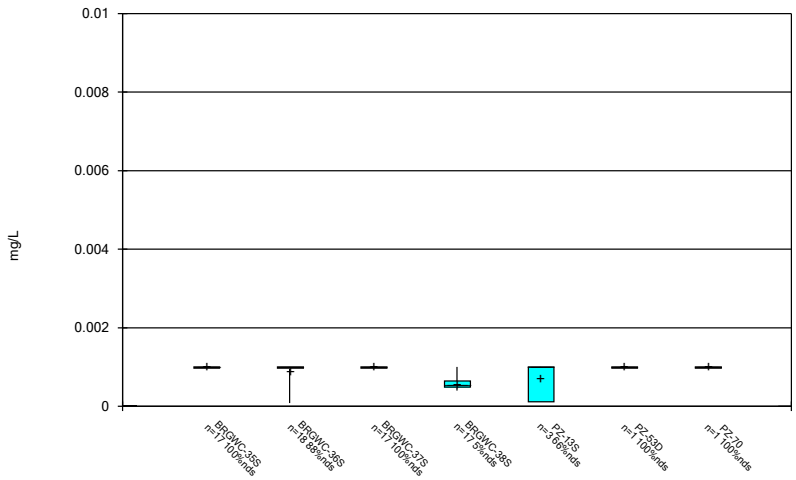
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

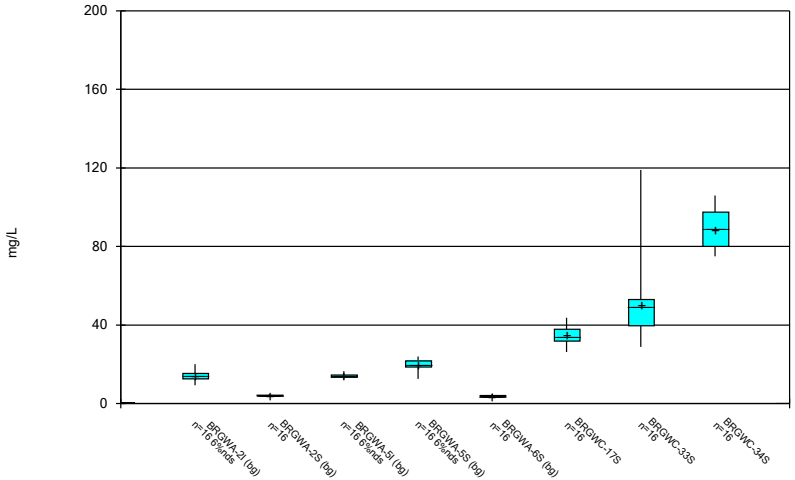
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

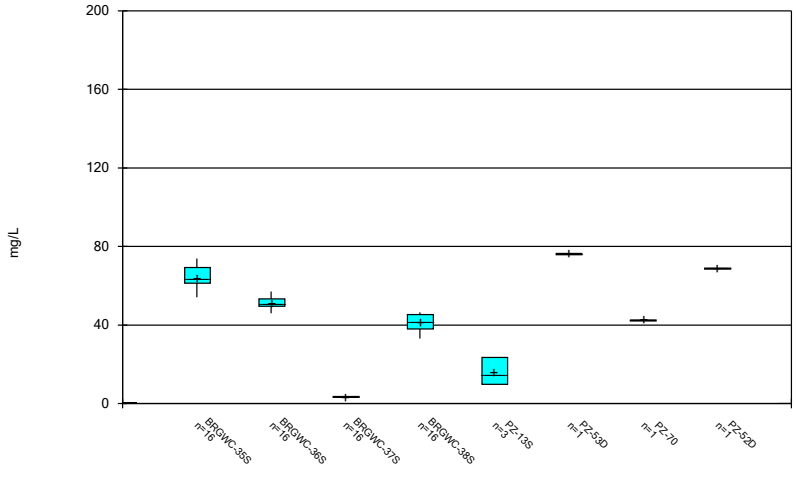
Box & Whiskers Plot



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

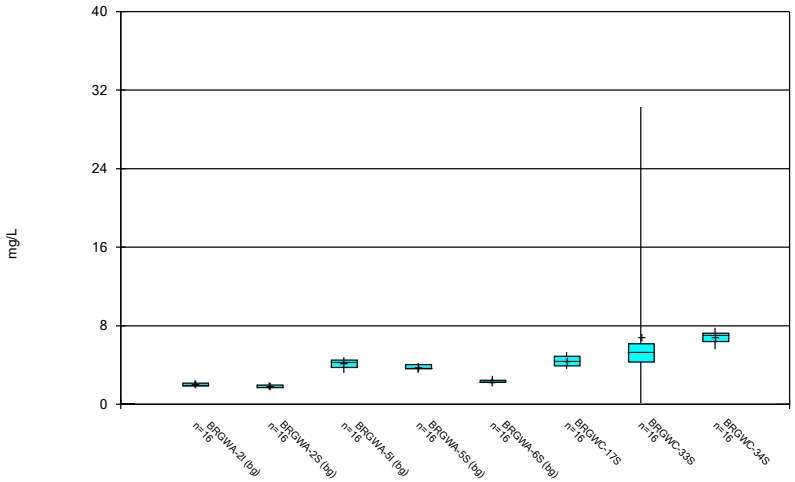
Box & Whiskers Plot



Constituent: 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

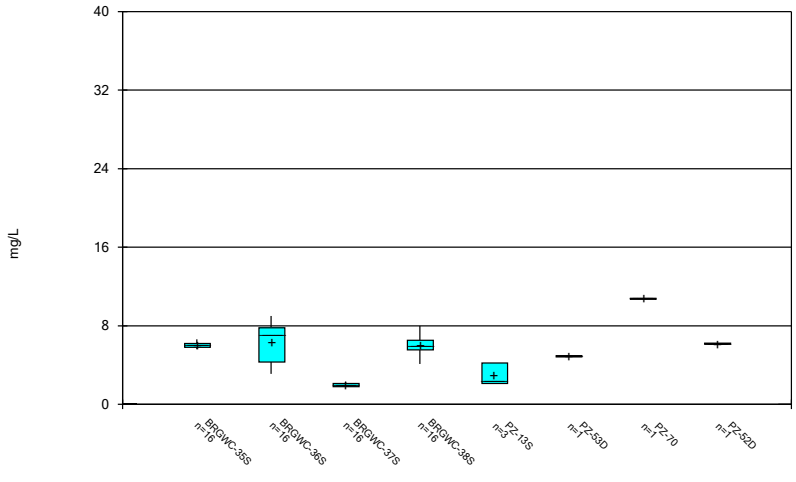
Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

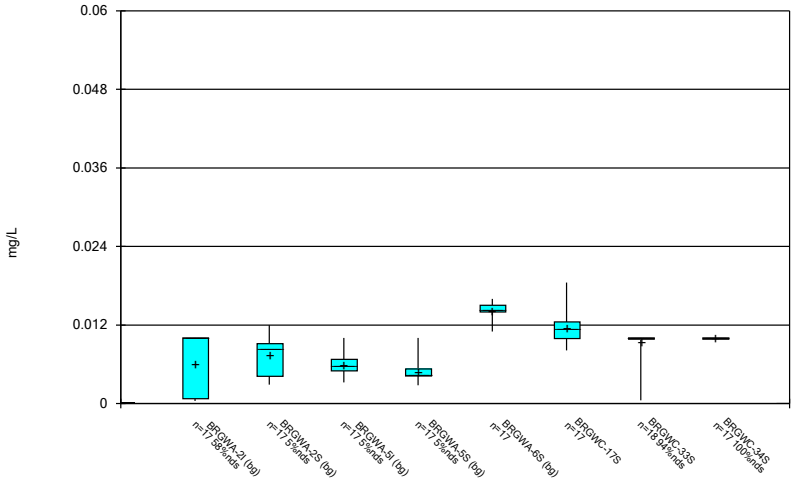
Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

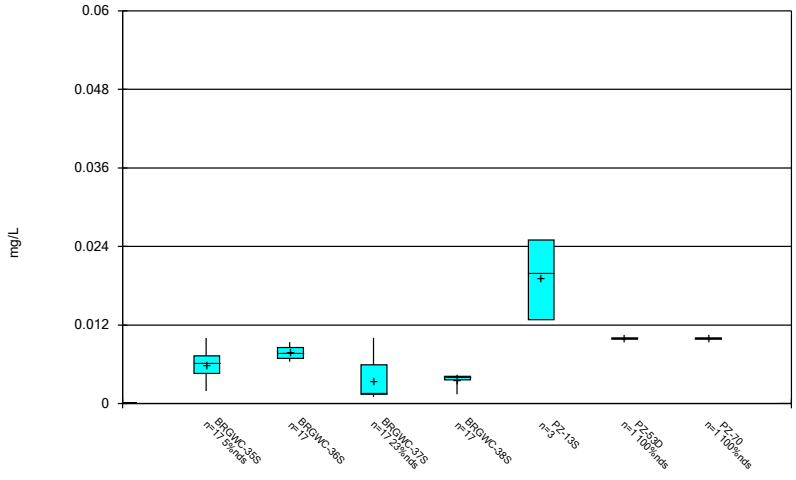
Box & Whiskers Plot



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

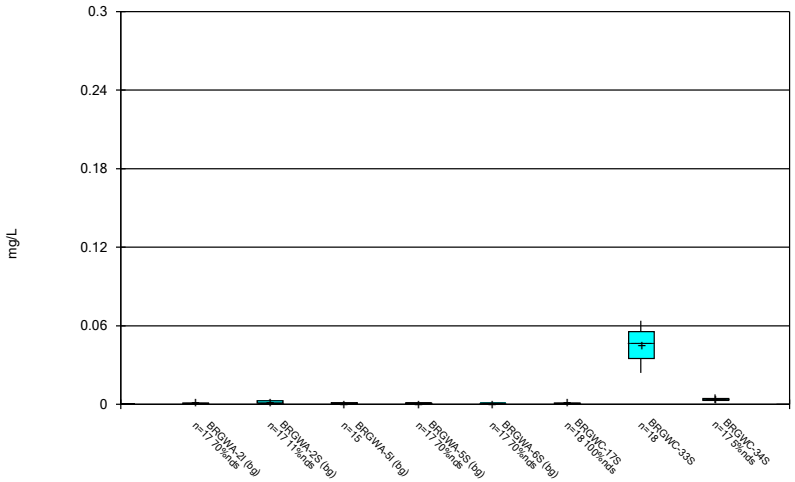
Box & Whiskers Plot



Constituent: 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

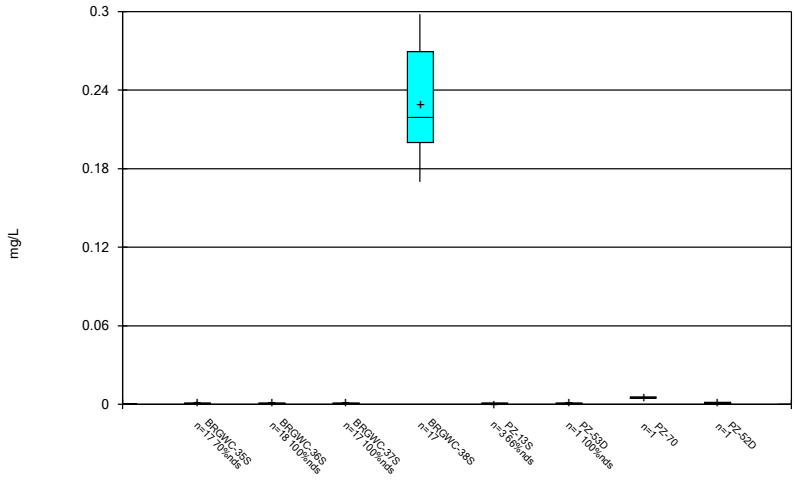
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

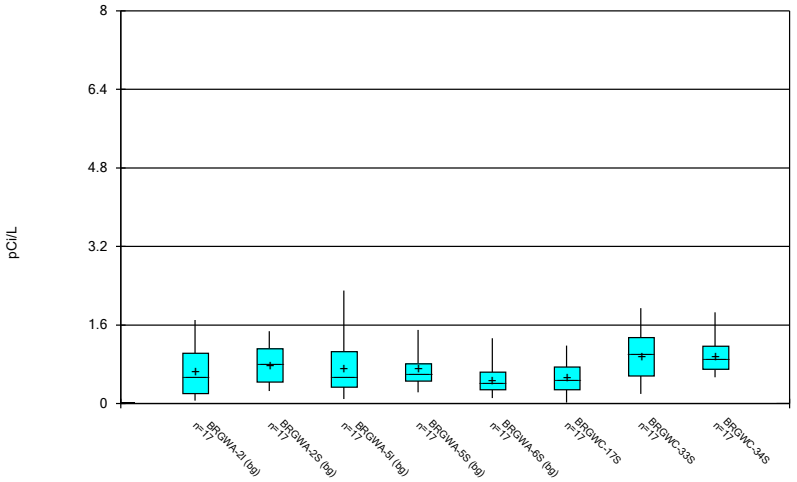
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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

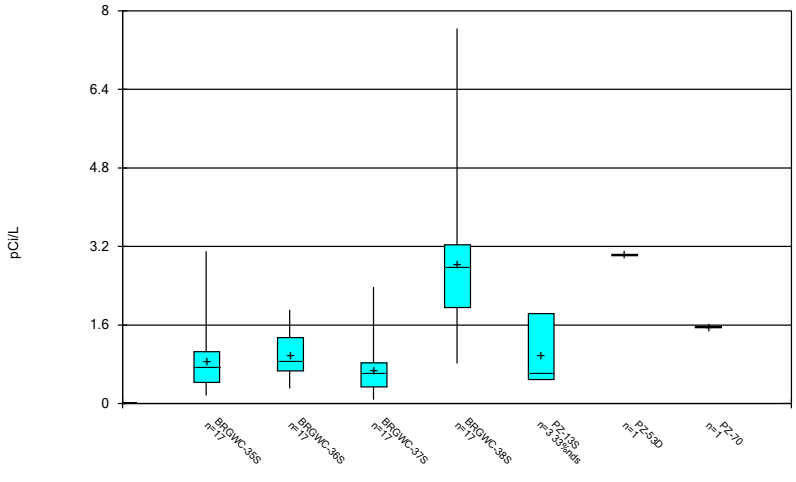
Box & Whiskers Plot



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

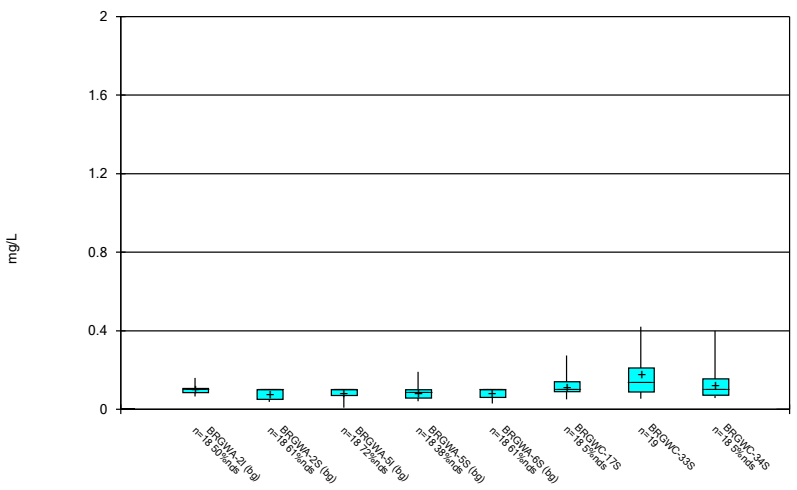
Box & Whiskers Plot



Constituent: 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

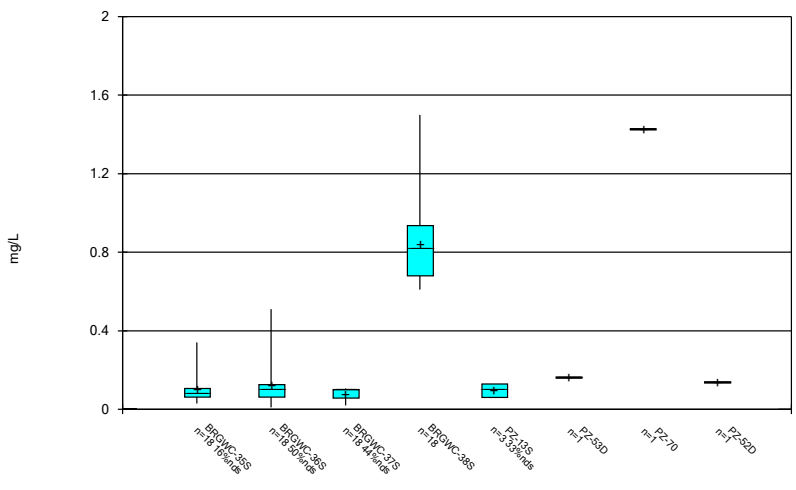
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

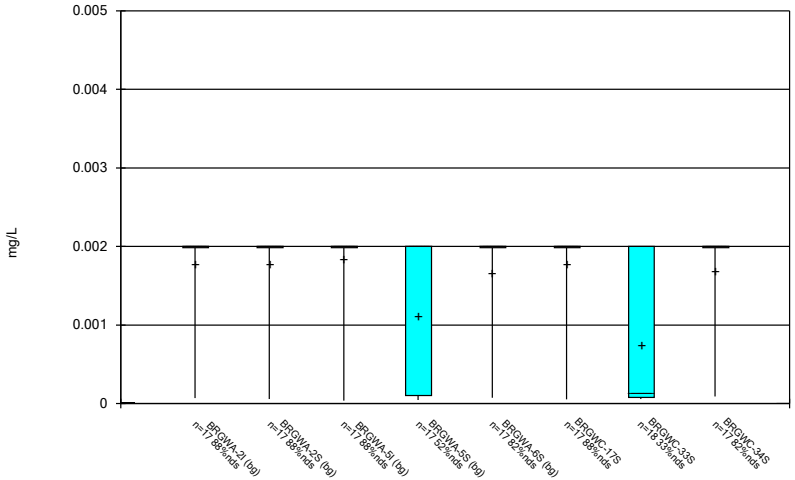
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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

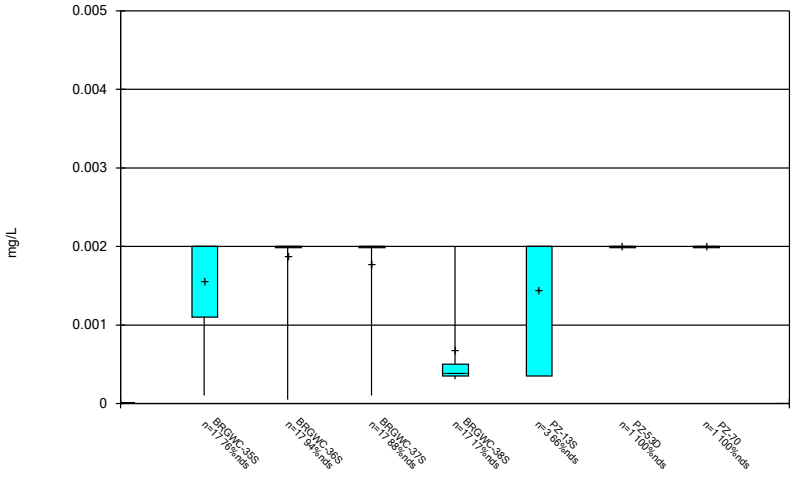
Box & Whiskers Plot



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

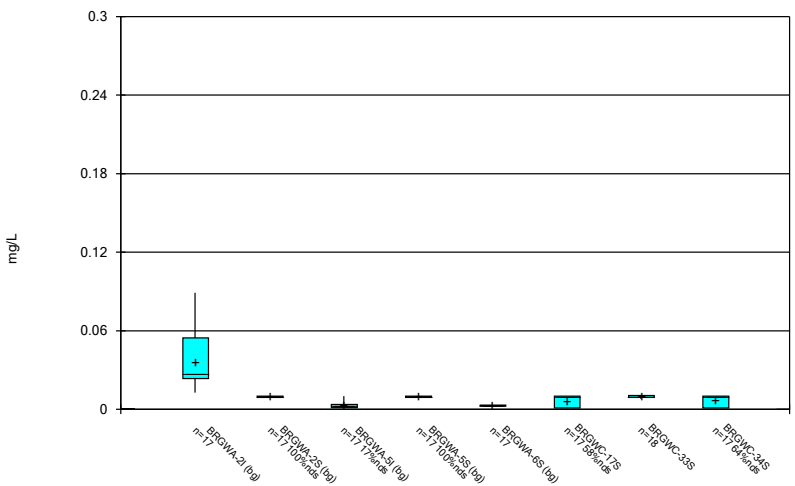
Box & Whiskers Plot



Constituent: 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

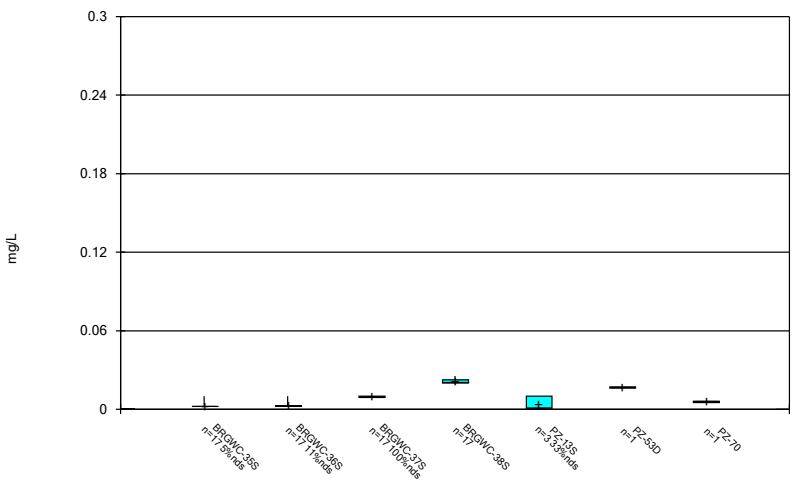
Box & Whiskers Plot



Constituent: Lithium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

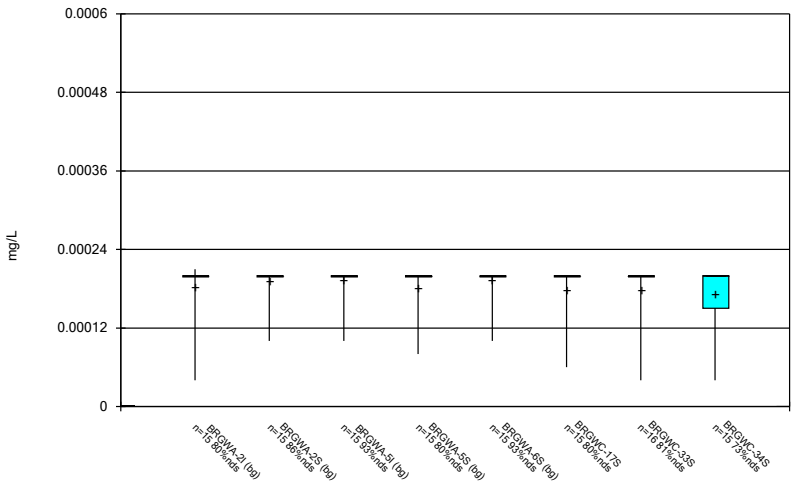
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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

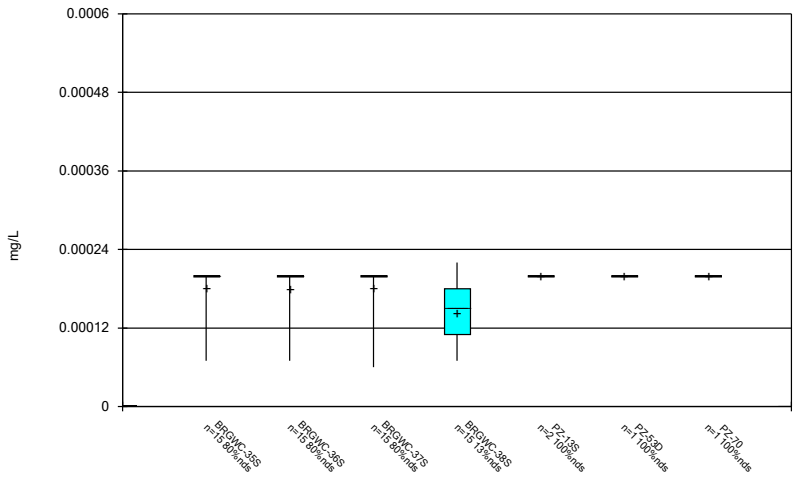
Box & Whiskers Plot



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

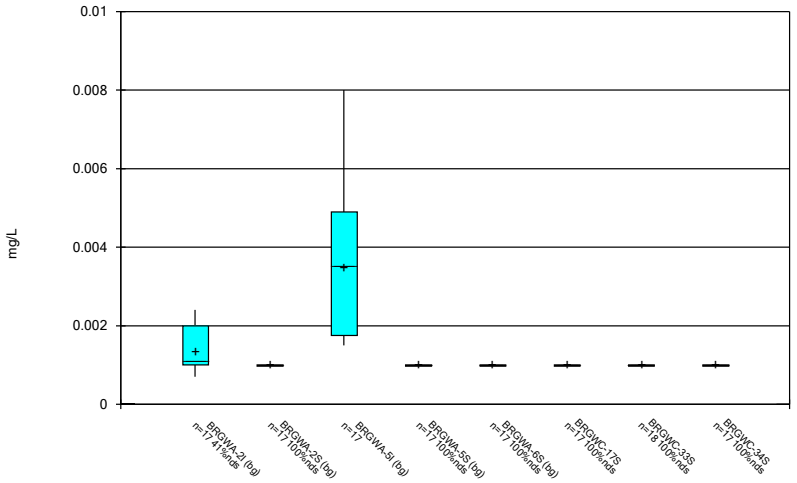
Box & Whiskers Plot



Constituent: 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

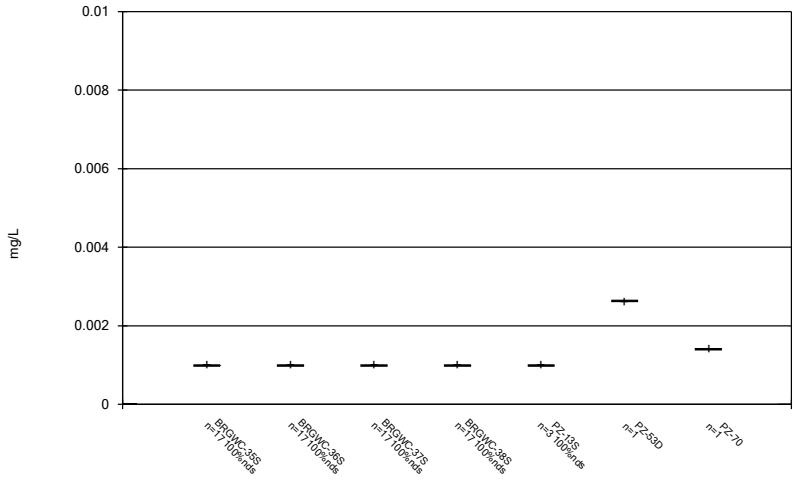
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

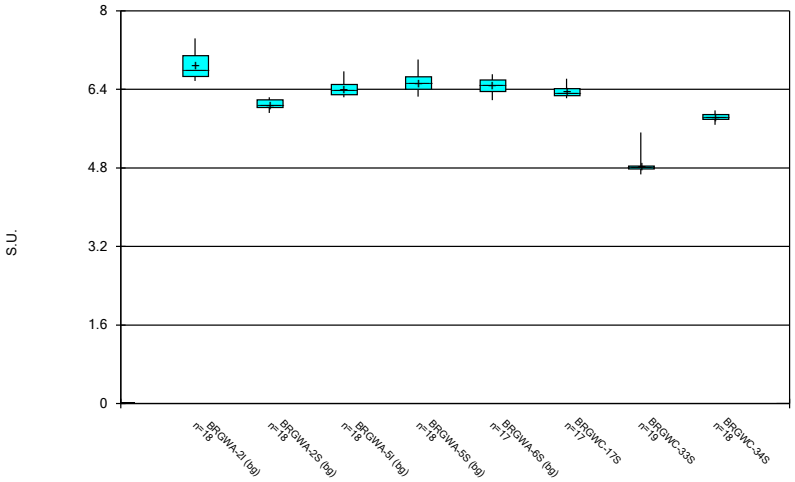
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

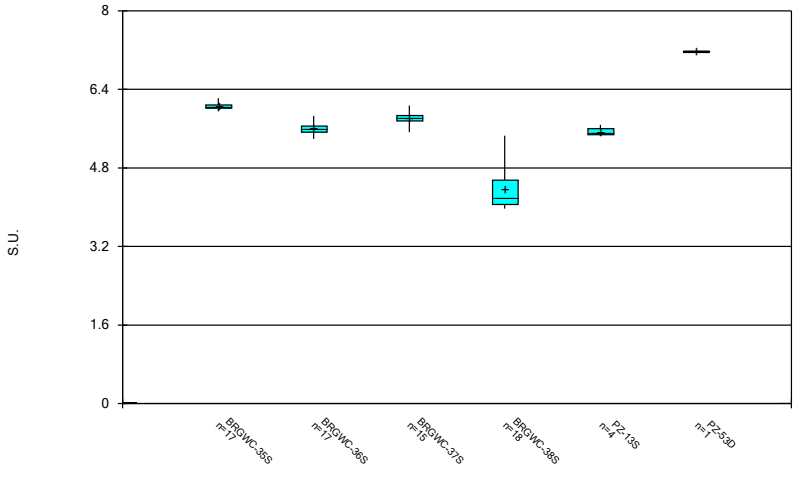
Box & Whiskers Plot



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

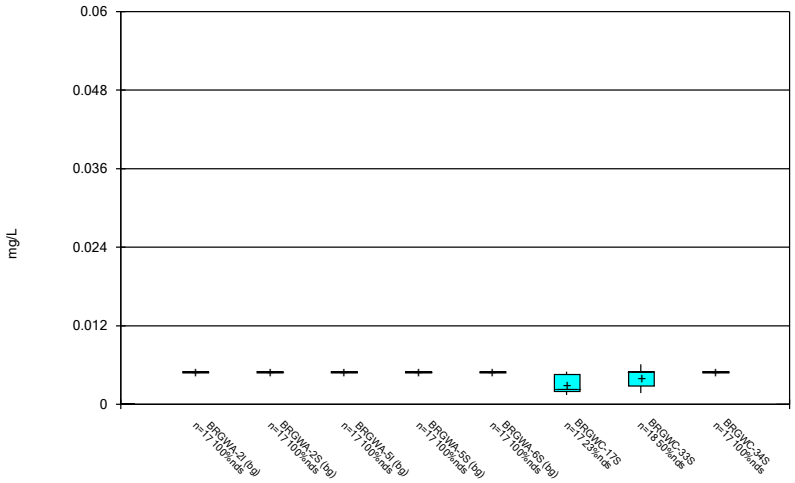
Box & Whiskers Plot



Constituent: 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

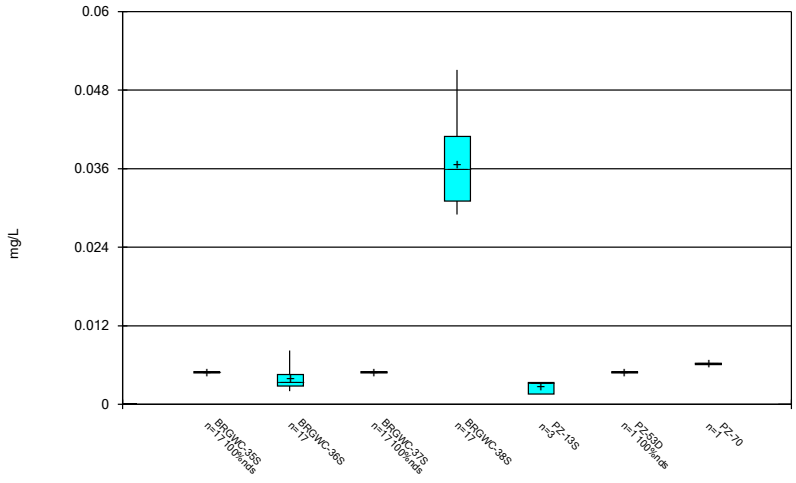
Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

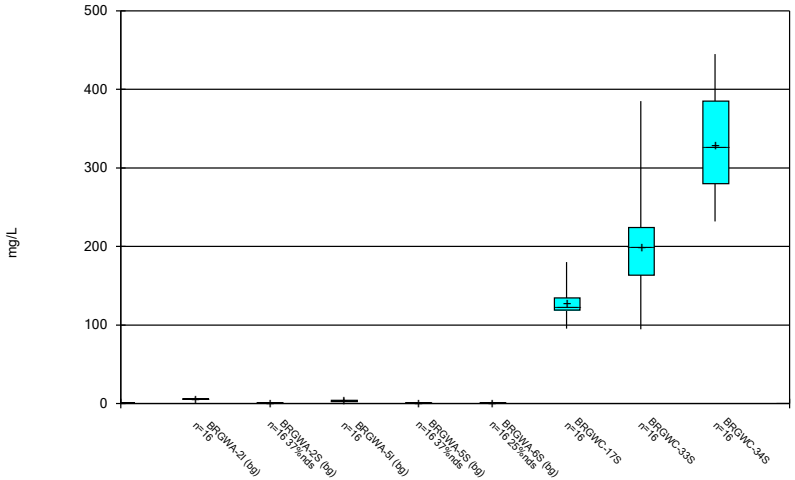
Box & Whiskers Plot



Constituent: Selenium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

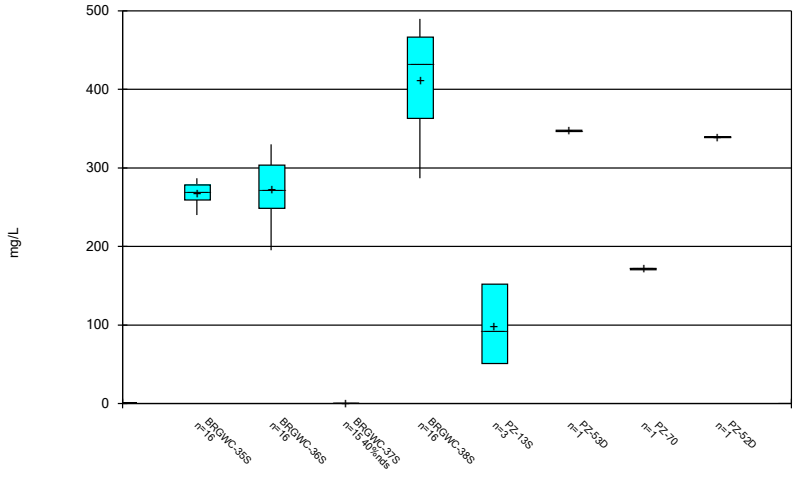
Box & Whiskers Plot



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

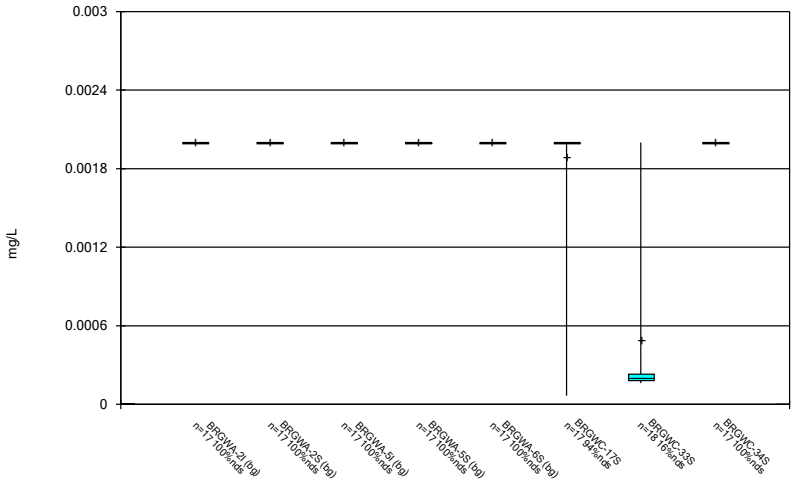
Box & Whiskers Plot



Constituent: 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

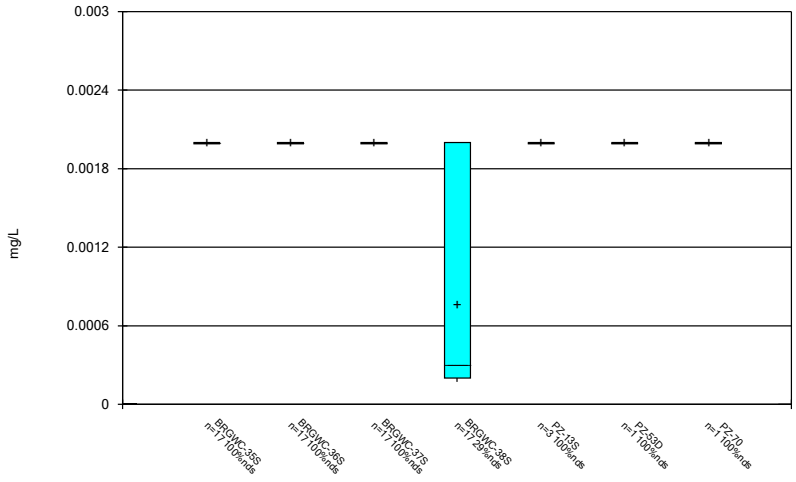
Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

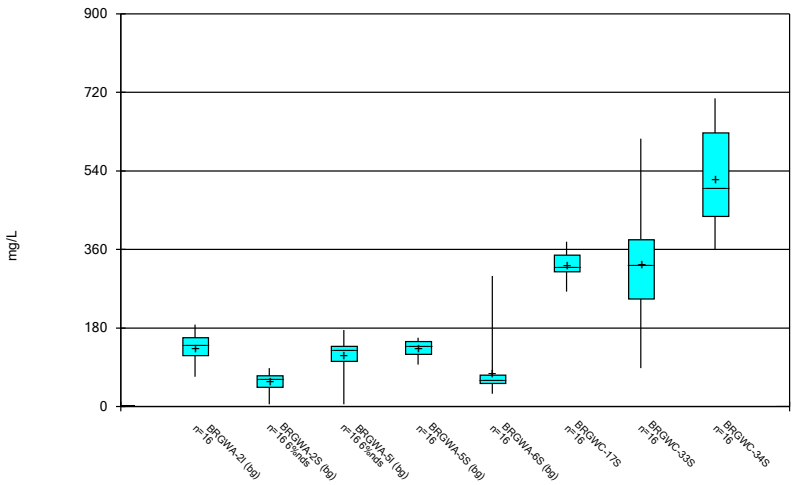
Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/4/2022 11:36 AM View: Pond E
Plant Branch Client: Southern Company Data: Plant Branch AP

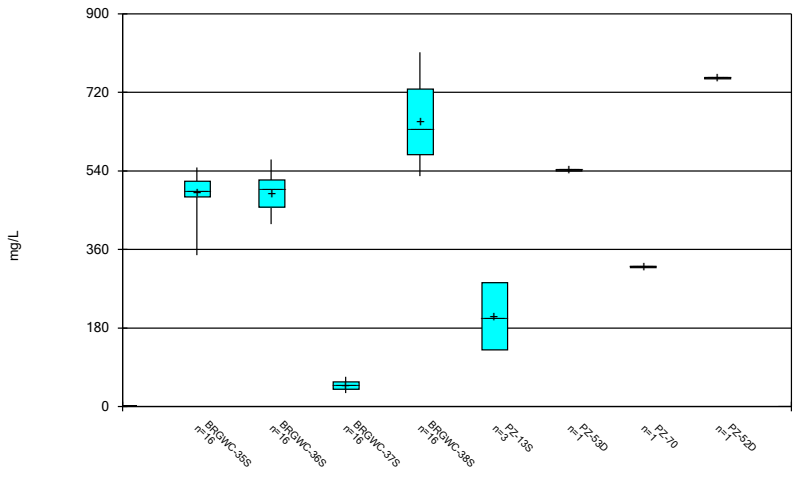
Box & Whiskers Plot



Constituent: 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 Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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

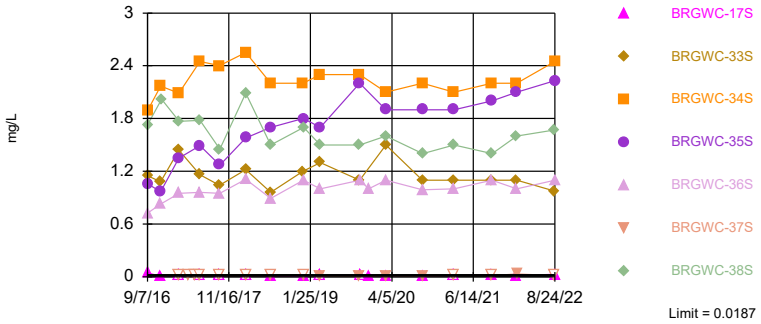
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	**BRGWC-17S**	**0.0187**	**n/a**	**8/24/2022**	**0.0273**	**Yes**	**80**	**n/a**	**n/a**	**63.75**	**n/a**	**n/a**	**0.0002983**	**NP Inter (NDs) 1 of 2**
Boron (mg/L)	**BRGWC-33S**	**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-37S	0.0187	n/a	8/23/2022	0.015ND	No	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-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

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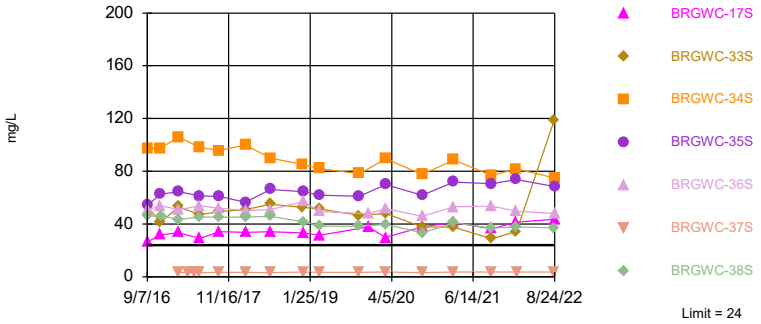
Exceeds Limit: BRGWC-17S, BRGWC-33S, BRGWC-34S, BRGWC-35S, BRGWC-36S, BRGWC-38S

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 per-constituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

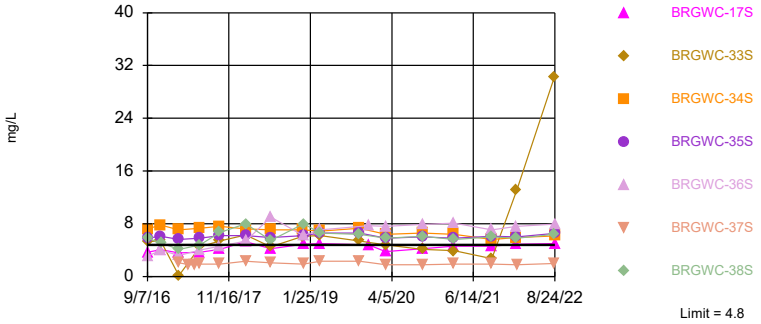
Constituent: Calcium Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

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. Annual per-constituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

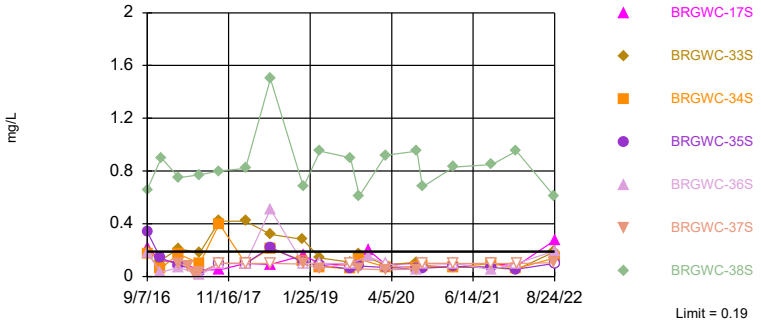
Constituent: Chloride Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

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.

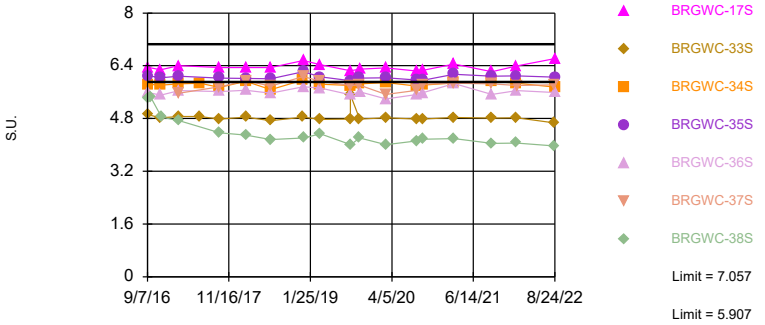
Constituent: Fluoride Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Exceeds Limits: BRGWC-33S, BRGWC-34S, BRGWC-36S, BRGWC-37S, BRGWC-38S

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.

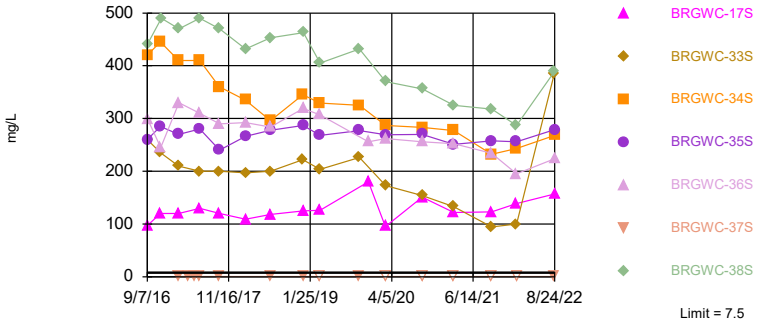
Constituent: pH, Field Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
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 per-constituent alpha = 0.004169. Individual comparison alpha = 0.0002983 (1 of 2). Comparing 7 points to limit.

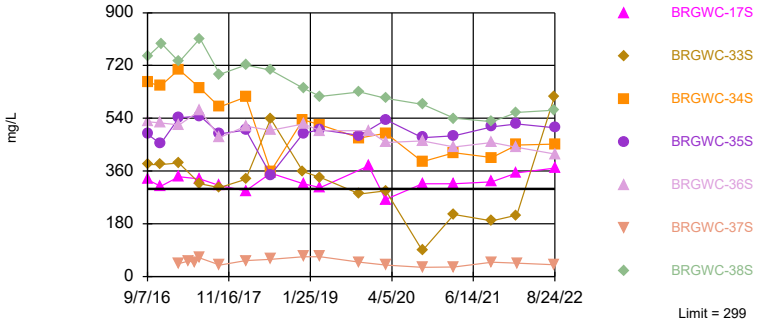
Constituent: Sulfate Analysis Run 9/30/2022 4:15 PM View: Pond E - Appendix III
Plant Branch Client: Southern Company Data: Plant Branch AP

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 per-constituent 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

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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					
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							0.0088 (J+X)	1.7 (J+X)	
6/28/2018						1.5			0.89
12/18/2018	0.0086 (J)	<0.015	<0.015	0.0062 (J)	<0.015				
12/19/2018							0.0045 (J)	1.8	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)	<0.015	<0.015	0.006 (J)	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							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

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

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			
11/21/2016			
2/20/2017			
2/21/2017			
2/22/2017	1.44	2.09	
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	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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			3.84						
6/14/2017									
6/15/2017						45.3	29	61.3	53.8
9/26/2017	14.3	14.4	3.31	24	3.15				
9/27/2017									
9/28/2017						45.1	34.1	60.8	51.8
2/13/2018	<25	<25	3.94	<25	3.65				
2/15/2018						45.3	33.8	56.6	50.1
6/26/2018	16 (J)	13.5 (J)	3.6	23.5 (J)	3.3				
6/27/2018							34.1	66.2	
6/28/2018						45.9			51
12/18/2018	14.5 (J)	16.4 (J)	3.8	19.8 (J)	3.5				
12/19/2018							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						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				
9/16/2020							37.9	61.8	45.9
9/17/2020						33.1			
3/1/2021	15.4				4.2				
3/2/2021		13.2	4	16.8					
3/3/2021									53
3/4/2021						41	41.2	71.8	
9/21/2021		14.1		19.1					
9/22/2021	15.9		4.3		4.1		36.4		53.7
9/23/2021						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									
8/23/2022	13.9	14.3	4.65	18.2	3.97	37.1			
8/24/2022							43.6	68.5	48.1

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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			3.26
4/17/2017			3.23
5/15/2017			2.97 (B-01)
6/12/2017			
6/13/2017			
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	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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			1.7						
6/14/2017									
6/15/2017						4.8	3.7	5.8	4
9/26/2017	2	4.4	1.8	4.1	2.3				
9/27/2017									
9/28/2017						6.7	4.1	6.2	4.6
2/13/2018	2.1	4.7	1.7	4.1	2.3				
2/15/2018						8	5.3	6.2	5.4
6/26/2018	2.4	4.5	2.2	4.1	2.6				
6/27/2018							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					
9/22/2021	1.7		1.5		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

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 9/30/2022 4:18 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-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				
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				
2/15/2018						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)				
6/27/2018								0.22 (J)	0.093 (J)
6/28/2018						1.5 (J+X)	0.51 (J+X)		
12/18/2018	0.085 (J)	<0.1	<0.1	<0.1	<0.1				
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			<0.1	<0.1		0.054 (J)		0.1
9/23/2021						0.85		0.073 (J)	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 9/30/2022 4:18 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-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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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			0.1 (J)
4/17/2017			0.08 (J)
5/15/2017			0.02 (J)
6/12/2017			
6/13/2017			
6/14/2017	0.18 (J)	0.1 (J)	
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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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	

Prediction Limit

Constituent: pH, Field (S.U.) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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									

Prediction Limit

Constituent: pH, Field (S.U.) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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	

Prediction Limit

Constituent: pH, Field (S.U.) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-34S	BRGWC-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			5.57
6/12/2017			
6/13/2017			
6/14/2017		5.87	
9/26/2017			
9/27/2017		5.74	
9/28/2017	6.03		5.76
2/13/2018			
2/15/2018	6.02	5.93	5.95
6/26/2018			
6/27/2018	6.01	5.68	
6/28/2018			5.78
12/18/2018		5.97	
12/19/2018	6.22		6.07
12/20/2018			
3/19/2019			
3/20/2019	6.06	5.84	5.93
8/27/2019			
8/28/2019	5.95	5.8	5.8
8/29/2019			
10/15/2019			
10/16/2019	6.03	5.85	5.81
10/17/2019			
3/3/2020			
3/5/2020	6.04	5.89	5.53
8/18/2020			
8/19/2020	5.97	5.78	5.66
9/15/2020			
9/16/2020	5.96	5.81	5.84
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021		5.88	5.87
3/4/2021	6.14		
9/21/2021			
9/22/2021		5.93	
9/23/2021	6.08		5.85
2/1/2022	6.09	5.87	
2/2/2022			5.8

Prediction Limit

Constituent: pH, Field (S.U.) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-35S	BRGWC-34S	BRGWC-37S
8/23/2022			5.82
8/24/2022	6.05	5.75	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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						432		277	
12/3/2019							180		256
3/3/2020	7.1	2.8	0.93 (J)	0.71 (J)	2.5		95.4		
3/5/2020						370		269	262
9/15/2020	5.9	1.7	<1	<1	<1				
9/16/2020							151	270	256
9/17/2020						356			
3/1/2021	4.7				0.74 (J)				
3/2/2021		2.2	<1	<1					
3/3/2021									252
3/4/2021						325	122	251	
9/21/2021		2.3		<1					
9/22/2021	5.2		<1		<1		123		234
9/23/2021						318		258	
2/1/2022	5.4	2	<1	<1	<1	287	139	256	195
2/2/2022									
8/23/2022	5.66	2.21	0.452	0.521	0.479	389			
8/24/2022							157	279	224

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

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			
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	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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									
11/15/2016				123	41				
11/16/2016	69	77	41						
11/17/2016							308	453	
11/18/2016									524
11/21/2016						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
12/18/2018	145 (X)	138 (X)	78 (X)	147	70 (X)				
12/19/2018							317	489	521
12/20/2018						642			
3/19/2019	146.5 (D)	130	68	146	72		303		498
3/20/2019						615		501	
10/15/2019	140	175	66	144	63				
10/16/2019						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	116	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						540	316	480	
9/21/2021		108		104					
9/22/2021	129		66		62		323		457
9/23/2021						528		511	
2/1/2022	126	129	72	124	61	560	354	521	441
2/2/2022									
8/23/2022	117	107	45	101	52	568			
8/24/2022							370	507	418

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 9/30/2022 4:18 PM View: Pond E - Appendix III

Plant Branch Client: Southern Company Data: Plant Branch AP

	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			45
4/17/2017			53
5/15/2017			48
6/12/2017			
6/13/2017			
6/14/2017	316	643	
6/15/2017			63
9/26/2017			
9/27/2017	303	579	
9/28/2017			39
2/13/2018			
2/15/2018	332	612	54
6/26/2018			
6/27/2018	538 (X)	359 (X)	
6/28/2018			59 (X)
12/18/2018	358	535	
12/19/2018			68
12/20/2018			
3/19/2019			
3/20/2019	338	517	68 (X)
10/15/2019			
10/16/2019	281	473	49
12/3/2019			
3/3/2020			
3/5/2020	292	489	39
9/15/2020			
9/16/2020	88	392	31
9/17/2020			
3/1/2021			
3/2/2021			
3/3/2021	212	422	33
3/4/2021			
9/21/2021			
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	

FIGURE E.

Appendix III Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	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

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-2I (bg)	0.001506	18	58	No	16	25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	-3	-58	No	16	87.5	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	-6	-58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-8	-58	No	16	56.25	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	2	58	No	16	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-17S	-0.001021	-29	-63	No	17	41.18	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-33S	-0.01268	-18	-58	No	16	0	n/a	n/a	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**
Boron (mg/L)	BRGWC-36S	0.03171	58	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-38S	-0.04809	-40	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.5425	43	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	0.073	30	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	0.03321	5	58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.5076	-36	-58	No	16	6.25	n/a	n/a	0.01	NP
Calcium (mg/L)	**BRGWA-6S (bg)**	**0.1657**	**69**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	**BRGWC-17S**	**1.937**	**71**	**58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Calcium (mg/L)	BRGWC-33S	-2.525	-38	-58	No	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-35S	2.067	57	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-36S	-0.4386	-29	-58	No	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-2I (bg)	-0.04825	-38	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-2S (bg)	-0.02501	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	**BRGWA-5I (bg)**	**-0.2006**	**-67**	**-58**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Chloride (mg/L)	BRGWA-5S (bg)	-0.07499	-48	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWA-6S (bg)	-0.01997	-21	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-17S	0.1812	53	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BRGWC-33S	0.1438	8	58	No	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-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
Fluoride (mg/L)	BRGWA-2I (bg)	0	-17	-68	No	18	50	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	49	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	54	68	No	18	72.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	0	-20	-68	No	18	38.89	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0	55	68	No	18	61.11	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-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
Fluoride (mg/L)	BRGWC-38S	0.008753	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**
pH, Field (S.U.)	**BRGWA-2S (bg)**	**-0.0368**	**-71**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH, Field (S.U.)	BRGWA-5I (bg)	-0.02765	-47	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	**BRGWA-5S (bg)**	**-0.05383**	**-81**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
pH, Field (S.U.)	BRGWA-6S (bg)	0	0	63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-33S	-0.01085	-46	-74	No	19	0	n/a	n/a	0.01	NP
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	1	63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U.)	BRGWC-37S	0.009624	10	53	No	15	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**

Appendix III Trend Tests - Prediction Limit Exceedances - All Results

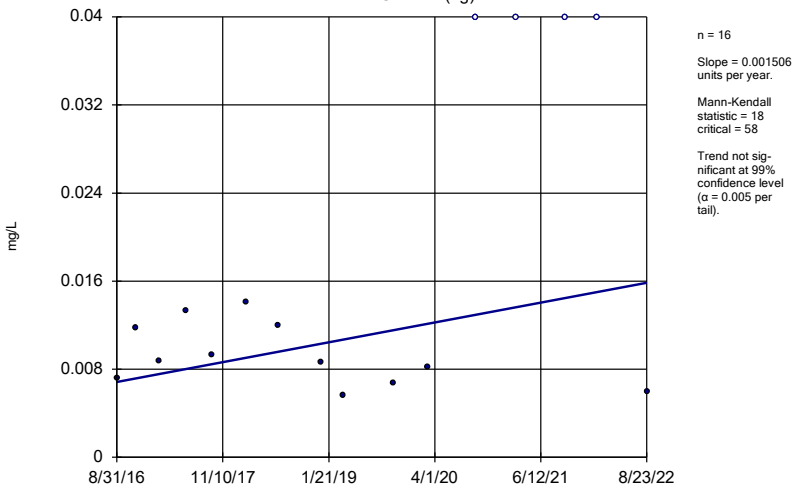
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 9/30/2022, 4:23 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	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**

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2I (bg)



n = 16

Slope = 0.001506 units per year.

Mann-Kendall statistic = 18
critical = 58

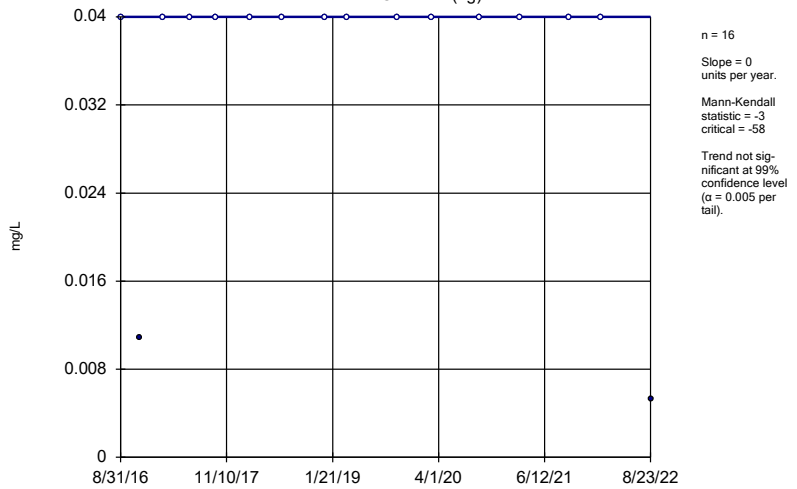
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2S (bg)



n = 16

Slope = 0 units per year.

Mann-Kendall statistic = -3
critical = -58

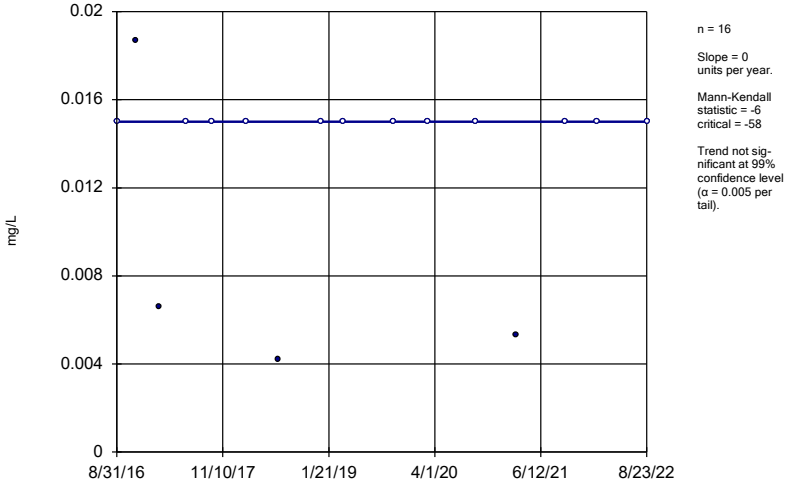
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5I (bg)



n = 16

Slope = 0 units per year.

Mann-Kendall statistic = -6
critical = -58

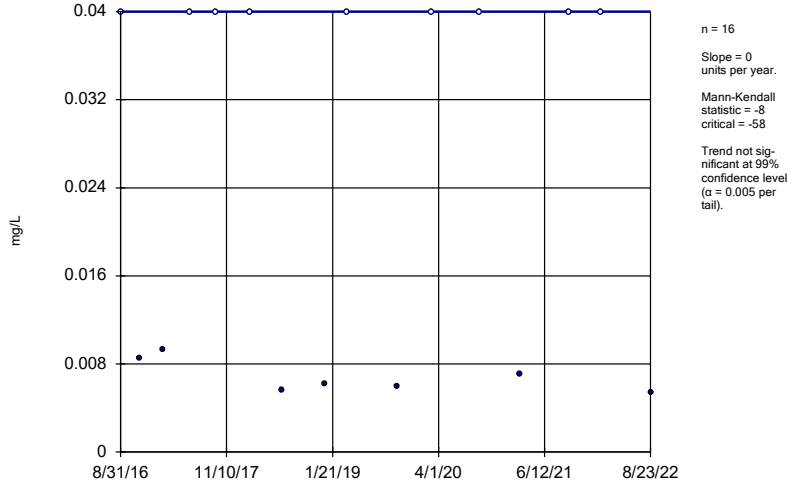
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5S (bg)



n = 16

Slope = 0 units per year.

Mann-Kendall statistic = -8
critical = -58

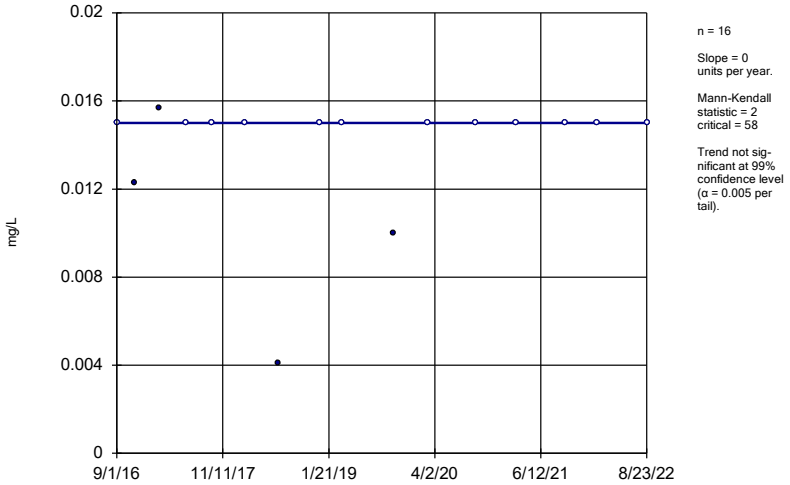
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-6S (bg)



n = 16

Slope = 0 units per year.

Mann-Kendall statistic = 2 critical = 58

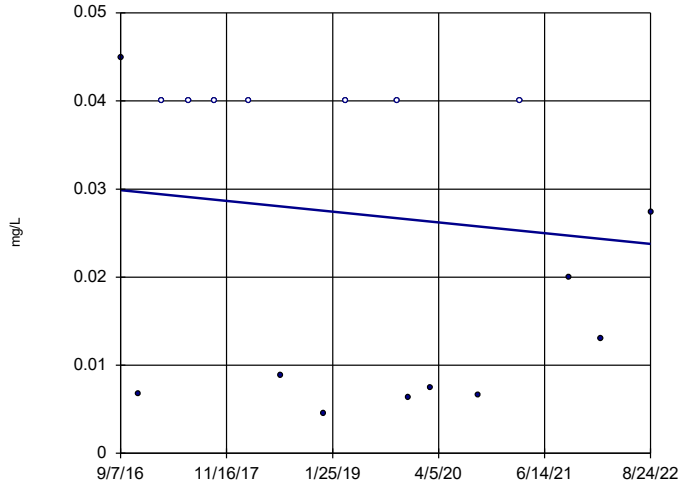
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWC-17S



n = 17

Slope = -0.001021 units per year.

Mann-Kendall statistic = -29 critical = -63

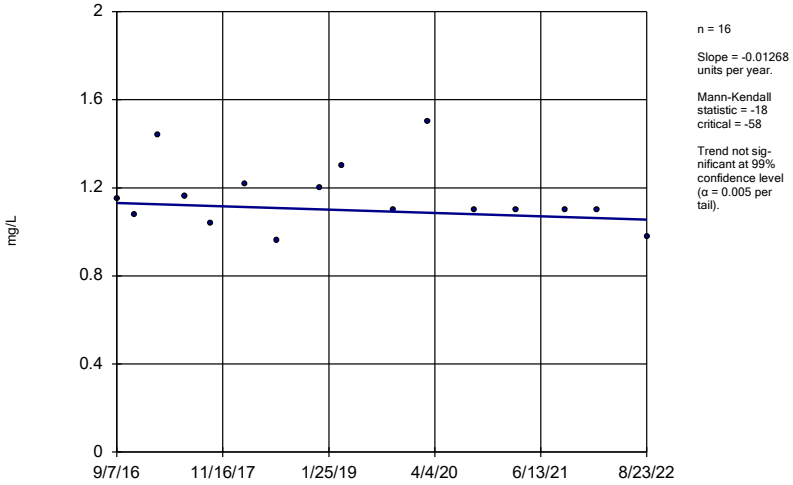
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:20 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-33S



n = 16

Slope = -0.01268 units per year.

Mann-Kendall statistic = -18 critical = -58

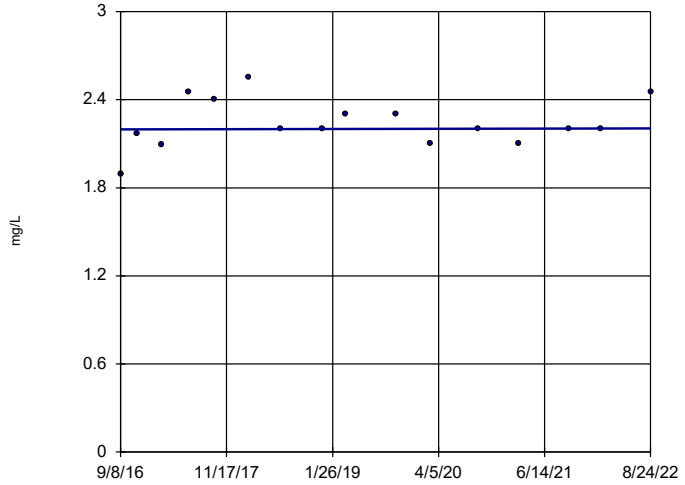
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-34S



n = 16

Slope = 0.001241 units per year.

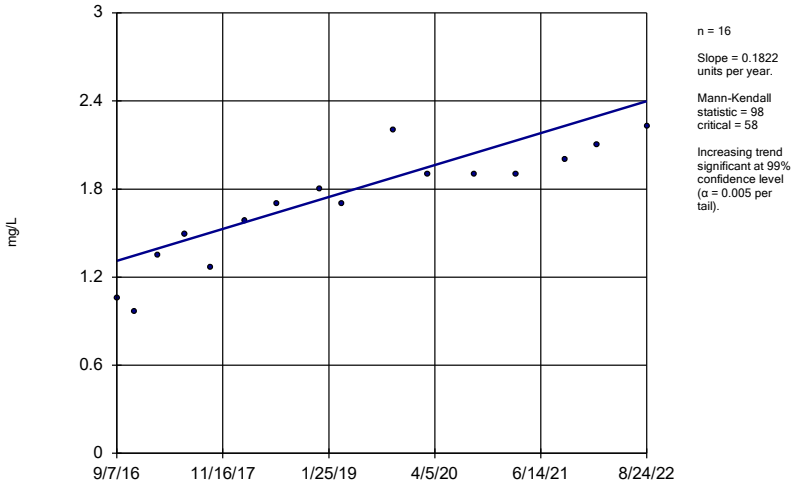
Mann-Kendall statistic = 13 critical = 58

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron 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



n = 16

Slope = 0.1822 units per year.

Mann-Kendall statistic = 98
critical = 58

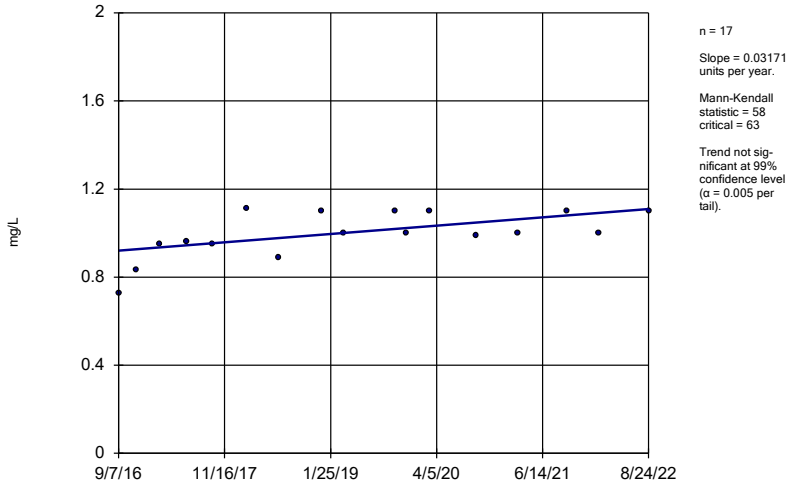
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-36S



n = 17

Slope = 0.03171 units per year.

Mann-Kendall statistic = 58
critical = 63

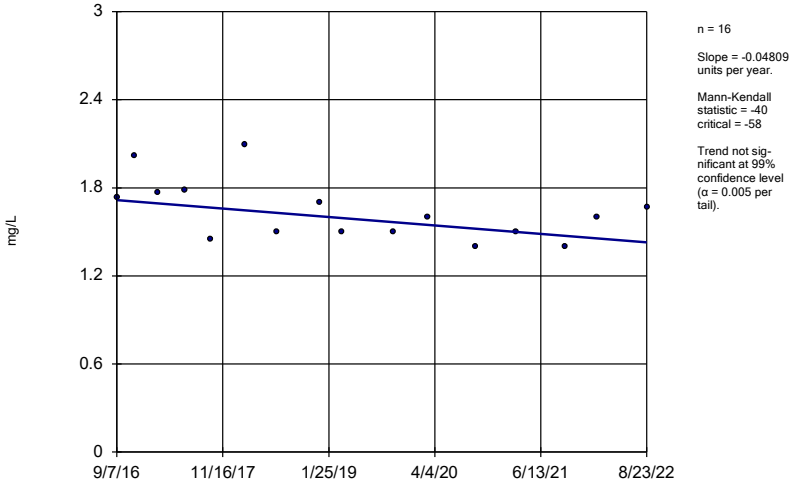
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-38S



n = 16

Slope = -0.04809 units per year.

Mann-Kendall statistic = -40
critical = -58

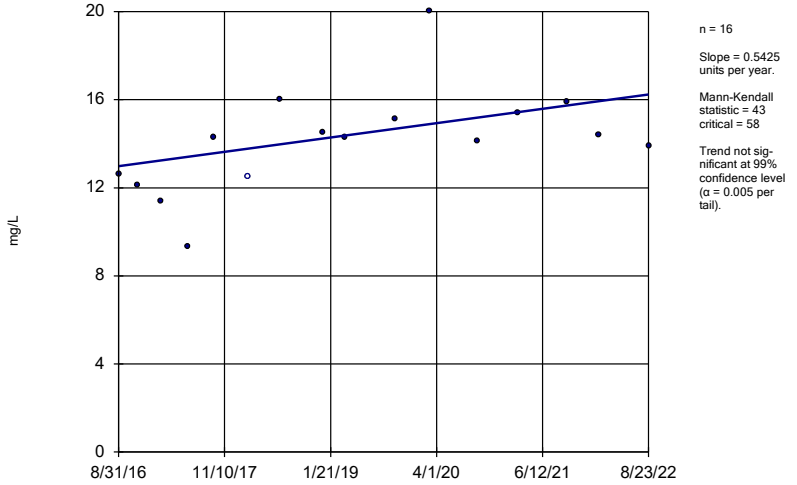
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2I (bg)



n = 16

Slope = 0.5425 units per year.

Mann-Kendall statistic = 43
critical = 58

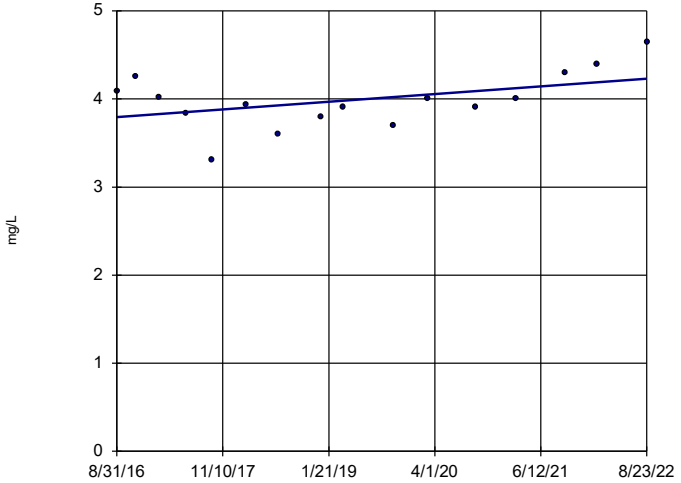
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2S (bg)



n = 16

Slope = 0.073 units per year.

Mann-Kendall statistic = 30 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

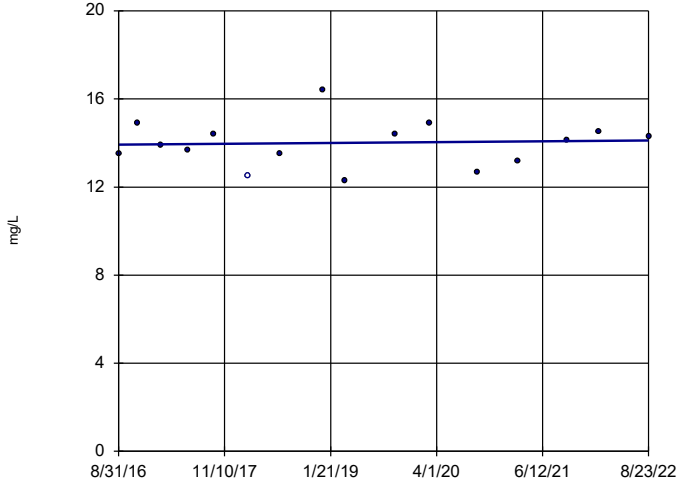
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5I (bg)



n = 16

Slope = 0.03321 units per year.

Mann-Kendall statistic = 5 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

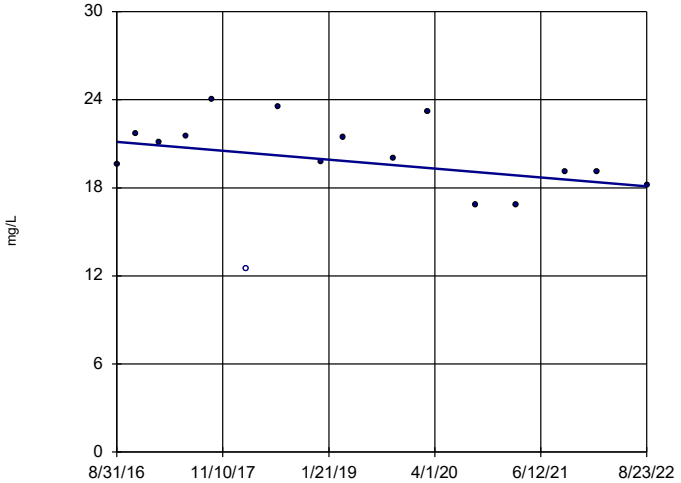
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5S (bg)



n = 16

Slope = -0.5076 units per year.

Mann-Kendall statistic = -36 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

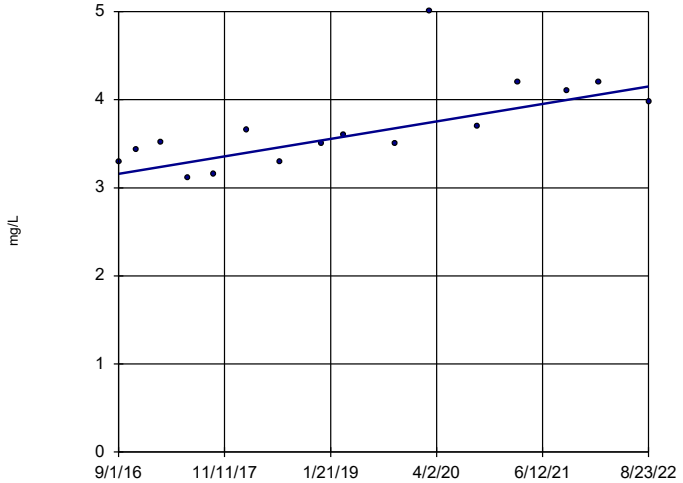
Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-6S (bg)



n = 16

Slope = 0.1657 units per year.

Mann-Kendall statistic = 69 critical = 58

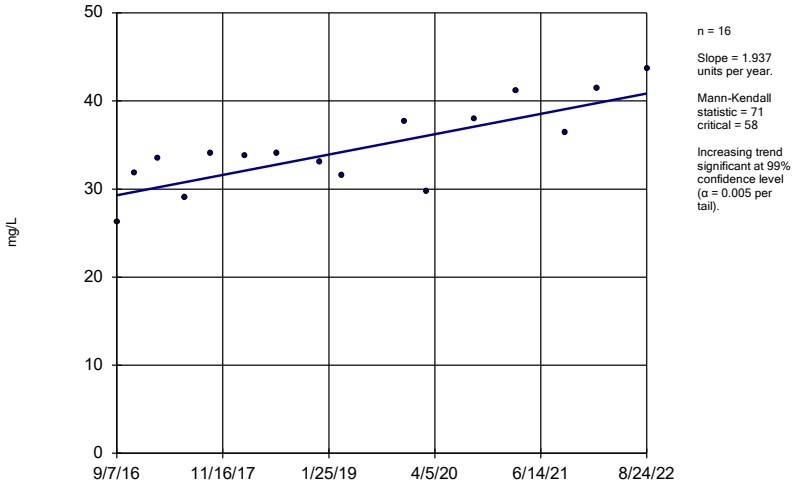
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium 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-17S



n = 16

Slope = 1.937 units per year.

Mann-Kendall statistic = 71
critical = 58

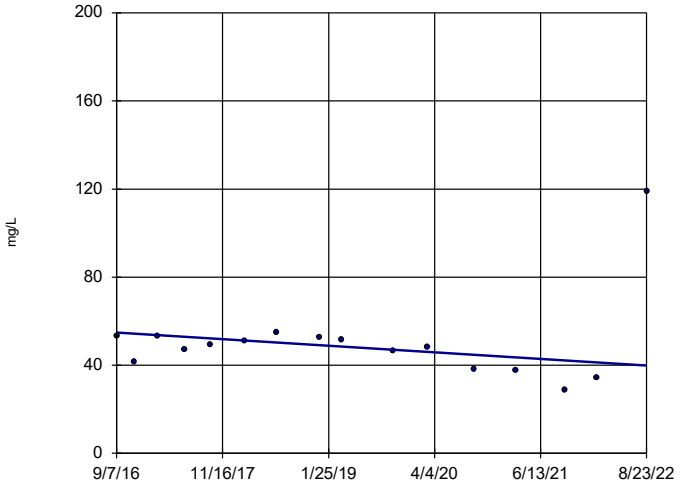
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-33S



n = 16

Slope = -2.525 units per year.

Mann-Kendall statistic = -38
critical = -58

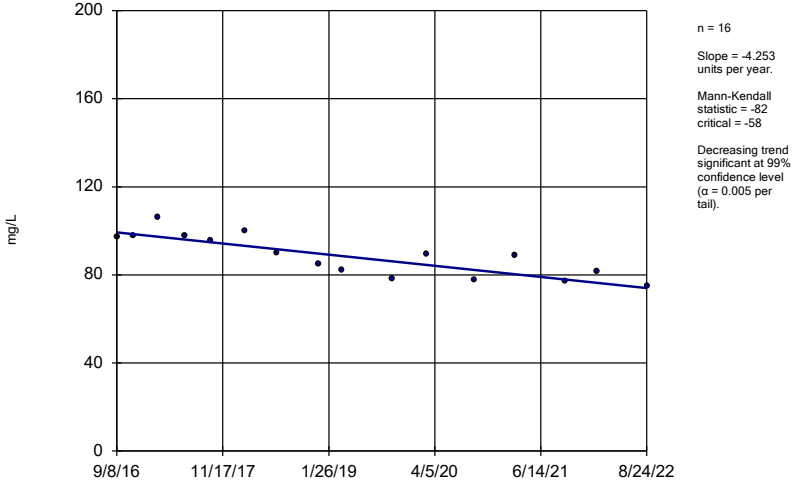
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-34S



n = 16

Slope = -4.253 units per year.

Mann-Kendall statistic = -82
critical = -58

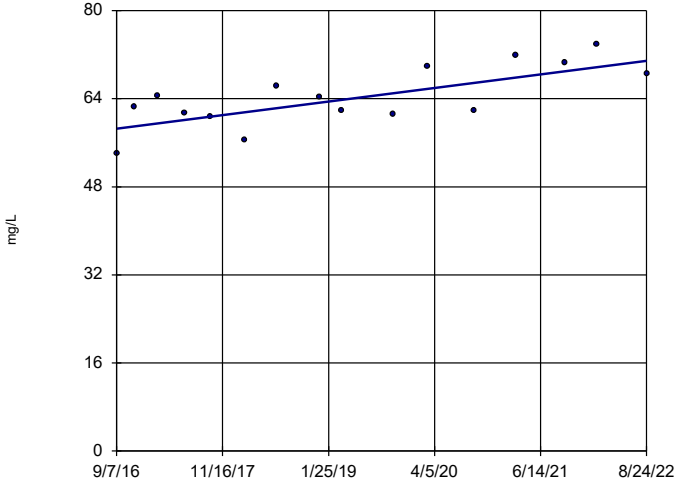
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-35S



n = 16

Slope = 2.067 units per year.

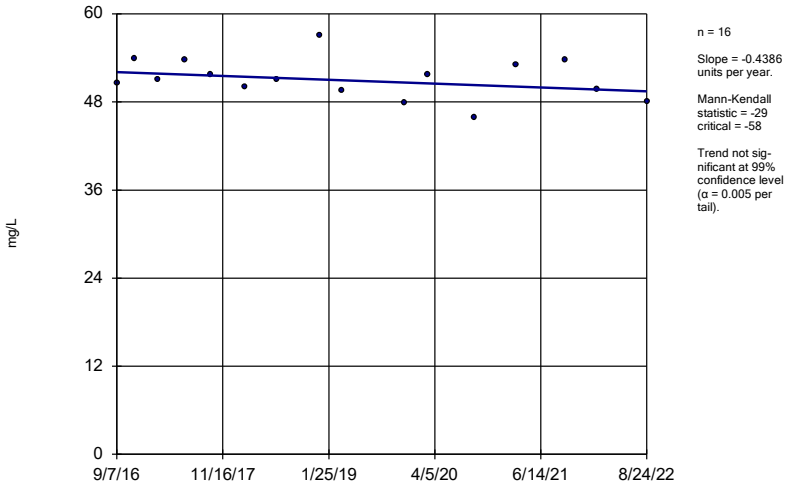
Mann-Kendall statistic = 57
critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium 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-36S



n = 16

Slope = -0.4386 units per year.

Mann-Kendall statistic = -29 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

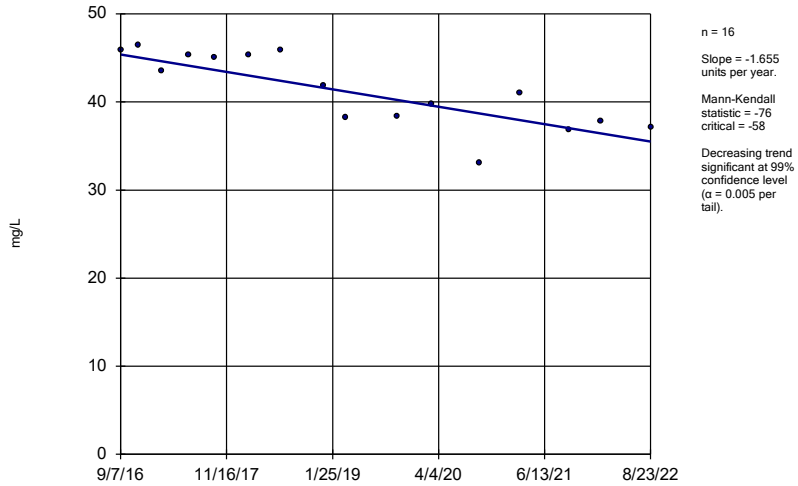
Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-38S



n = 16

Slope = -1.655 units per year.

Mann-Kendall statistic = -76 critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

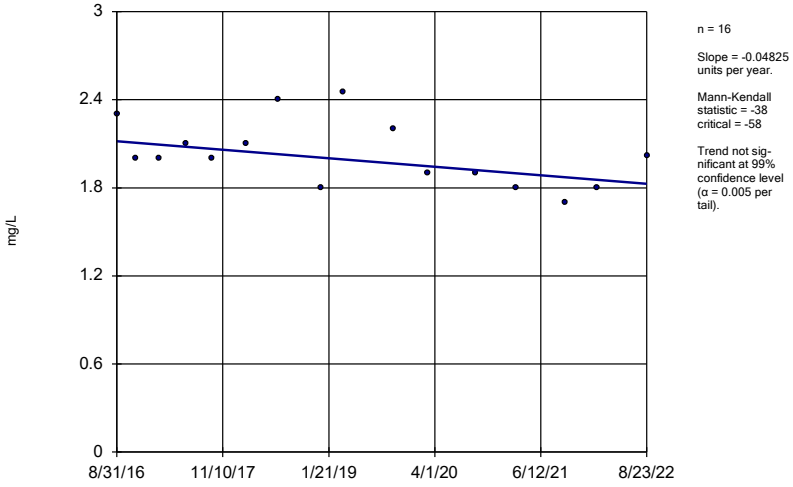
Constituent: Calcium Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2I (bg)



n = 16

Slope = -0.04825 units per year.

Mann-Kendall statistic = -38 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

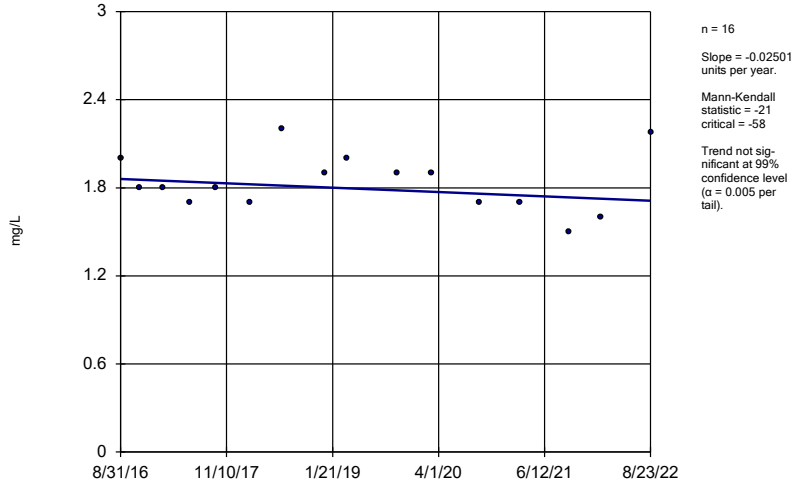
Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2S (bg)



n = 16

Slope = -0.02501 units per year.

Mann-Kendall statistic = -21 critical = -58

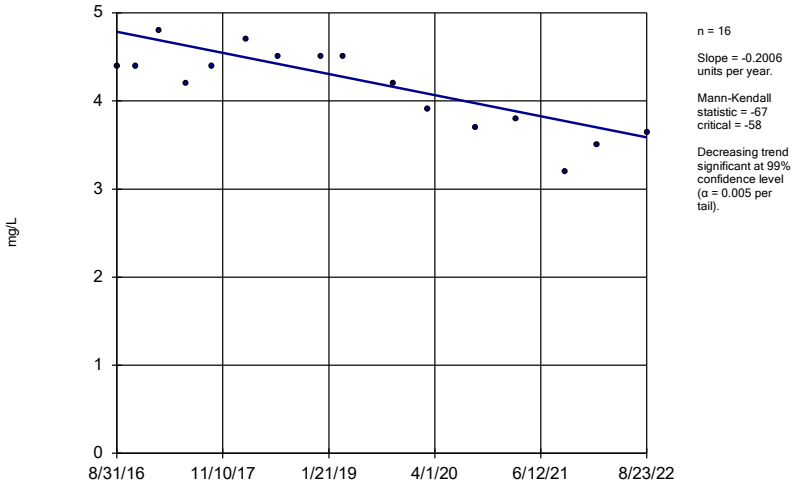
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride 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

BRGWA-5I (bg)



n = 16

Slope = -0.2006 units per year.

Mann-Kendall statistic = -67
critical = -58

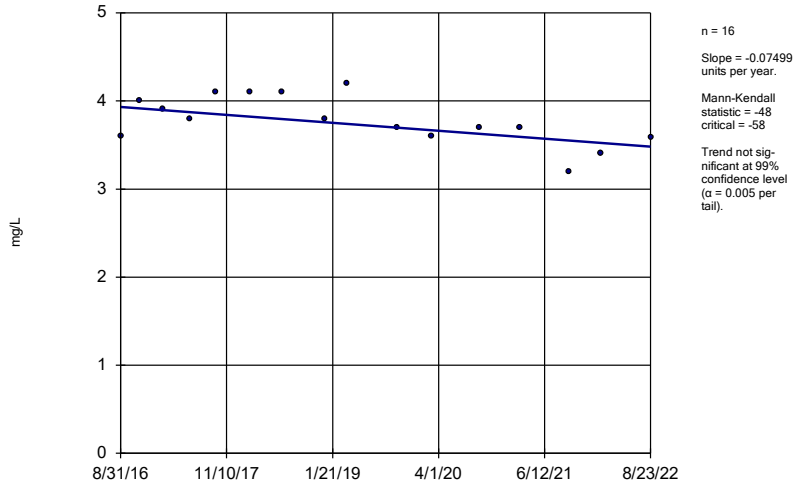
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-5S (bg)



n = 16

Slope = -0.07499 units per year.

Mann-Kendall statistic = -48
critical = -58

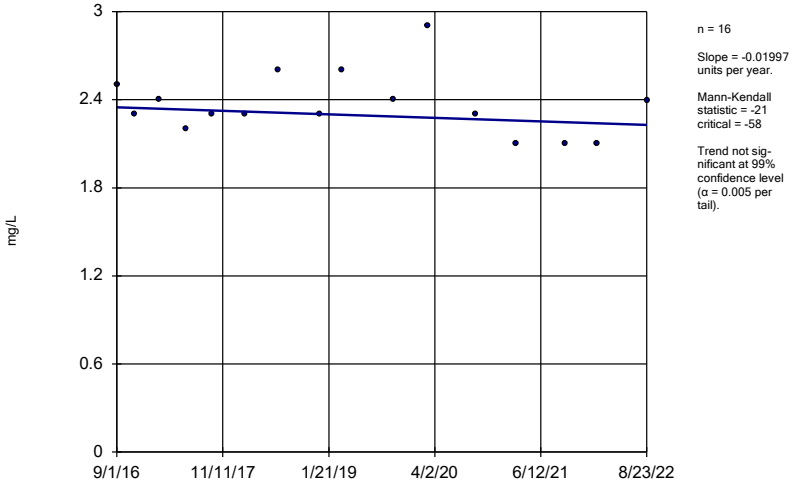
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-6S (bg)



n = 16

Slope = -0.01997 units per year.

Mann-Kendall statistic = -21
critical = -58

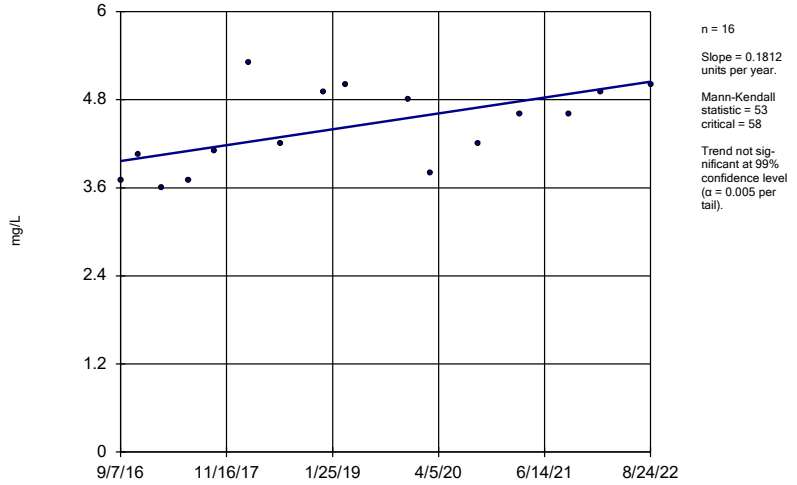
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-17S



n = 16

Slope = 0.1812 units per year.

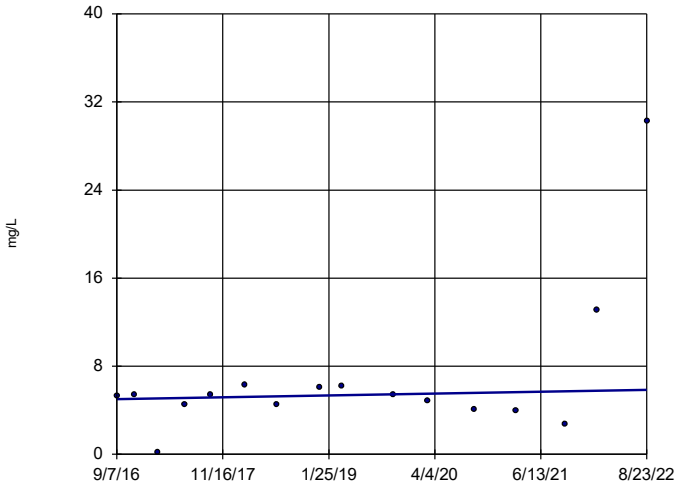
Mann-Kendall statistic = 53
critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride 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-33S



n = 16

Slope = 0.1438 units per year.

Mann-Kendall statistic = 8
critical = 58

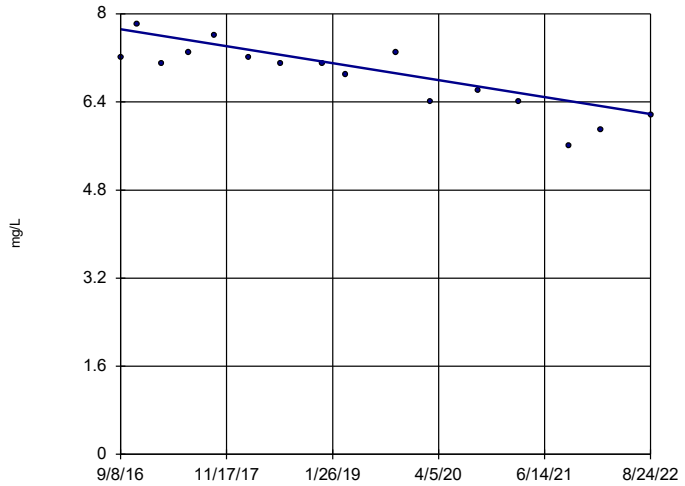
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-34S



n = 16

Slope = -0.2582 units per year.

Mann-Kendall statistic = -80
critical = -58

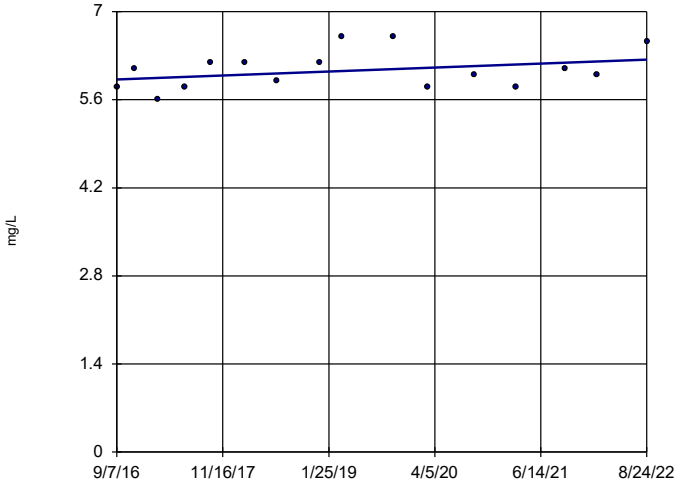
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-35S



n = 16

Slope = 0.05257 units per year.

Mann-Kendall statistic = 26
critical = 58

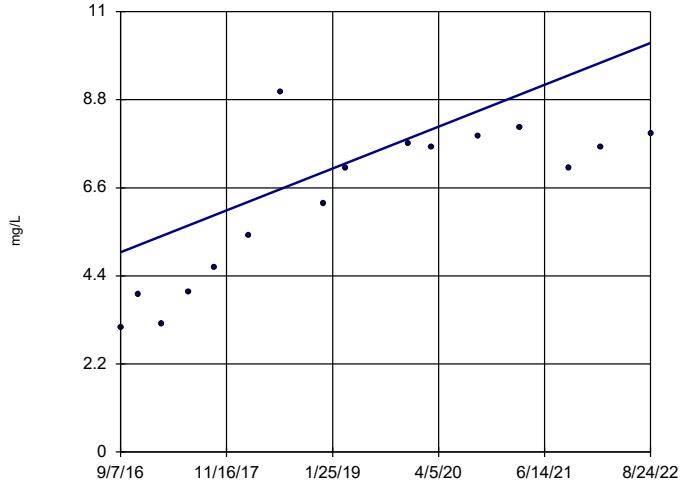
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-36S



n = 16

Slope = 0.8757 units per year.

Mann-Kendall statistic = 80
critical = 58

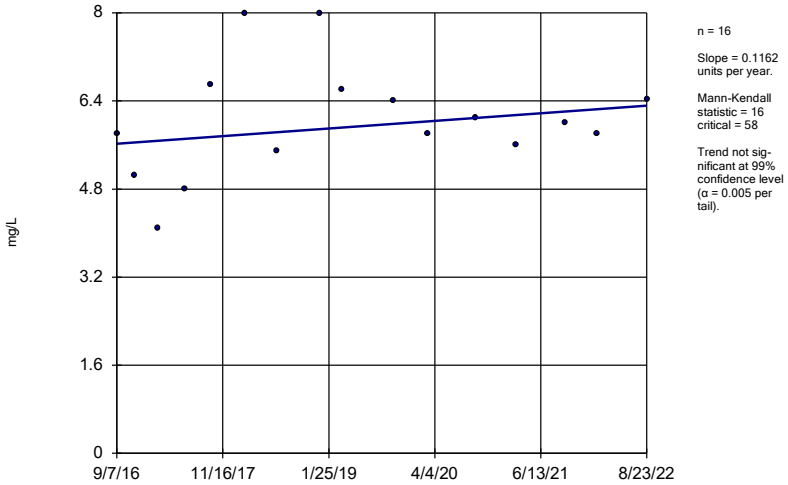
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-38S



n = 16

Slope = 0.1162 units per year.

Mann-Kendall statistic = 16 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

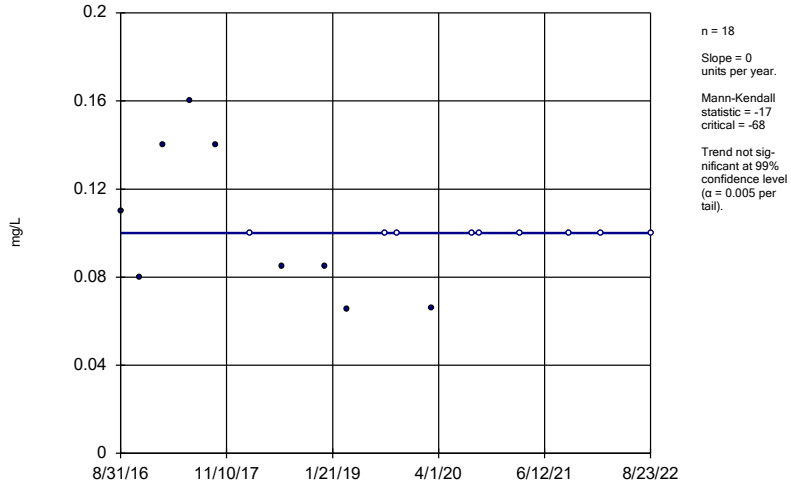
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2I (bg)



n = 18

Slope = 0 units per year.

Mann-Kendall statistic = -17 critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

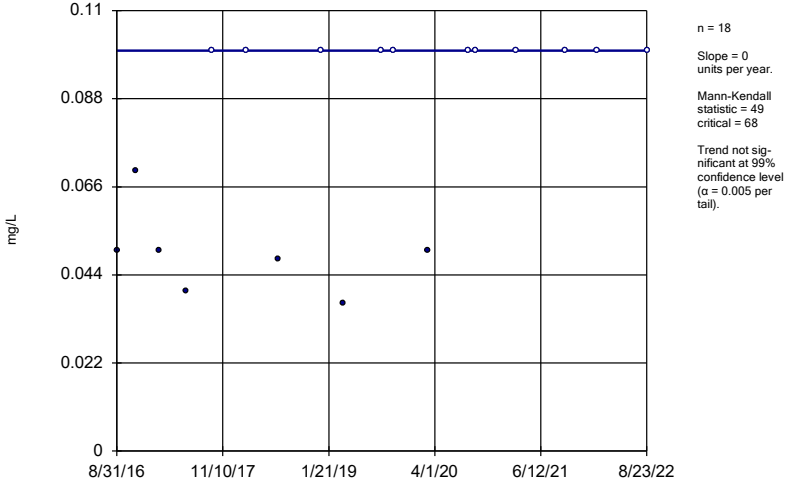
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2S (bg)



n = 18

Slope = 0 units per year.

Mann-Kendall statistic = 49 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

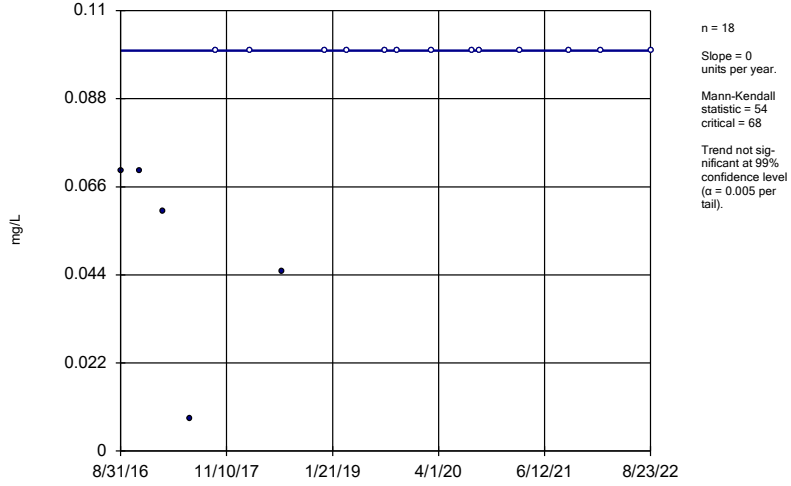
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5I (bg)



n = 18

Slope = 0 units per year.

Mann-Kendall statistic = 54 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

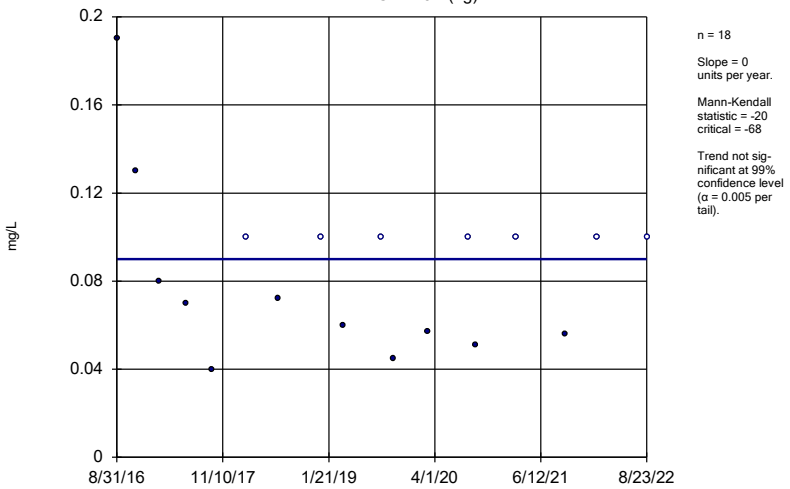
Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5S (bg)



n = 18

Slope = 0 units per year.

Mann-Kendall statistic = -20
critical = -68

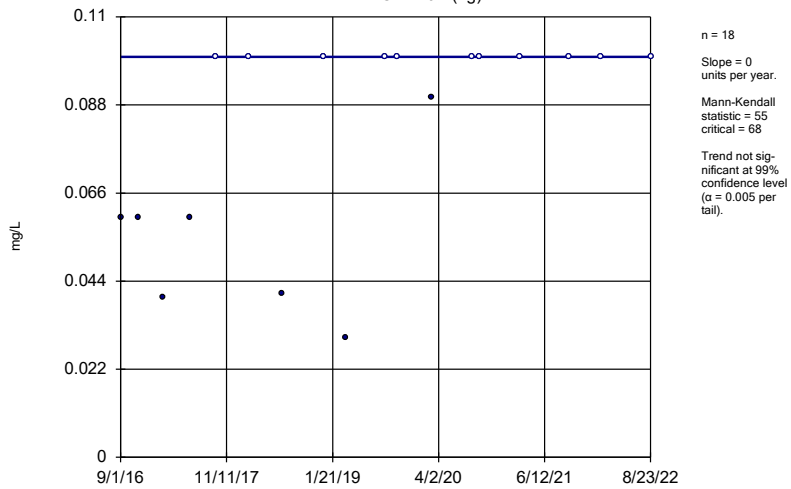
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-6S (bg)



n = 18

Slope = 0 units per year.

Mann-Kendall statistic = 55
critical = 68

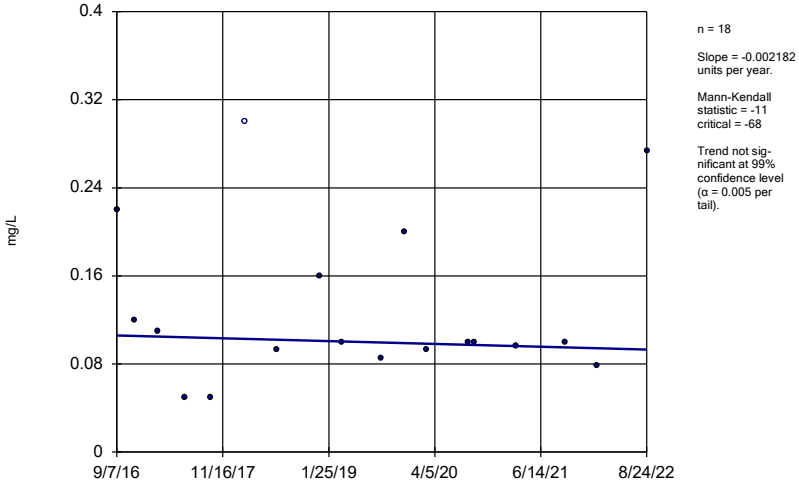
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWC-17S



n = 18

Slope = -0.002182 units per year.

Mann-Kendall statistic = -11
critical = -68

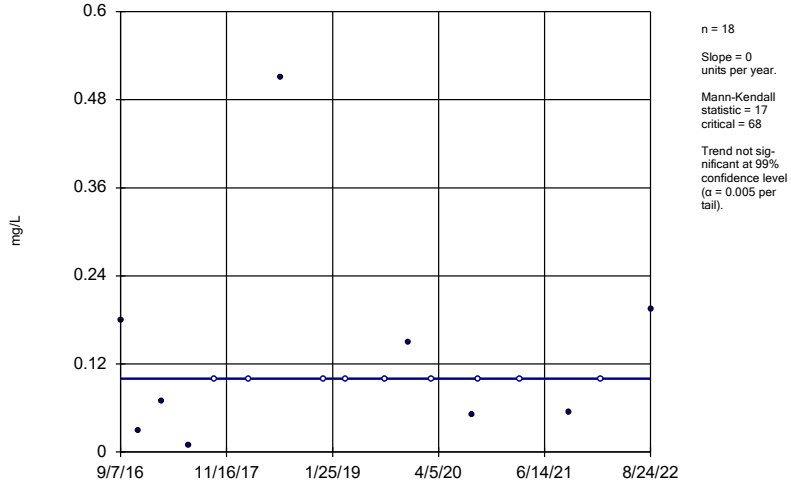
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWC-36S



n = 18

Slope = 0 units per year.

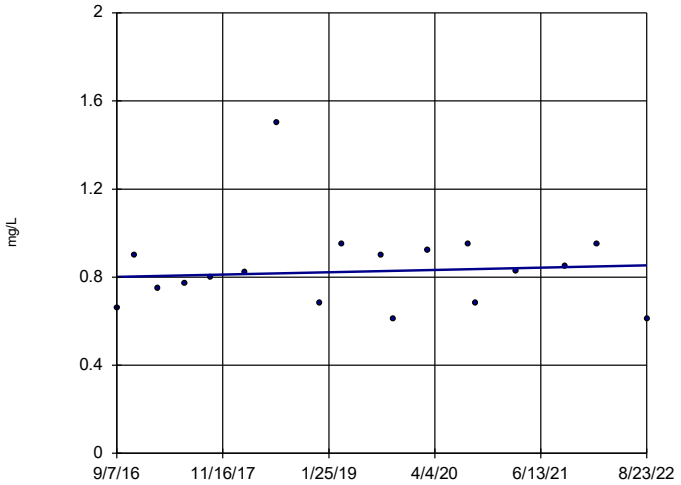
Mann-Kendall statistic = 17
critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride 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-38S



n = 18

Slope = 0.008753 units per year.

Mann-Kendall statistic = 16
critical = 68

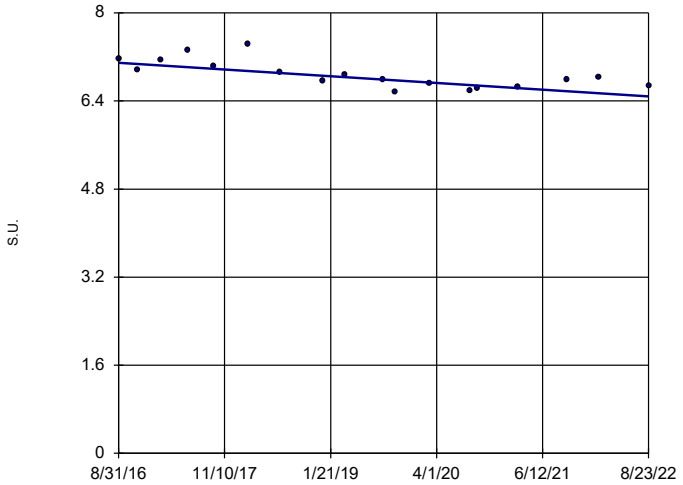
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Fluoride Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2I (bg)



n = 18

Slope = -0.1019 units per year.

Mann-Kendall statistic = -79
critical = -68

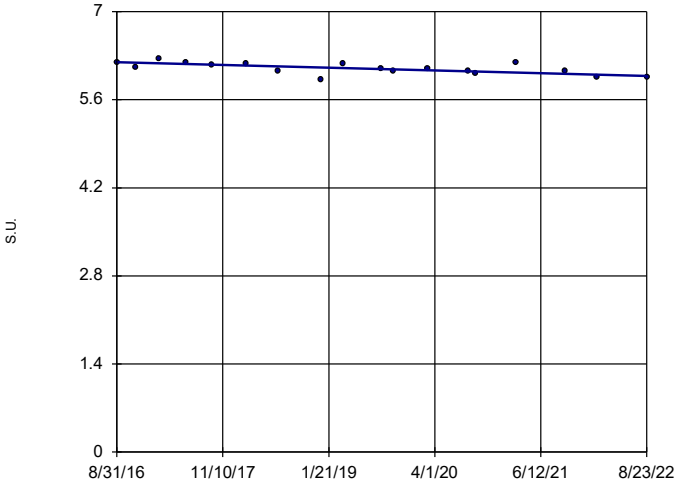
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2S (bg)



n = 18

Slope = -0.0368 units per year.

Mann-Kendall statistic = -71
critical = -68

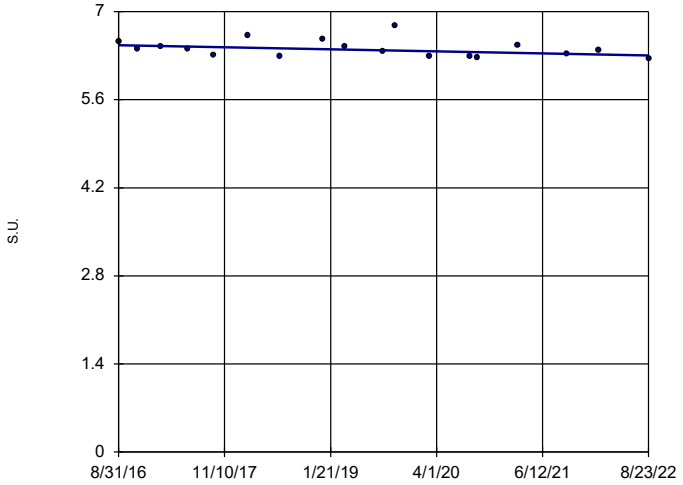
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-5I (bg)



n = 18

Slope = -0.02765 units per year.

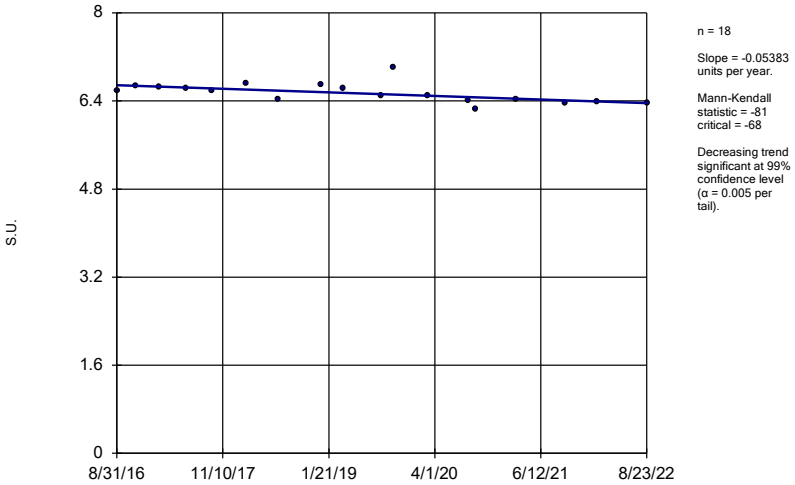
Mann-Kendall statistic = -47
critical = -68

Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sen's Slope Estimator

BRGWA-5S (bg)



n = 18

Slope = -0.05383 units per year.

Mann-Kendall statistic = -81 critical = -68

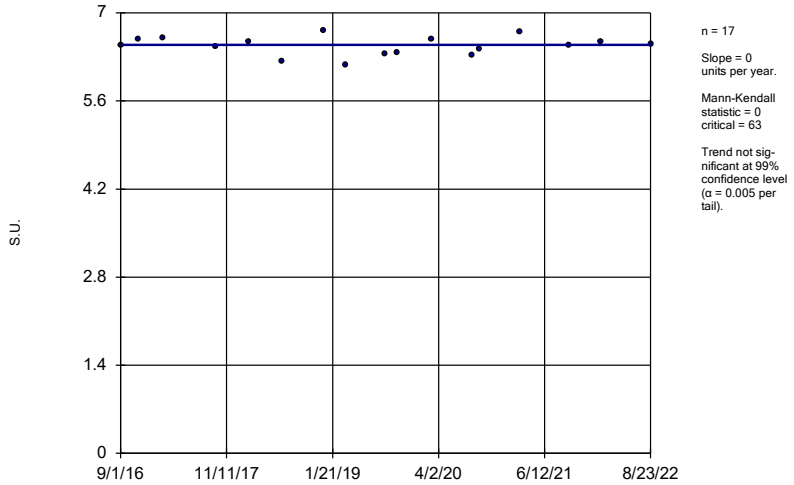
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-6S (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 63

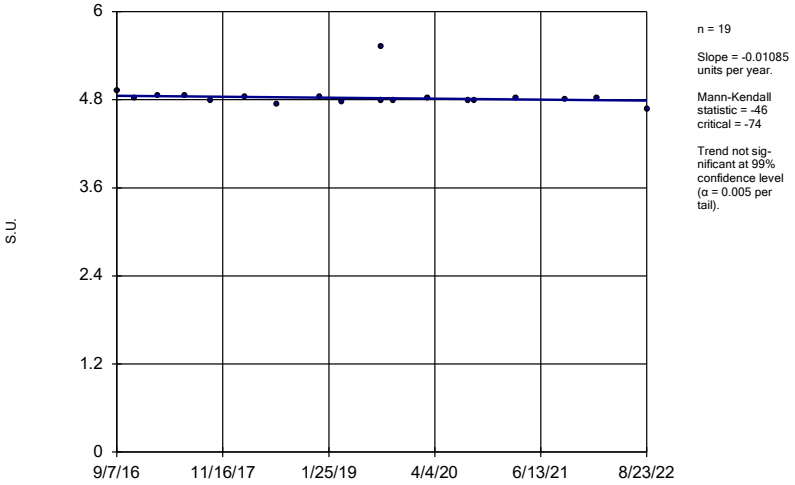
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-33S



n = 19

Slope = -0.01085 units per year.

Mann-Kendall statistic = -46 critical = -74

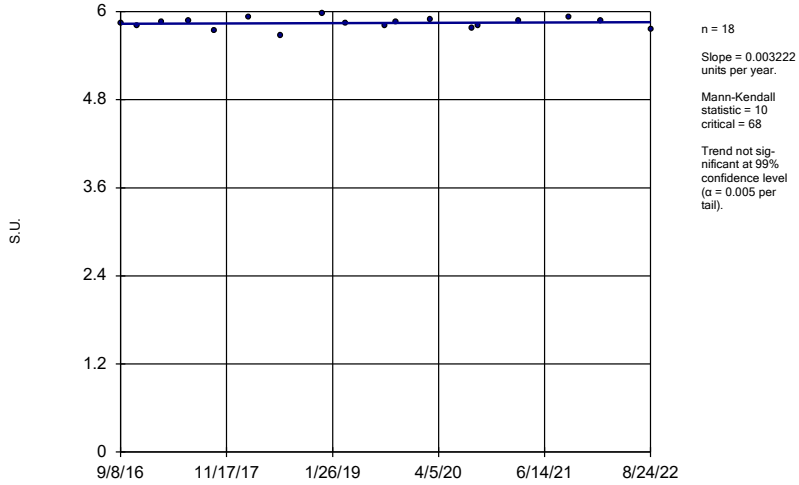
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-34S



n = 18

Slope = 0.003222 units per year.

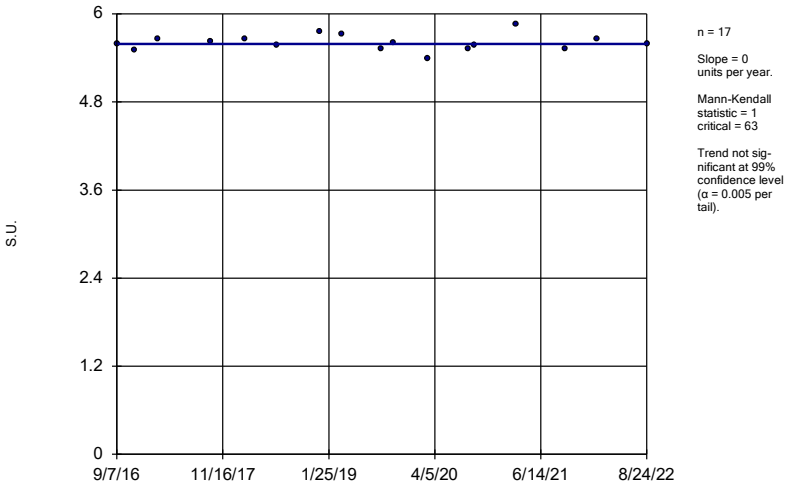
Mann-Kendall statistic = 10 critical = 68

Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sen's Slope Estimator

BRGWC-36S



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 1 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

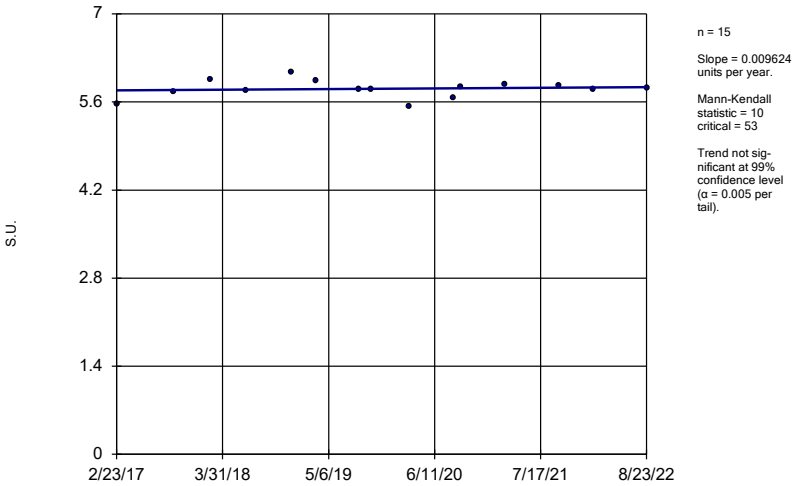
Constituent: pH, Field Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-37S



n = 15

Slope = 0.009624 units per year.

Mann-Kendall statistic = 10 critical = 53

Trend not significant at 99% confidence level (α = 0.005 per tail).

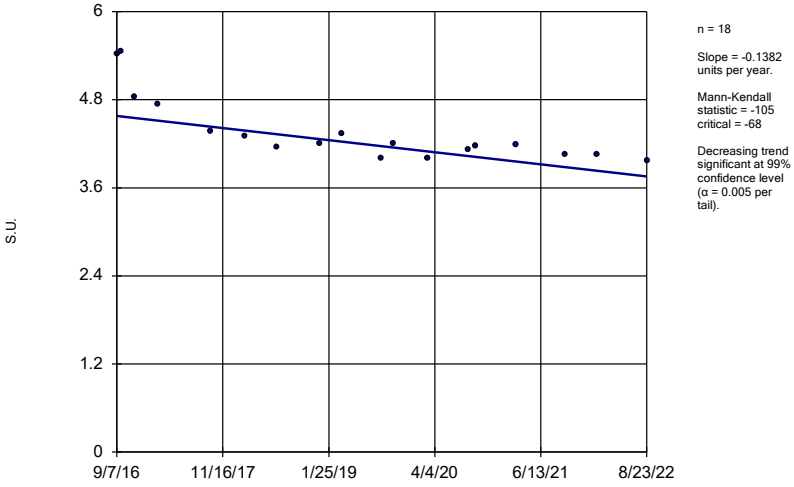
Constituent: pH, Field Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-38S



n = 18

Slope = -0.1382 units per year.

Mann-Kendall statistic = -105 critical = -68

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

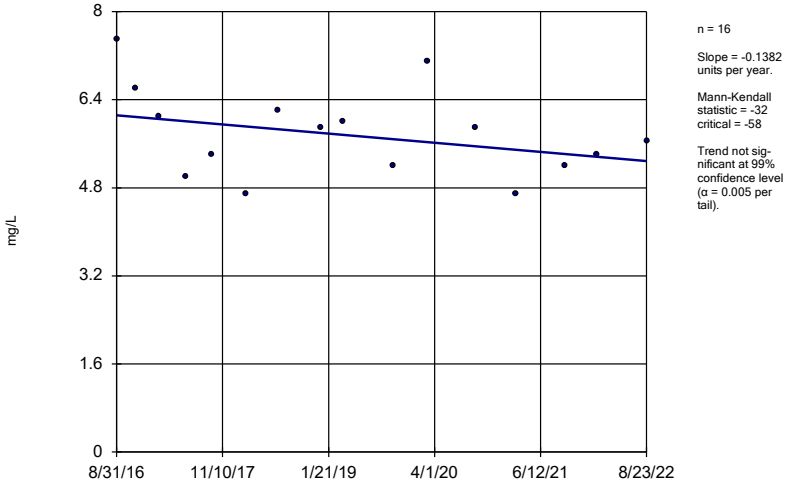
Constituent: pH, Field Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2I (bg)



n = 16

Slope = -0.1382 units per year.

Mann-Kendall statistic = -32 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

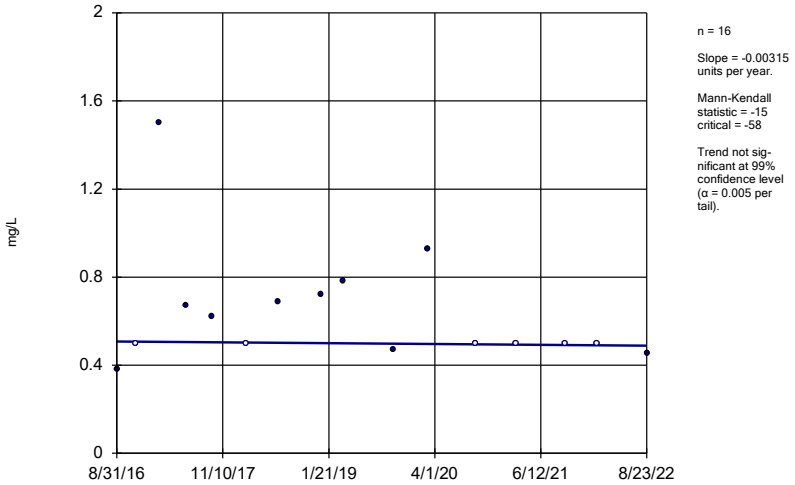
Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2S (bg)



n = 16

Slope = -0.00315 units per year.

Mann-Kendall statistic = -15
critical = -58

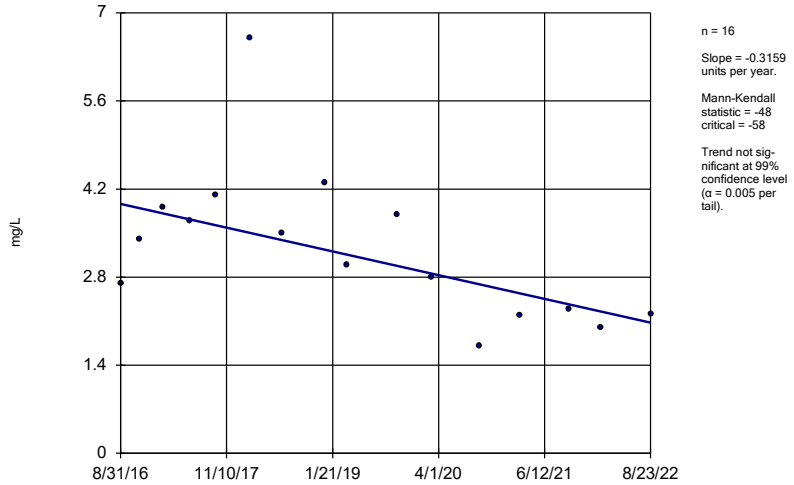
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-5I (bg)



n = 16

Slope = -0.3159 units per year.

Mann-Kendall statistic = -48
critical = -58

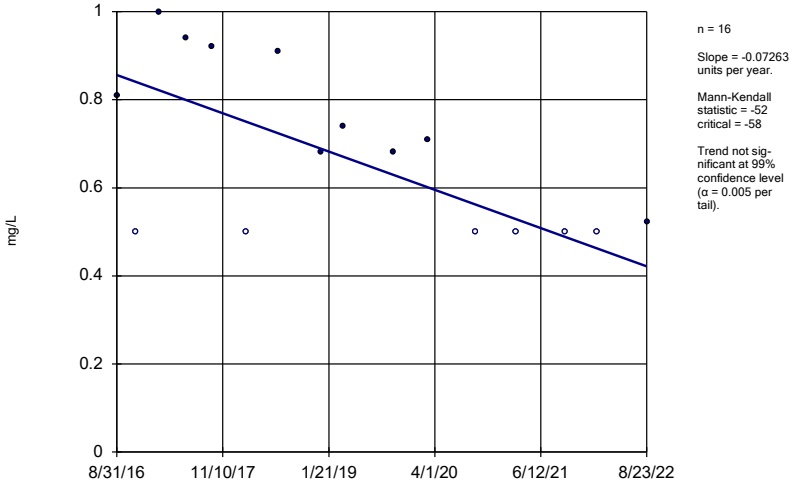
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5S (bg)



n = 16

Slope = -0.07263 units per year.

Mann-Kendall statistic = -52
critical = -58

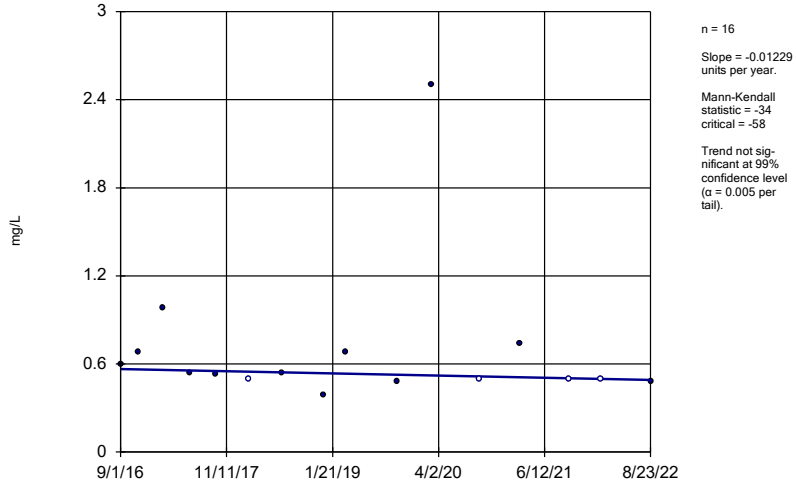
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-6S (bg)



n = 16

Slope = -0.01229 units per year.

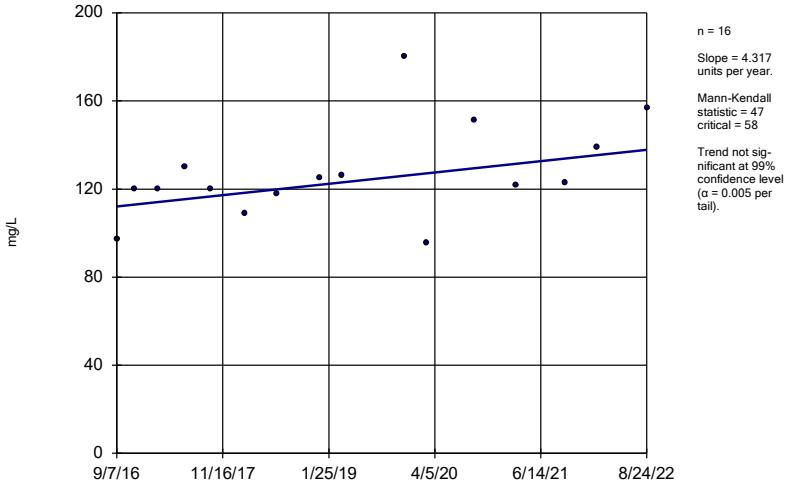
Mann-Kendall statistic = -34
critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate 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-17S



n = 16

Slope = 4.317 units per year.

Mann-Kendall statistic = 47 critical = 58

Trend not significant at 99% confidence level (α = 0.005 per tail).

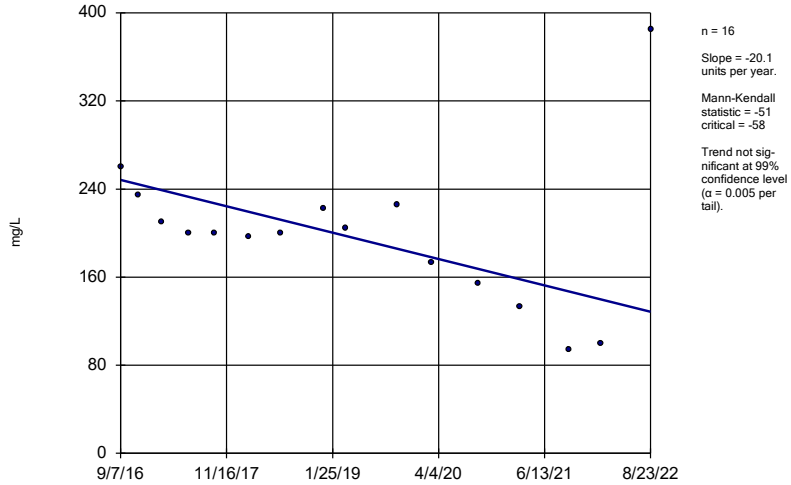
Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-33S



n = 16

Slope = -20.1 units per year.

Mann-Kendall statistic = -51 critical = -58

Trend not significant at 99% confidence level (α = 0.005 per tail).

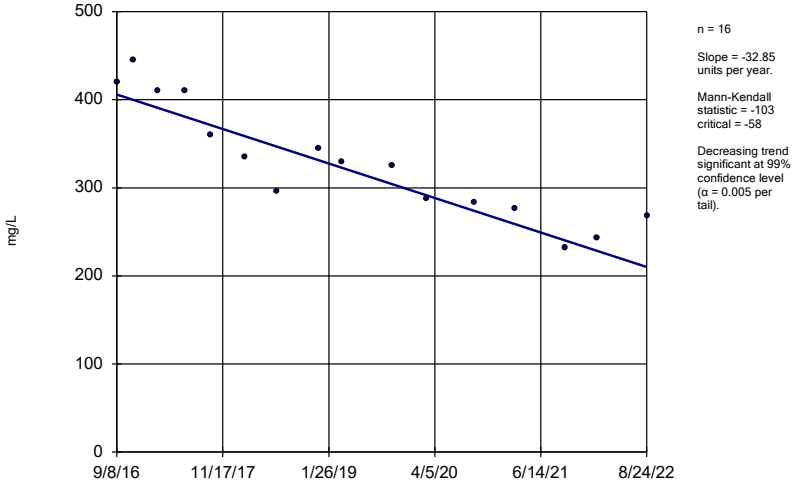
Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-34S



n = 16

Slope = -32.85 units per year.

Mann-Kendall statistic = -103 critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

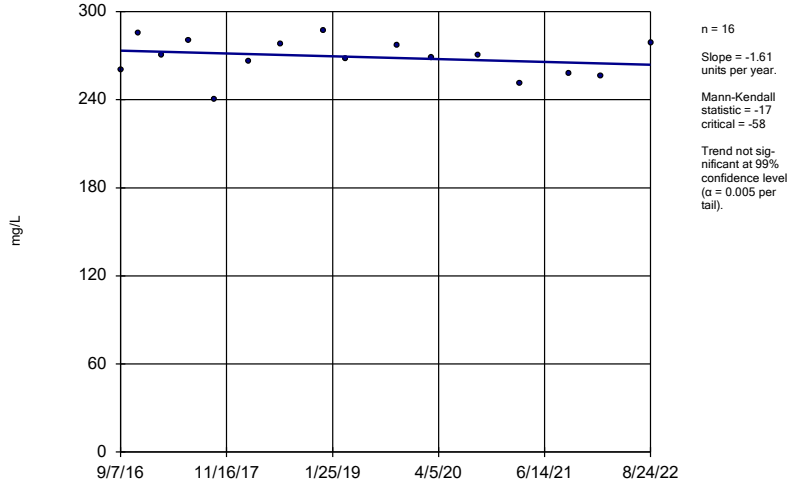
Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-35S



n = 16

Slope = -1.61 units per year.

Mann-Kendall statistic = -17 critical = -58

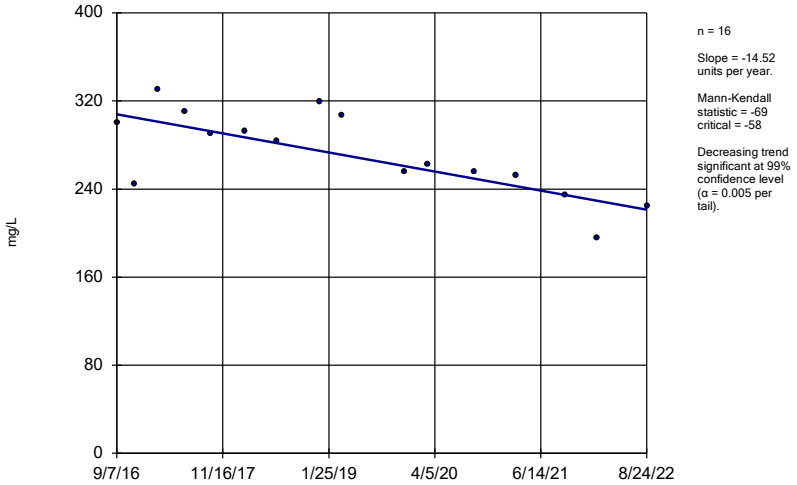
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate 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-36S



n = 16

Slope = -14.52 units per year.

Mann-Kendall statistic = -69
critical = -58

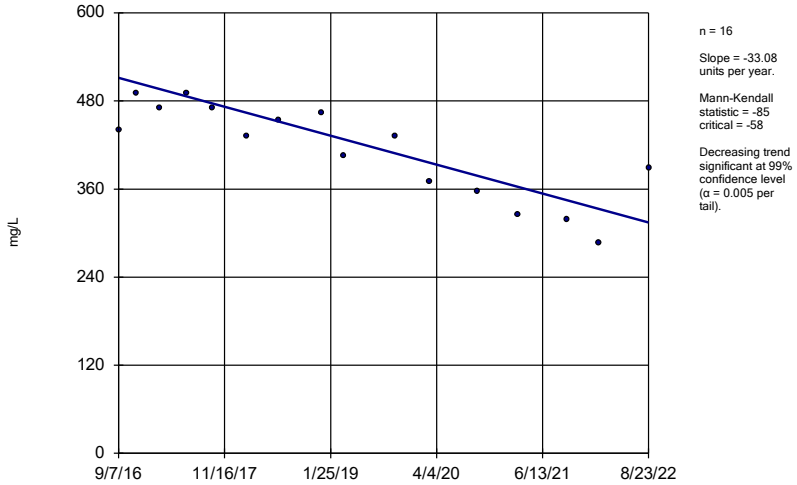
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-38S



n = 16

Slope = -33.08 units per year.

Mann-Kendall statistic = -85
critical = -58

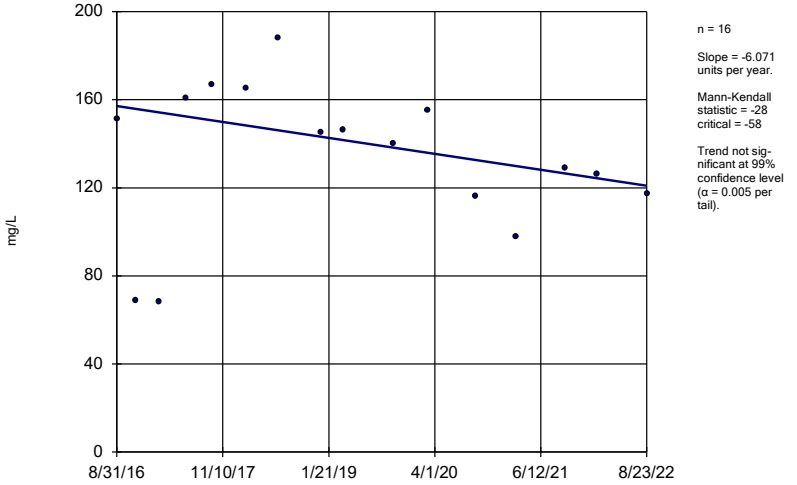
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-2I (bg)



n = 16

Slope = -6.071 units per year.

Mann-Kendall statistic = -28
critical = -58

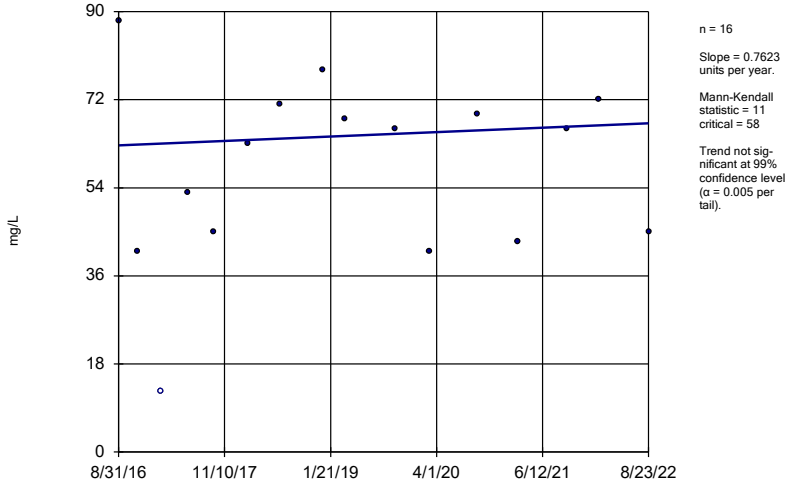
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2S (bg)



n = 16

Slope = 0.7623 units per year.

Mann-Kendall statistic = 11
critical = 58

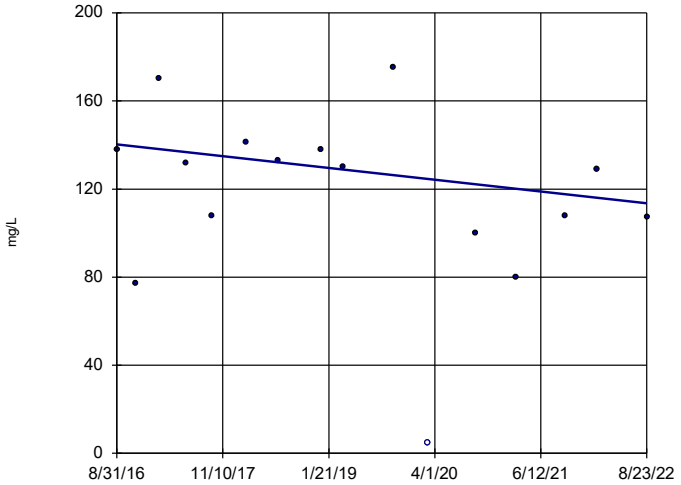
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5I (bg)



n = 16

Slope = -4.462 units per year.

Mann-Kendall statistic = -30
critical = -58

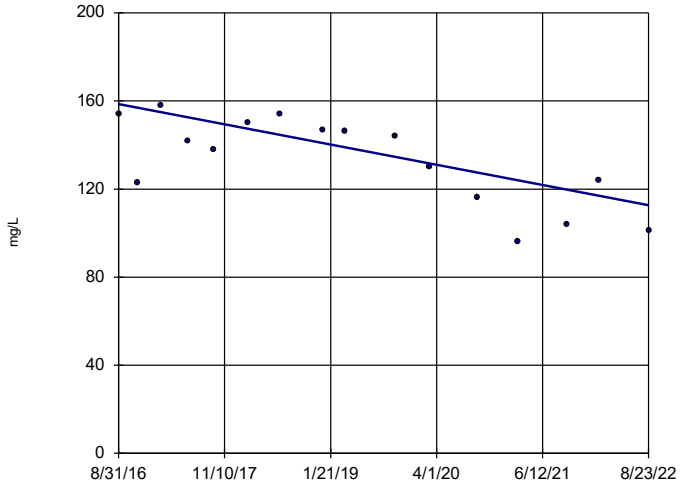
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-5S (bg)



n = 16

Slope = -7.658 units per year.

Mann-Kendall statistic = -65
critical = -58

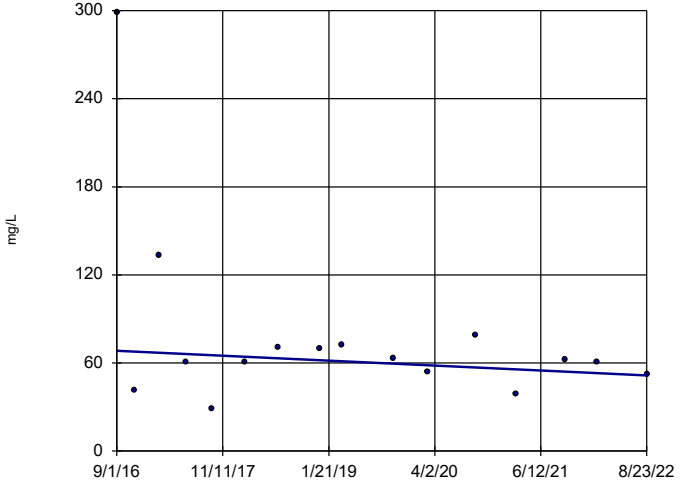
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWA-6S (bg)



n = 16

Slope = -2.774 units per year.

Mann-Kendall statistic = -23
critical = -58

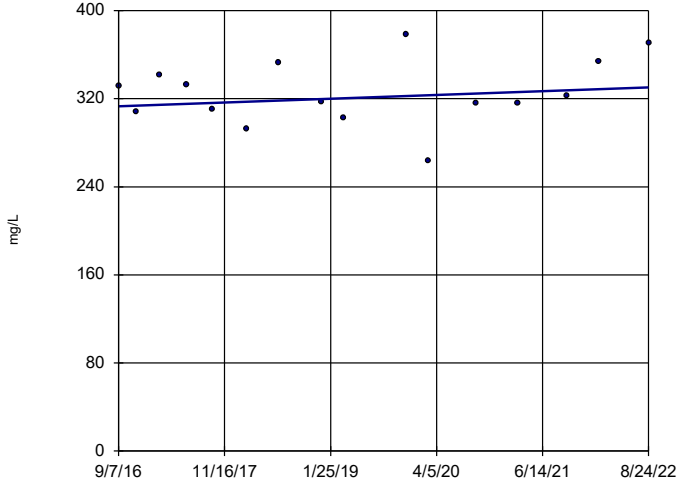
Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-17S



n = 16

Slope = 2.861 units per year.

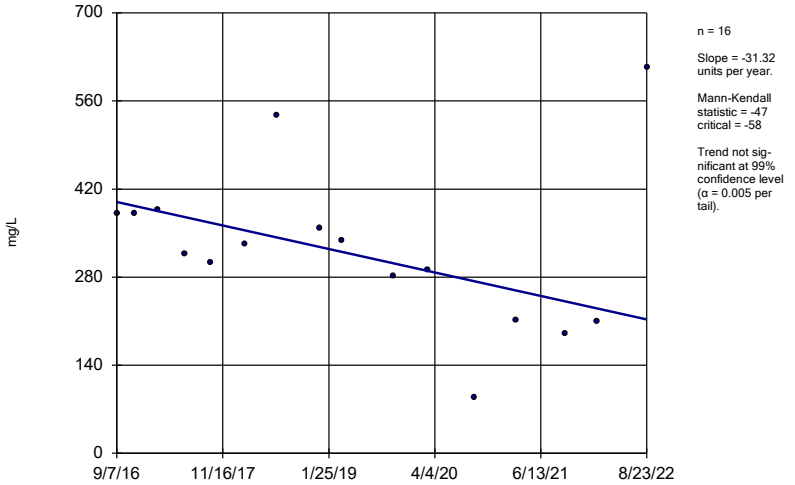
Mann-Kendall statistic = 19
critical = 58

Trend not sig-nificant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 PM View: Pond E - Trend Tests
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator

BRGWC-33S



n = 16

Slope = -31.32 units per year.

Mann-Kendall statistic = -47
critical = -58

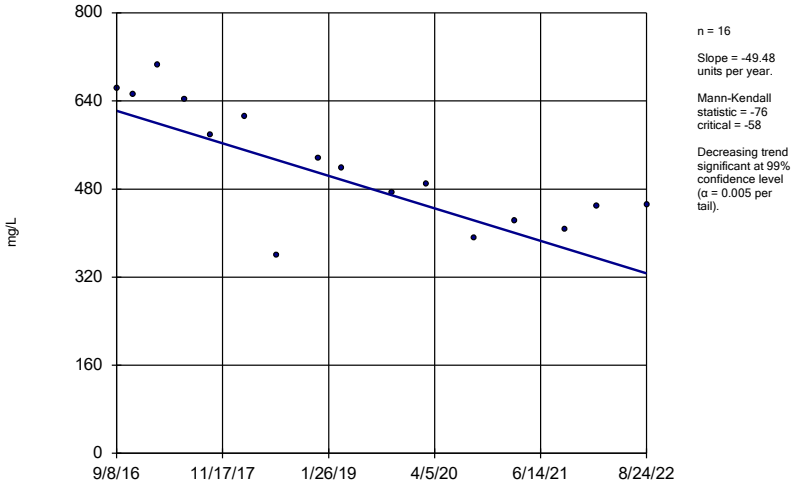
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-34S



n = 16

Slope = -49.48 units per year.

Mann-Kendall statistic = -76
critical = -58

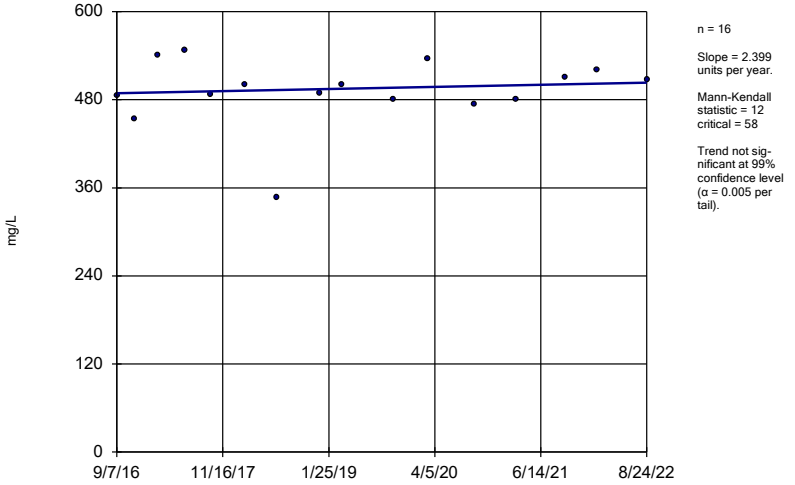
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-35S



n = 16

Slope = 2.399 units per year.

Mann-Kendall statistic = 12
critical = 58

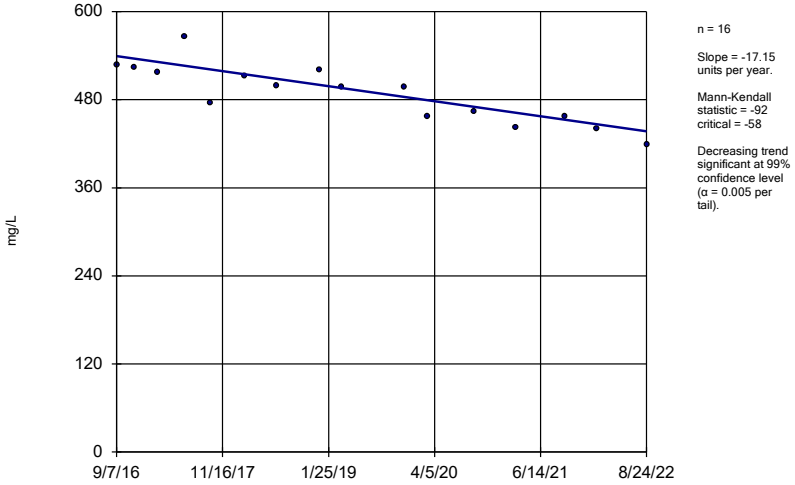
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-36S



n = 16

Slope = -17.15 units per year.

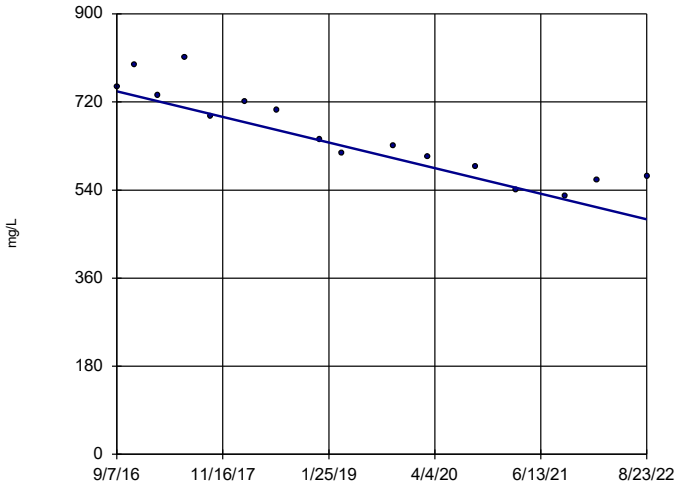
Mann-Kendall statistic = -92
critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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-38S



n = 16

Slope = -43.84 units per year.

Mann-Kendall statistic = -96
critical = -58

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids Analysis Run 9/30/2022 4:21 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 Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	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

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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	18	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: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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	18	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)

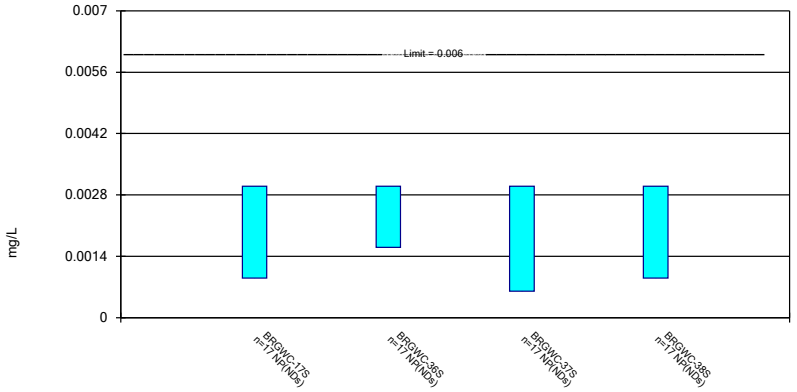
Confidence Intervals - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 1:25 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	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

Compliance Limit is not exceeded. Per-well alpha = 0.01.

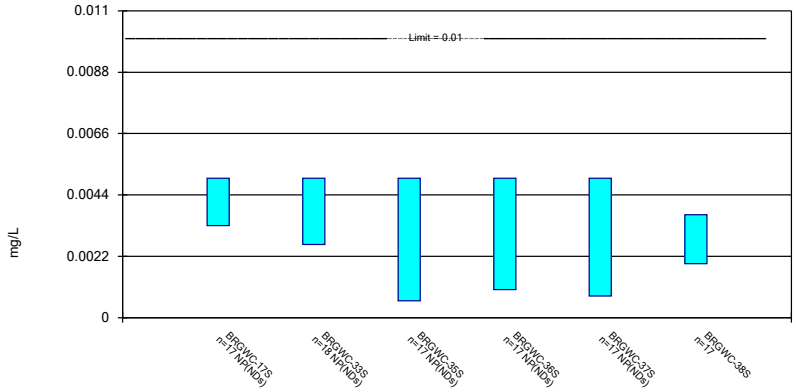


Constituent: Antimony Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

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.

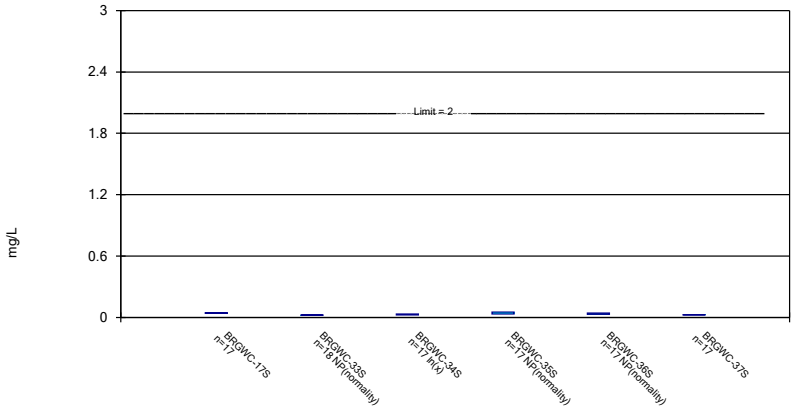


Constituent: Arsenic Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

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.

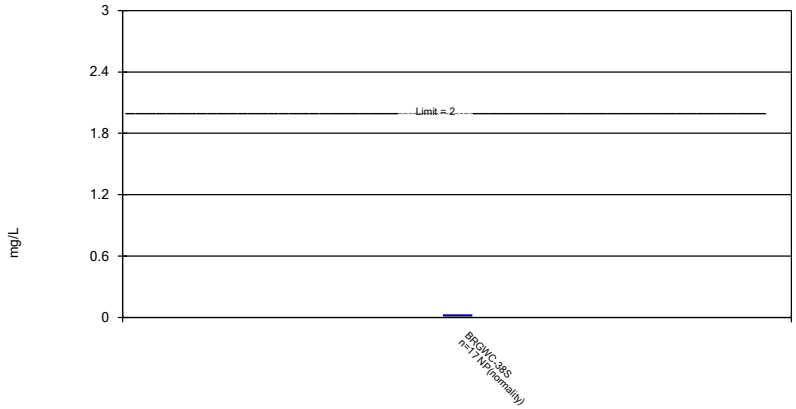


Constituent: Barium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

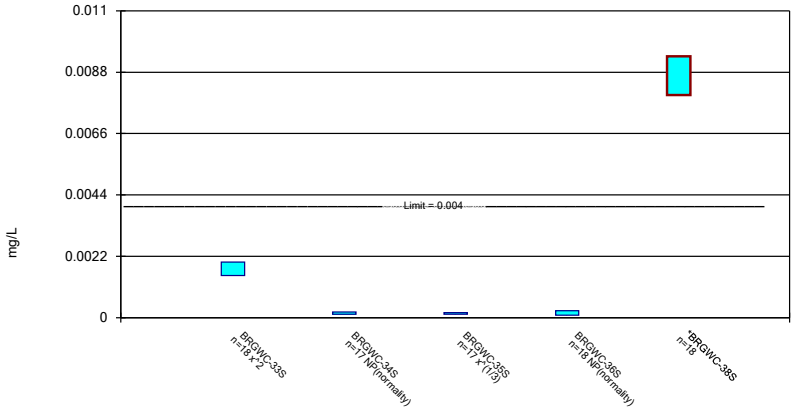
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: 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

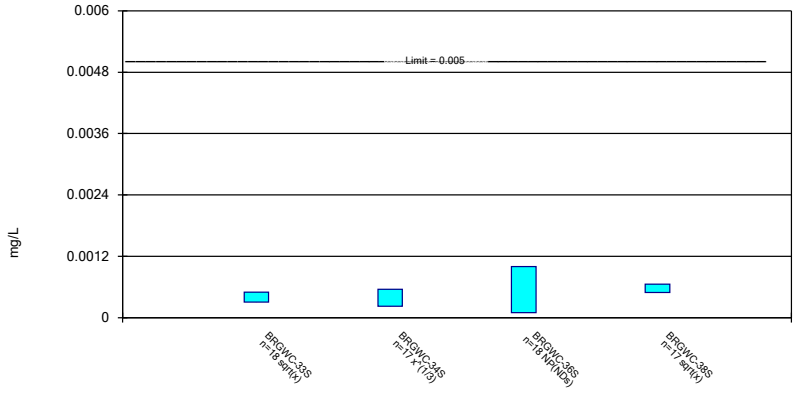
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium 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

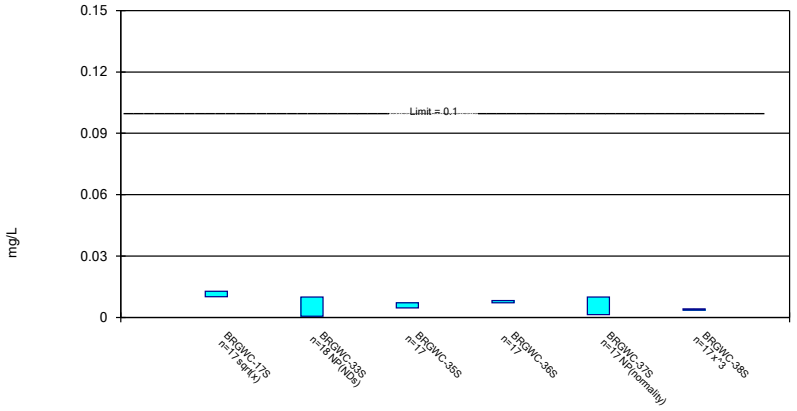
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Parametric and Non-Parametric (NP) Confidence Interval

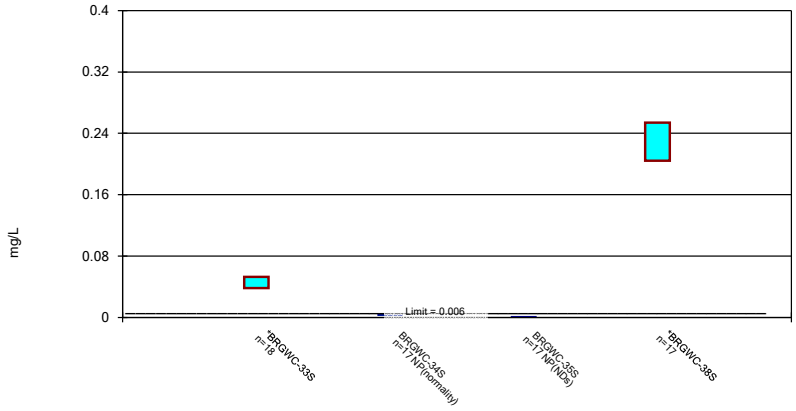
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



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

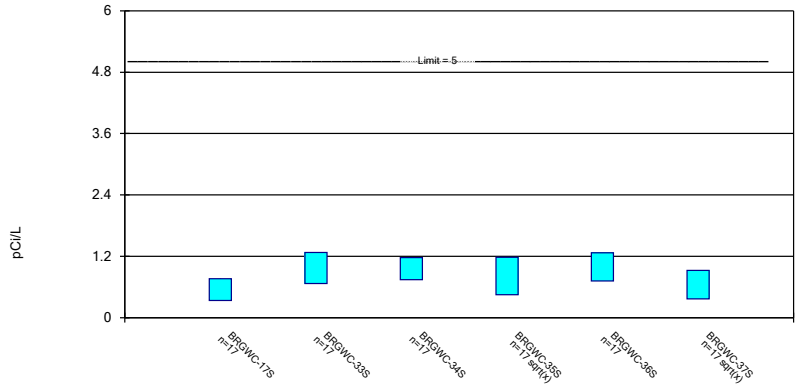
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt 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.

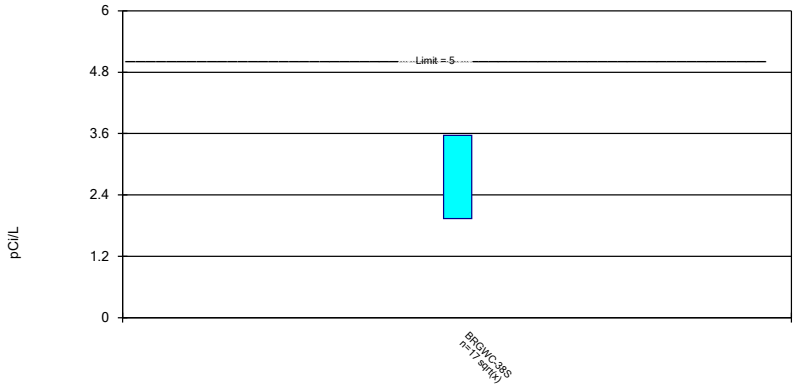


Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence In
Plant Branch Client: Southern Company Data: Plant Branch AP

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.

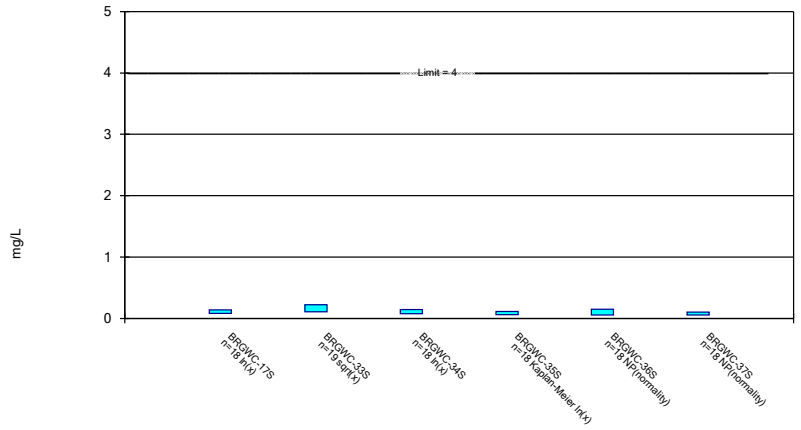


Constituent: Combined Radium 226 + 228 Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence In
Plant Branch Client: Southern Company Data: Plant Branch AP

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.

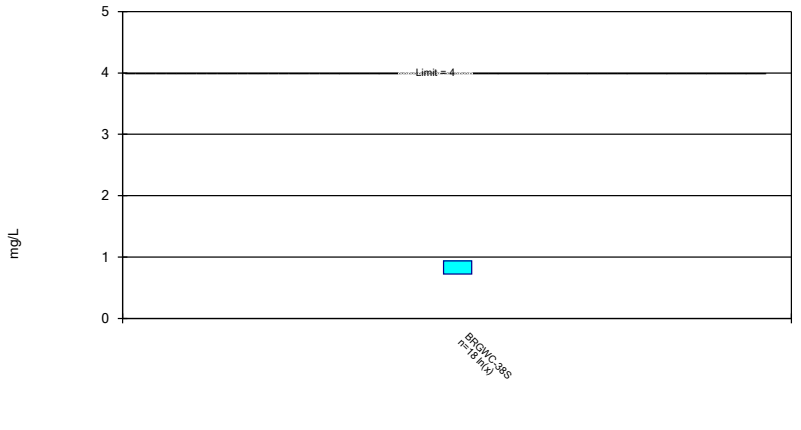


Constituent: Fluoride Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Parametric Confidence Interval

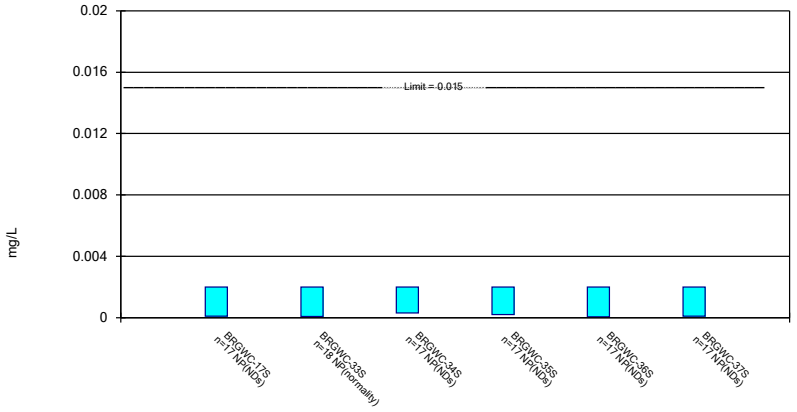
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

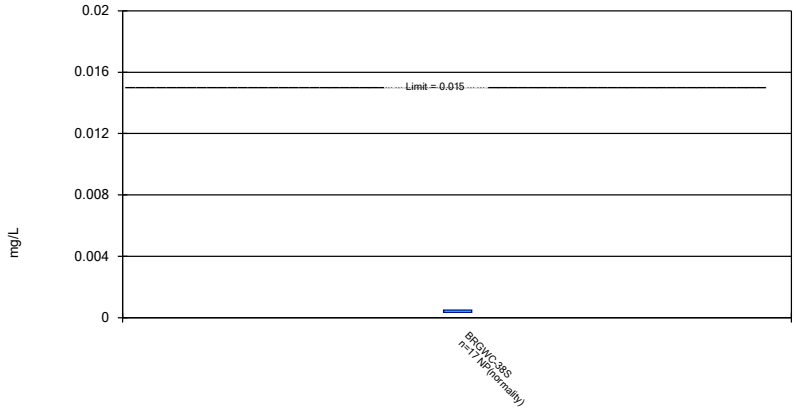


Constituent: Lead Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

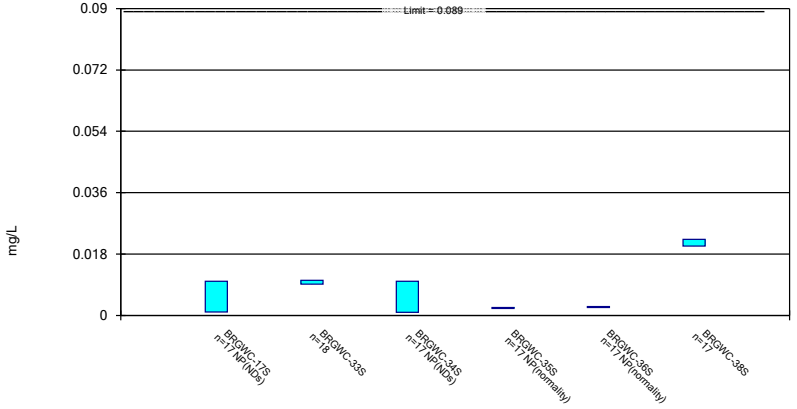


Constituent: Lead Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

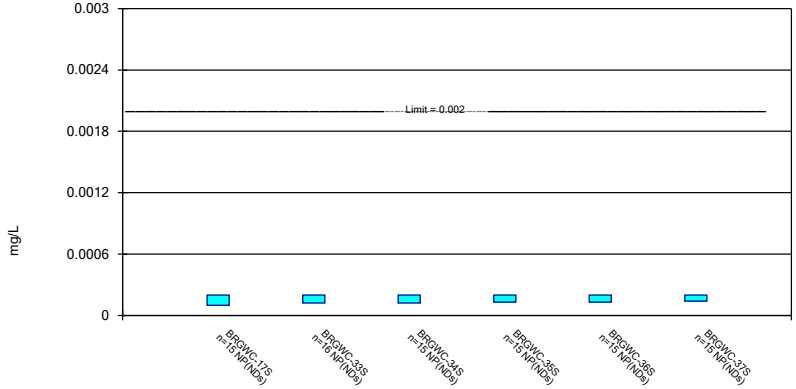


Constituent: Lithium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

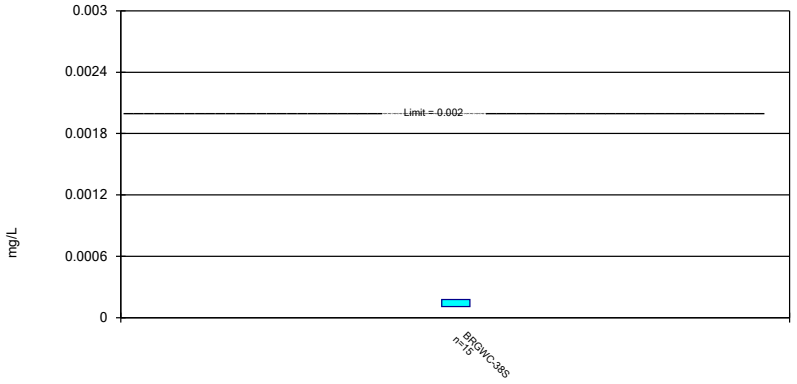
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury 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

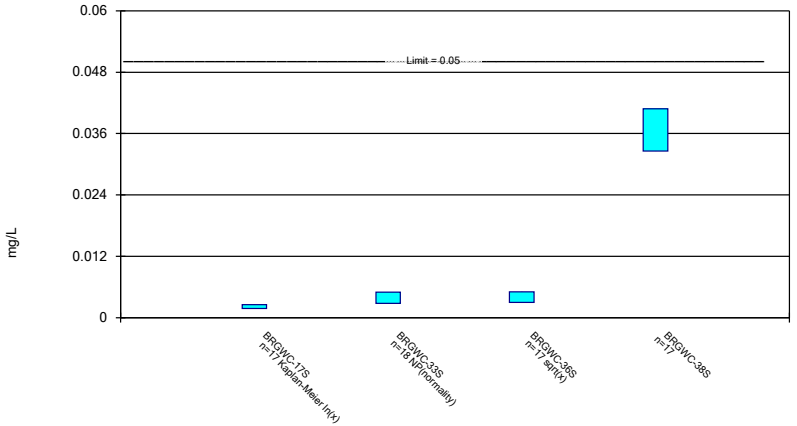
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury 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

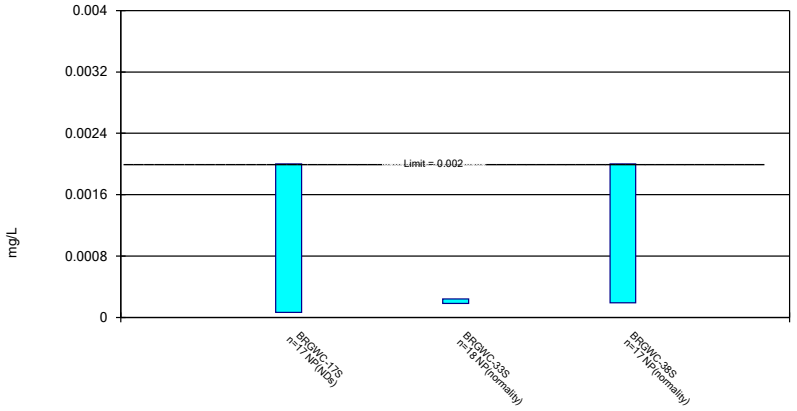
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 11/4/2022 1:24 PM View: Pond E - Confidence Intervals
Plant Branch Client: Southern Company Data: Plant Branch AP

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

Constituent: Cobalt (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-38S
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

Confidence Interval

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)			
11/17/2016	0.145 (U)	1.02 (U)	0.613	0.729 (U)		
11/18/2016					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)
12/18/2018		1.64 (UX)	1.22			
12/19/2018	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)
10/16/2019		1.16 (U)	0.561 (U)	1.69		0.815 (U)
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)
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	
Mean	0.5488	0.9716	0.9605	0.8735	0.9905	0.6882
Std. Dev.	0.3425	0.4857	0.3438	0.6993	0.4415	0.5156
Upper Lim.	0.7634	1.276	1.176	1.178	1.267	0.9215
Lower Lim.	0.3342	0.6673	0.7451	0.4487	0.7139	0.3675

Confidence Interval

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

Confidence Interval

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-17S	BRGWC-33S	BRGWC-34S	BRGWC-35S	BRGWC-36S	BRGWC-37S
9/7/2016	0.22 (J)	0.19 (J)		0.34	0.18 (J)	
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)	
2/22/2017	0.11 (J)	0.21 (J)	0.17 (J)	0.09 (J)		
2/23/2017					0.07 (J)	0.1 (J)
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)
9/27/2017		0.42	0.4			
9/28/2017	0.05 (J)			<0.1	<0.1	<0.1
2/15/2018	<0.1	0.42	<0.1	<0.1	<0.1	<0.1
6/27/2018	0.093 (J)	0.32	0.21 (J)	0.22 (J)		
6/28/2018					0.51 (J+X)	<0.1
12/18/2018		0.28 (J)	0.12 (J)			
12/19/2018	0.16 (J)			0.11 (J)	<0.1	0.094 (J)
3/19/2019	0.1 (J)				<0.1	
3/20/2019		0.14 (J)	0.074 (J)	0.088 (J)		0.062 (J)
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
10/16/2019		0.17 (J)	0.13 (J)	0.08 (J)		0.059 (J)
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)
8/19/2020	0.1	0.11	0.074 (J)	0.06 (J)	0.051 (J)	0.055 (J)
9/16/2020	0.1	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	0.096 (J)			0.076 (J)		
9/22/2021	0.1	0.068 (J)	0.1		0.054 (J)	
9/23/2021				0.073 (J)		<0.1
2/1/2022	0.079 (J)	0.053 (J)	0.06 (J)	0.055 (J)	<0.1	
2/2/2022						<0.1
8/23/2022		0.187				0.105
8/24/2022	0.274		0.14	<0.1	0.194	
Mean	0.1183	0.1753	0.1214	0.1026	0.1194	0.08083
Std. Dev.	0.05866	0.1115	0.08229	0.07216	0.1078	0.02744
Upper Lim.	0.1403	0.2244	0.1433	0.1134	0.15	0.1
Lower Lim.	0.08203	0.1072	0.07674	0.05857	0.054	0.055

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

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

Confidence Interval

Constituent: Thallium (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-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.	N	%NDs	Normality	Xform	Alpha	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

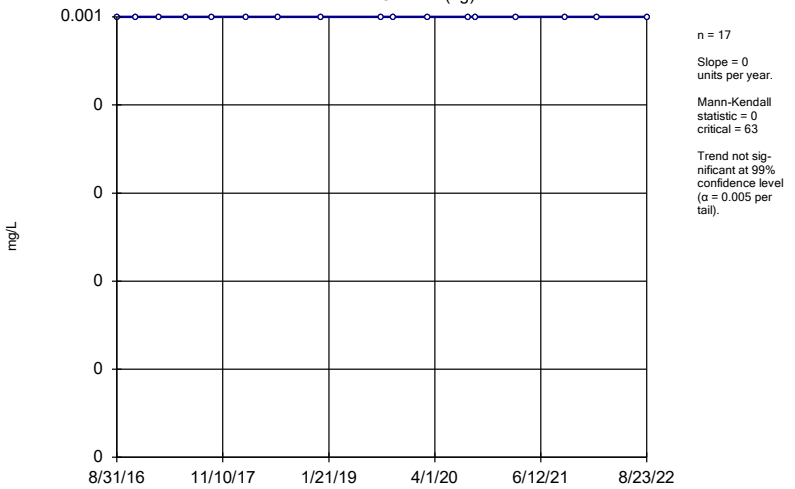
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/4/2022, 3:21 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Beryllium (mg/L)	BRGWA-2I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-2S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5I (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-5S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	BRGWA-6S (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Beryllium (mg/L)	**BRGWC-38S**	**-0.0004476**	**-77**	**-68**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.01**	**NP**
Cobalt (mg/L)	BRGWA-2I (bg)	0	-16	-63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	**BRGWA-2S (bg)**	**-0.0004021**	**-70**	**-63**	**Yes**	**17**	**11.76**	**n/a**	**n/a**	**0.01**	**NP**
Cobalt (mg/L)	BRGWA-5I (bg)	-0.0001378	-49	-53	No	15	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-5S (bg)	0	26	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	BRGWA-6S (bg)	0	9	63	No	17	70.59	n/a	n/a	0.01	NP
Cobalt (mg/L)	**BRGWC-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**

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2I (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 63

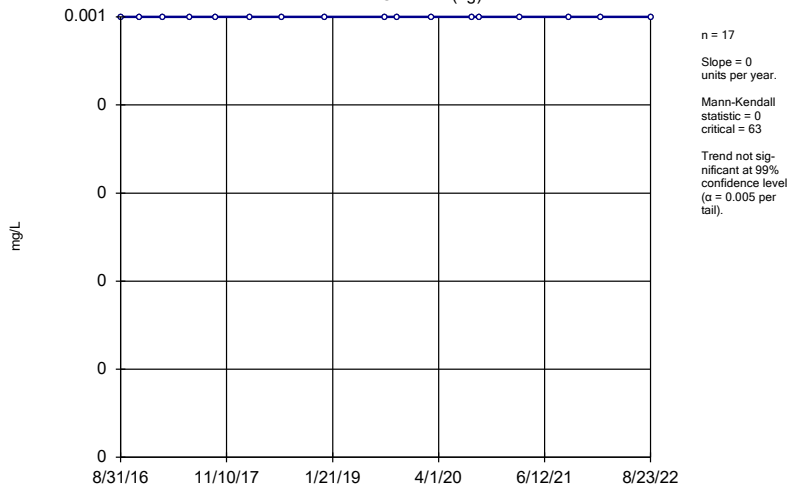
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2S (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

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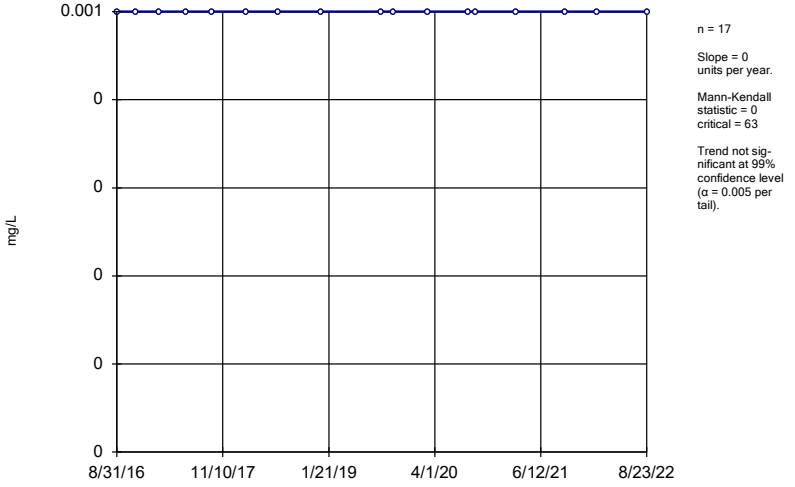


n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 63

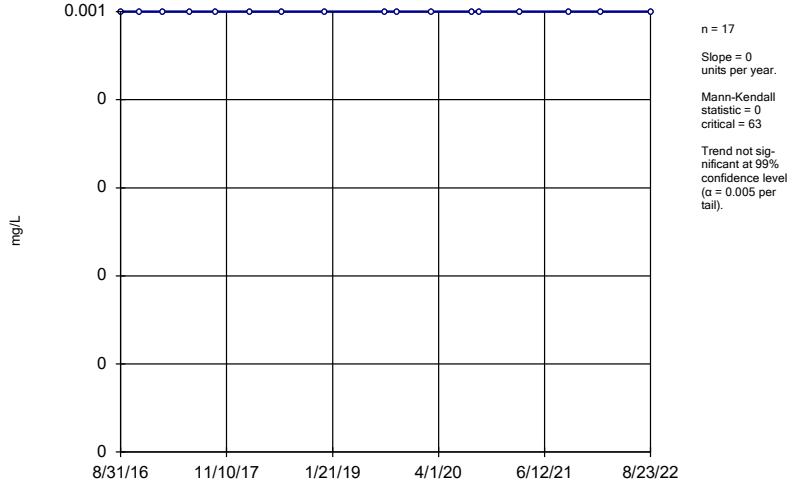
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5S (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 63

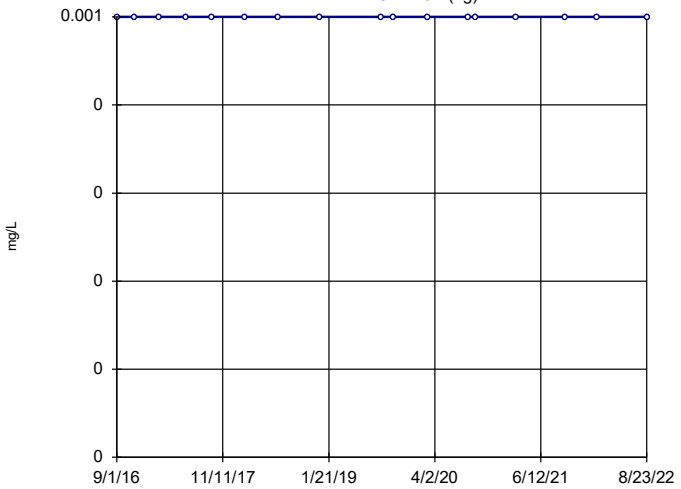
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-6S (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 63

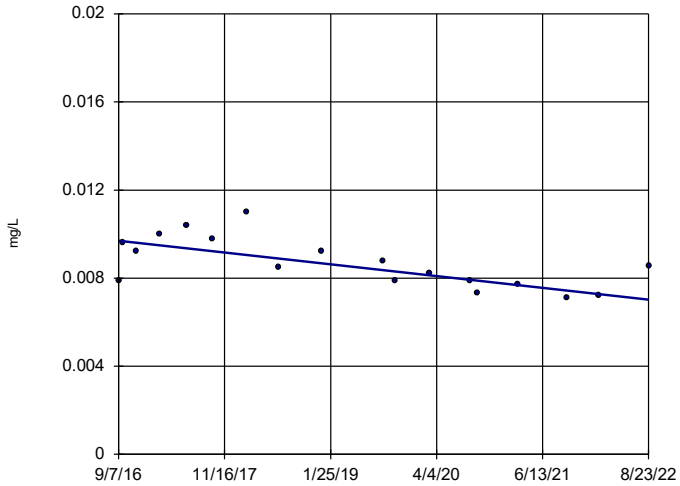
Trend not significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-38S



n = 18

Slope = -0.0004476 units per year.

Mann-Kendall statistic = -77 critical = -68

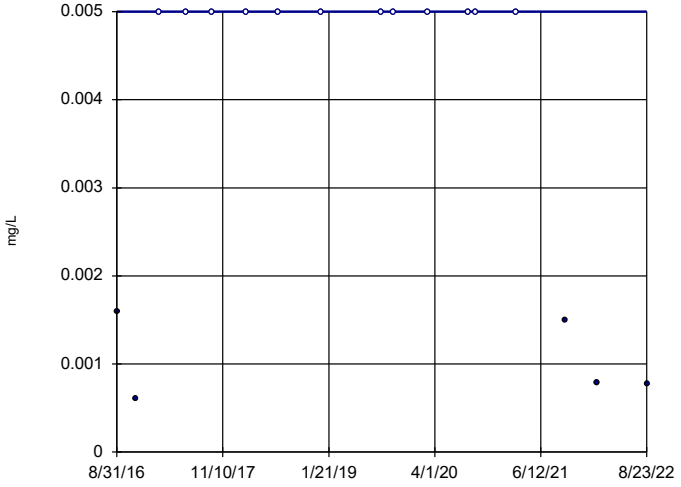
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-2I (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = -16 critical = -63

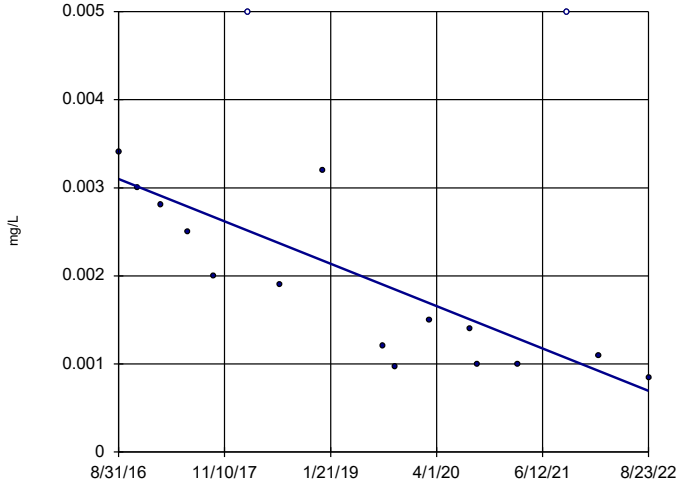
Trend not significant at 99% confidence level (α = 0.005 per tail).

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.

Sen's Slope Estimator

BRGWA-2S (bg)



n = 17

Slope = -0.0004021 units per year.

Mann-Kendall statistic = -70 critical = -63

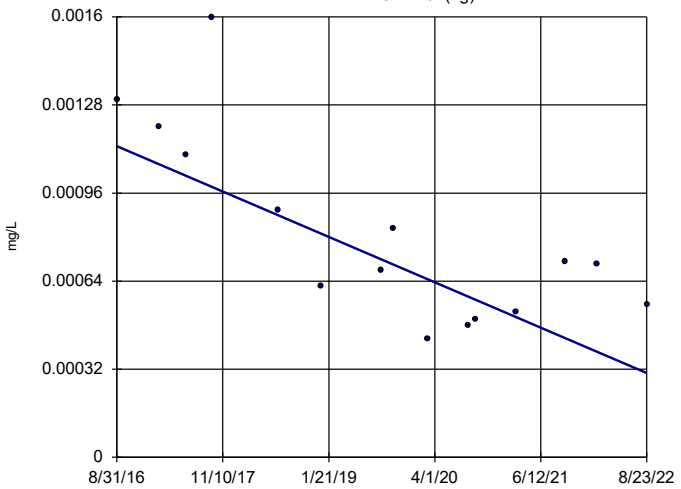
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

Sen's Slope Estimator

BRGWA-5I (bg)



n = 15

Slope = -0.0001378 units per year.

Mann-Kendall statistic = -49 critical = -53

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests

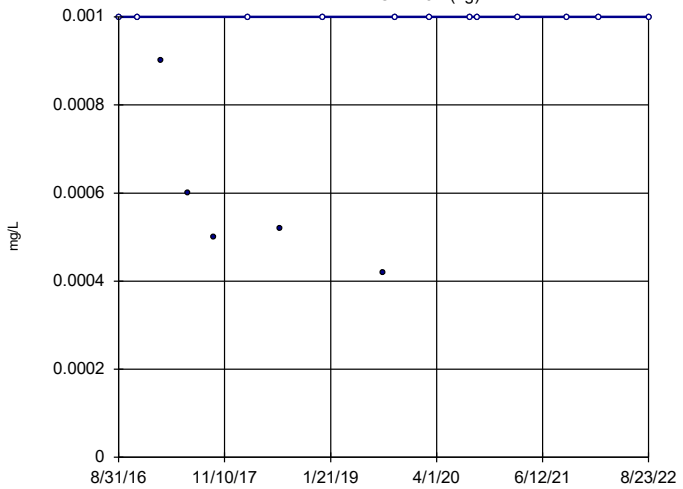
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-5S (bg)



n = 17

Slope = 0 units per year.

Mann-Kendall statistic = 26 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests

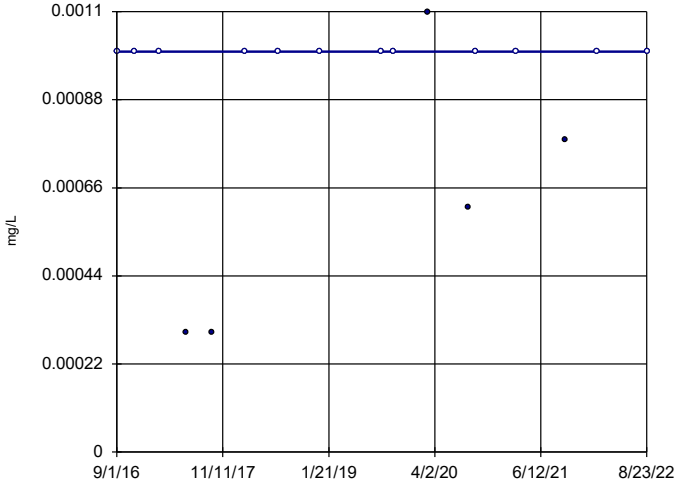
Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

BRGWA-6S (bg)



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Slope = 0 units per year.

Mann-Kendall statistic = 9 critical = 63

Trend not significant at 99% confidence level (α = 0.005 per tail).

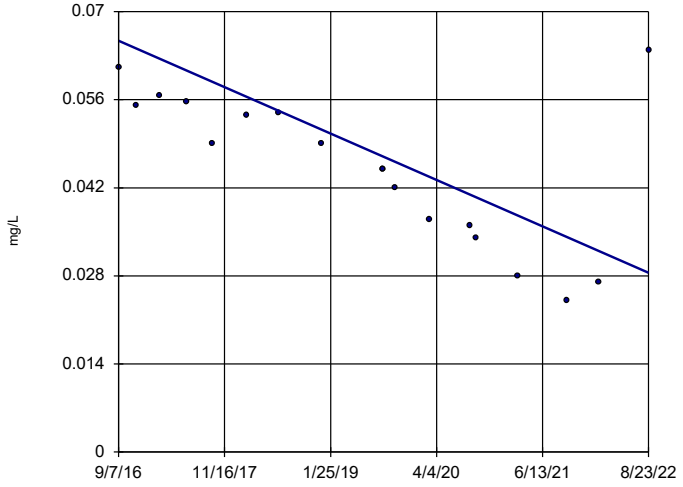
Constituent: Cobalt Analysis Run 11/4/2022 3:20 PM View: Pond E - Appendix IV Trend Tests

Plant Branch Client: Southern Company Data: Plant Branch AP

Sanitas™ v.9.6.35 Groundwater Stats Consulting. UG

Sen's Slope Estimator

BRGWC-33S



n = 18

Slope = -0.006188 units per year.

Mann-Kendall statistic = -105 critical = -68

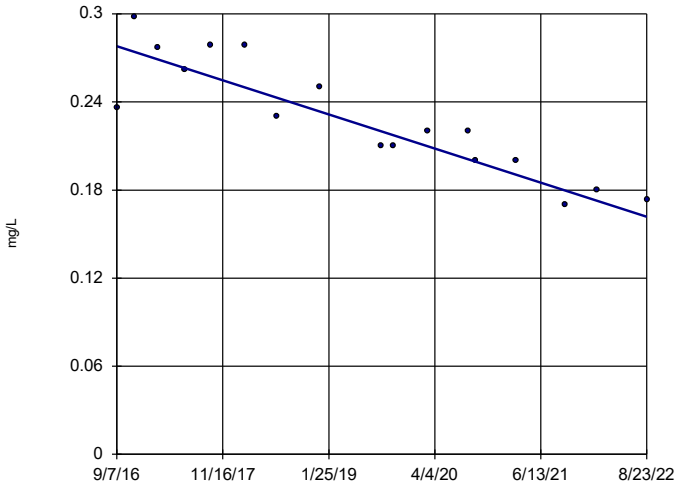
Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

Sen's Slope Estimator

BRGWC-38S



n = 17

Slope = -0.01947 units per year.

Mann-Kendall statistic = -98
critical = -63

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

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

APPENDIX F

Risk Evaluation

RISK EVALUATION REPORT
PLANT BRANCH
ASH POND E
MILLEDGEVILLE, PUTNAM COUNTY, GEORGIA

Prepared for

Georgia Power
241 Ralph McGill Boulevard
Atlanta, Georgia 30308

Prepared by

Geosyntec Consultants
1255 Roberts Blvd., Suite 200,
Kennesaw, Georgia 30144

March 2023

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LIST OF ACRONYMS AND ABBREVIATIONS

AP	Ash Pond
CCR	Coal Combustion Residual
CEM	Conceptual Exposure Model
CFR	Code of Federal Regulations
COI	Constituent of Interest
COPI	Constituent of Potential Interest
EPC	Exposure Point Concentration
EPD	[Georgia] Environmental Protection Division
ft	feet
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
HSRA	Hazardous Site Response Act
IRIS	Integrated Risk Information System
mg/L	Milligrams per liter
MSL	Above Mean Sea Level
ProUCL	ProUCL software version 5.1
PWR	Partially Weathered Rock
PZ	Piezometer
RAGS	Risk Assessment Guidance for Superfund
RME	Reasonable Maximum Exposure
RRS	Risk Reduction Standards
RSL	Regional Screening Level
SSL	Statistically Significant Level
TWR	Transitionally Weathered Rock
UCL	95 Percent Upper Confidence Limit of the Arithmetic Mean
USEPA	United States Environmental Protection Agency
VRP	Voluntary Remediation Program

EXECUTIVE SUMMARY

Georgia Power's Plant Branch (site) was formerly operated as a coal-fired power plant from the 1960's until retirement in 2015. It is located approximately eight miles north of Milledgeville in Putnam County, Georgia. Coal combustion residual (CCR) material resulting from such power generation has historically been transferred and stored at Ash Ponds (AP) A, B, C, D, and E in compliance with applicable regulations. The former Ash Pond A, the first ash pond constructed at the facility, was taken out of service in the late 1960s and was closed in April 2016 by the removal and relocation of its stored CCR to AP-E. AP-E will be closed by removal, specifically, by relocation of the CCR stored in those ash ponds to a new, permitted, CCR landfill located on the plant property. Because Plant Branch ceased producing electricity prior to April 2015, none of the ash ponds are subject to the Federal CCR Rule. This report focuses on AP-E.

This report presents the results of a risk evaluation for CCR constituents[1] exhibiting statistically significant levels (SSLs) in groundwater at AP-E from samples collected by Georgia Power in compliance with the State CCR Rule between 2016 and August 2022. The risk evaluation was performed in support of the *Assessment of Corrective Measures Report - Plant Branch - Ash Pond E (AP-E)* (Geosyntec, 2022a). A conservative, health-protective approach was used that is consistent with USEPA risk assessment guidance, Georgia Environmental Protection Division (EPD) regulations and guidance, and standard practice for risk assessment in the State of Georgia. Beryllium and cobalt have been identified as SSL-related constituents using the groundwater protection standards (GWPSs) established for AP-E in accordance with the State CCR Rule in the *2022 Annual Groundwater Monitoring and Corrective Action Report – Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b).

Using this approach that includes multiple conservative assumptions, the SSL constituents, beryllium and cobalt, are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater or surface water is warranted. Compliance monitoring for AP-E will continue pursuant to the requirements of the State CCR Rule. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.

[1] The constituents included in the risk evaluation also occur naturally in the site geologic setting.

Consistent with USEPA guidance, this risk evaluation used a tiered approach to evaluate potential risks, which included the following steps:

1. Development of a conceptual exposure model (CEM) for AP-E.
2. Initial groundwater risk screening: Comparison of groundwater concentrations of SSL-related constituents to conservative, health-protective criteria and/or background concentrations to assess whether they pose a risk to human health.
3. Refined groundwater risk evaluation: Perform a more refined analysis of Constituents of Potential Interest (COPIs) that were not screened out in the initial risk screening to assess whether they pose a potential risk to human health.
4. Development of risk conclusions and identification of associated uncertainties.

Using this approach that includes multiple conservative assumptions, SSL-related constituents evaluated from AP-E are not expected to pose a risk to human health or the environment. The SSL-related constituents are delineated to concentrations below analytical detection limits that are less than the applicable health-protective screening levels in on-site groundwater monitoring wells. Therefore, no further risk evaluation for groundwater is warranted. In addition, because SSL-related constituents in groundwater were delineated within the plant property boundary, evaluation of off-site ecological receptors associated with the surface water pathway was not necessary. Compliance monitoring for AP-E will continue pursuant to the requirements of the State CCR Rule. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.

1 INTRODUCTION

This report summarizes a risk evaluation of AP-E at Georgia Power's Plant Branch (site) located in Milledgeville, Georgia in Putnam County (**Figure 1**). The risk evaluation was performed in support of the *Assessment of Corrective Measures – Plant Branch Ash Pond E* (Geosyntec, 2022a). AP-E is located to the northwest of Ash Ponds B, C, and D and is bounded by Beaver Dam Creek to the east. Plant Branch ceased producing electricity prior to April 2015. Therefore, AP-E is not subject to the Federal CCR Rule. Georgia Power is currently in the permitting process to close AP-E in accordance with the State CCR Rule. A CCR Unit Solid Waste Handling Permit application for AP-E was submitted to GA EPD in November 2018 and is under review. AP-E will be closed by removal, specifically, by relocation of the CCR stored in those ash ponds to a new CCR landfill located on the plant property.

This risk evaluation provides additional technical review of the human health and environmental protectiveness associated with the planned closure of AP-E with respect to constituent concentrations in groundwater identified at SSLs above the GWPS. USEPA revised the Federal CCR Rule on July 30, 2018, updating the GWPS for cobalt, lead, lithium, and molybdenum values. On February 22, 2022, EPD adopted the federal GWPS for cobalt, lead, lithium, and molybdenum under 40 CFR §257.95(h) (EPD, 2022), which established the GWPS for these constituents as the higher of background concentrations or 0.006 milligrams per liter (mg/L), 0.015 mg/L, 0.040 mg/L, and 0.100 mg/L, respectively.

The risk evaluation relies on a conservative, health-protective approach that is consistent with the risk approaches outlined in Voluntary Remediation Program (VRP) (Georgia Voluntary Remediation Act, O.C.G.A. § 12-8-100) and components of the Risk Assessment Guidance for Superfund (RAGS) as included in the USEPA Regional Screening Levels (RSLs) User's Guide (USEPA, 2022a). This evaluation also incorporates principles and assumptions consistent with the State CCR Rule. The risk evaluation includes the development of a site-specific CEM and a stepwise risk screening process for identified SSL-related constituents for AP-E.

Beryllium and cobalt were identified as SSL-related constituents under the State CCR Rule in the following wells:

- Beryllium: BRGWC-38S;
- Cobalt: BRGWC-33S and BRGWC-38S.

The remainder of the report is organized as follows:

- ***Section 2, Basis and Background for the Development of the Conceptual Exposure Model*** – Presents site-specific information related to the site history, monitoring

network, topography and surface hydrology, geology and hydrogeology, potential transport pathways, and receptors that could potentially be exposed to SSL-related constituents.

- ***Section 3, Risk Evaluation Screening*** – Describes the process for the initial risk-based screening of SSL-related constituents to identify COPIs in groundwater.
- ***Section 4, Refined Risk Evaluation*** – Describes the risk screening process for the COPIs identified in groundwater, including calculation of exposure point concentrations (EPCs) and analysis of concentration trends over time.
- ***Section 5, Uncertainty Assessment*** – Describes the uncertainties associated with the risk screening process.
- ***Section 6, Conclusions*** – Presents the conclusions of the risk evaluation.
- ***Section 7, References*** – Provides reference information for the sources cited in this document.

2 BASIS AND BACKGROUND FOR THE DEVELOPMENT OF THE CONCEPTUAL EXPOSURE MODEL

This section provides a brief overview of the site location and operational history, site regulatory status, and geology/hydrogeology. A CEM representing the site-specific processes and conditions that are relevant to the potential migration of groundwater and potential exposure to SSL-related constituents has been developed based on a review and compilation of information previously presented in site documents, including the *Hydrogeologic Assessment Report (HAR) for Ash Pond E* (Geosyntec, 2020), *2021 Semiannual Groundwater Monitoring and Corrective Action Report – Plant Branch Ash Pond E (AP-E)* (Golder, 2022), and *2022 Annual Groundwater Monitoring Report – Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b). The CEM includes a conservative evaluation of assumed potential transport pathways, exposure pathways and potential human and ecological receptors.

2.1 Site Description

The site is located in Putnam County, GA, approximately 8 miles north of Milledgeville. The property occupies approximately 3,200 acres and is bounded on the south and east by Lake Sinclair, which is an approximate 15,330-acre hydroelectric reservoir that was created in 1953 by the impoundment of the Oconee River. A site location map and a detailed site map is included as **Figure 1**. The site formerly operated as a coal-fired power plant since the 1960's until its retirement in 2015. Plant Branch is no longer active and is currently being decommissioned. During its operation, five ash ponds were used for management of the CCR on the plant property. These ponds are identified as Ponds A, B, C, D, and E. Ash Pond A, the first ash pond constructed at the site, was taken out of service in the late 1960's and was closed in April 2016 by the removal and relocation of its stored CCR to Ash Pond E. Ponds B, C, D, and E are currently inactive, and will be closed by removal by relocation of the stored CCR material to a proposed fully lined landfill located on the plant property (Geosyntec, 2022b).

The monitoring well network for AP-E is shown on **Figure 2**. Based on the conceptual site model and the observed hydrogeologic conditions at the site, downgradient well locations are distributed along the eastern and southern perimeter of AP-E in the direction of groundwater flow. Both background and downgradient wells are screened in the overburden, the transition-zone, and the upper bedrock as a single interconnected aquifer system.

2.1.1 Topography and Surface Hydrology

AP-E is located in the western half of the site property, which is generally topographically higher than the eastern portion of the property. Surface water drainage is to the northeast, east, and south. Several hilltops form a ridgeline west of AP-E. These hilltops form a topographic and surface water (and presumably groundwater) divide between the pond and the embayment to the west of the pond. Topographic relief across the site is less than 150 feet, with a

topographic high of nearly 485 feet above mean sea level (ft MSL) occurring along the topographic ridge west of AP-E, and with a topographic low at the downgradient toe of the dike on the east edge of the ash pond (approximately 360 ft MSL), where a tributary to Beaverdam Creek discharges into Lake Sinclair (Geosyntec, 2020).

2.1.2 Geology and Hydrogeology

The following information is provided in the *2022 Annual Groundwater Monitoring & Corrective Action Report – Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b) and presented below:

> *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. Overall, 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 forming a dendritic drainage pattern. These rocks are deeply weathered due to the humid climate and bedrock is typically overlain by a variably thick blanket of residual soils and saprolite. …Saprolitic soils and/or saprolitic rock vary in thickness across the Site but are generally encountered at or near ground surface. Saprolitic rock is also considered to be 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 soils, saprolite, and transitionally weathered rock, is collectively referred to as overburden.*
>
> . . . .
>
> *The uppermost aquifer at the Site is an unconfined regional groundwater aquifer that occurs in the regolith, but also within the PWR and fractured bedrock (transitizion zone). Generally, the water table surface at the Site is a subdued reflection of topography, with groundwater generally flowing east from the ridges west of Ash Pond E. Localized groundwater flow directions are influenced by variations in topography and the top of bedrock surface.*

The potentiometric surface contours provided in the *2022 Annual Groundwater Monitoring & Corrective Action Report – Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b) are provided on **Figure 3.**

2.2 Potential Transport Pathways

A variety of geologic, hydrogeologic, and geochemical mechanisms can occur in the subsurface and serve to attenuate constituent concentrations in groundwater such as soil or rock

characteristics, the local geology and hydrogeology, and the distance the groundwater must travel before reaching a potential receptor. A summary of the potential transport pathways is shown on the CEM in **Figure 4**.

Beaverdam Creek is located to the east of AP-E. The surface water flow direction for Beaverdam Creek is from north to south where it enters Lake Sinclair. A conservative assumption for this assessment was made that the groundwater from the site flows to either Beaverdam Creek or Lake Sinclair. In addition, for the purposes of this evaluation, both Beaverdam Creek and Lake Sinclair were assumed to represent a hydraulic discharge boundary for groundwater flow in the upper aquifer from the nearby region.

Concentrations of the SSL-related constituents were below their respective health-protective screening levels in wells on-site and upgradient of surface water bodies, as shown by the findings of the risk evaluation in Section 4.1.4. Therefore, evaluation of surface water was not necessary.

2.3 Potential Exposure Pathways and Receptors

The exposure pathways for groundwater were assumed to be complete for purposes of this risk evaluation and were used to identify potential receptors and estimate potential risk. The CEM (**Figure 4**) depicts the conservative potential exposure pathways and receptors included in the risk evaluation.

The following potential exposure pathways and receptors were considered:

- On-site industrial worker: The groundwater exposure pathway for the on-site industrial worker was considered incomplete because there are no wells on-site that are classified for use as potable wells.

- On-site construction worker: While there is a potential for limited exposure to groundwater by a future construction worker through dermal contact with on-site shallow groundwater during subsurface activities, future construction workers would be expected to have little to no direct contact with on-site groundwater due to safety procedures outlined in their site-specific health and safety plans.

- On-site resident: The groundwater exposure pathway for on-site residents was considered incomplete because the site is zoned as either Industrial and Manufacturing District or Agricultural District and there is no residential use on-site under current site conditions and future residential use of the site is considered unlikely (Putnam County, 2022).

- Off-site industrial/construction worker: The potential for off-site worker exposure through direct contact with groundwater was addressed qualitatively through the evaluation of hypothetical off-site residential receptors. Health-protective screening levels for residential receptors would be more conservative than industrial and construction worker screening levels.

- Off-site resident: The groundwater exposure pathway for hypothetical off-site residential receptors was conservatively assumed to be potentially complete. Nearby zoning is either zoned Agricultural District (the surrounding properties) or Single-Family Residential District (soutwest of the site) (Putnam County, 2022). An off-site well survey of potential groundwater wells within a three-mile radius of the site (AP-BCD and AP-E) was conducted and consisted of reviewing federal, state, and county records and online sources, in addition to conducting a windshield survey of the area (Newfields, 2020). The off-site well survey is included as **Appendix A**. A desktop review was performed in January 2022 to search for additonal wells added since 2020. Results of the survey and the January 2022 update are presented on **Figure 5**. Hypothetical off-site residential receptors in the downgradient groundwater flow direction identified in the well survey are located on the opposite side of the discharge boundaries for AP-E (i.e., Beaverdam Creek or Lake Sinclair).

  Concentrations of SSL-related constituents in on-site groundwater monitoring wells and piezometers are below health-protective screening levels in wells on-site and upgradient of surface water bodies at AP-E. As a conservative measure, hypothetical off-site residential exposure to the SSL-related constituents was evaluated using data collected from on-site groundwater wells between 2016 and August 2022 downgradient of AP-E. This comparison makes the conservative assumption that on-site groundwater has the potential to migrate to off-site drinking water wells through advective transport in groundwater without any attenuation in the aquifer media through factors such as dilution, dispersion, or adsorption, and disregards the presence of Beaverdam Creek or Lake Sinclair which represent assumed hydraulic discharge boundaries for groundwater downgradient of AP-E. Accordingly, the risk evaluation screening assumed the hypothetical off-site residential receptor could be exposed by ingestion and dermal contact with SSL-related constituents in groundwater through its use as a future potable water source.

- Recreational surface water receptors: The surface water exposure pathway for hypothetical recreational receptors was addressed qualitatively through the evaluation of on-site groundwater data. SSL-related constituent concentrations are below the health-protective screening criteria in on-site groundwater. Therefore, evaluation of the surface water pathway was not necessary.

- Ecological surface water receptors: The surface water exposure pathway for off-site ecological receptors was addressed qualitatively through the evaluation of on-site groundwater data. SSL-related constituent concentrations are below health-protective screening criteria in on-site groundwater. Therefore evaluation of the surface water pathway was not necessary.

3 RISK EVALUATION SCREENING

The CEM developed in Section 2 was used to identify the potential exposure pathways to human receptors that should be considered in the risk evaluation. The initial step in the risk evaluation is the comparison of SSL-related constituent concentrations from groundwater samples collected between 2016 and August 2022 to relevant, health-protective levels. The approach used is consistent with the Georgia EPD regulations and guidance, USEPA guidance, and standard practice for risk assessment in the State of Georgia. The Georgia EPD allows for the site-specific evaluation of risk in programs such as the Voluntary Remediation Program (VRP) (EPD, 2009).

The initial risk evaluation screening was performed for the potential groundwater exposure pathway by comparing the concentrations of SSL-related constituents in groundwater samples from wells determined to have SSL-related constituents to appropriate health-protective screening criteria. These criteria included the risk reduction standards (RRS)[2] established under the Hazardous Site Response Act (HSRA) for drinking water and site-specific background for the protection of human health. If the maximum concentration of a SSL-related constituent exceeded the screening criterion, the constituent was identified as a COPI for further evaluation in the refined risk evaluation. The methodology and screening criteria used were identified in accordance with regulatory guidance and standard risk assessments practices using an approach designed to conservatively overestimate possible exposures and risks, providing an additional level of confidence in the conclusions. The methodology is summarized on **Figure 6** and discussed in more detail below.

3.1 Data Used in Risk Evaluation Screening

This section provides information on the groundwater dataset used in the risk evaluation screening.

3.1.1 Groundwater Data

For the initial risk screening evaluation, groundwater data from samples collected between 2016 and August 2022 from the on-site wells that were identified to have SSL-related constituents were used in the risk screening evaluation for hypothetical off-site residential exposure.

The list of wells identified in the *2022 Annual Groundwater Monitoring & Corrective Action Report – Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b) with SSL-related constituents identified under the State CCR Rule is as follows:

[2] HSRA was amended in 2018 to make the methods used for calculating RRSs consistent with USEPA's RAGS for the calculation of RSLs.

- Beryllium: BRGWC-38S; and
- Cobalt: BRGWC-33S and BRGWC-38S.

The data for the wells were screened against the relevant health-protective screening criteria. The location of wells with SSL-related constituents included in the risk screen are provided on **Figure 7**.

Groundwater data used in the risk screening level evaluation were collected from the uppermost aquifer and are considered to be representative of groundwater conditions at the site. The groundwater dataset used in the risk evaluation is presented in **Appendix B**. Method detection limits for the groundwater datasets used in the risk evaluation were reviewed and confirmed to be less than the screening levels.

3.1.2 Background Groundwater Quality

Statistical analysis of groundwater monitoring data is performed at the site pursuant to §257.93-95 following the established statistical method from the Unified Guidance (USEPA, 2009) for AP-E; background values are routinely updated under the program. For the data set presented, five monitoring wells in the certified monitoring well network are designated as upgradient (background) locations for AP-E, BRGWA-2S, BRGWA-2I, BRGWA-5S, BRGWA-5I, and BRGWA-6S. The statistical analyses performed on the groundwater data were described in the *2022 Annual Groundwater Monitoring and Corrective Action Report – Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b); and is summarized below.

> *The Sanitas groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance (Unified Guidance) (USEPA, 2009). Time series plots generated by Sanitas are used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters are formally tested using Tukey's box plot method and not used to establish statistical limits. Background well data were updated following the Unified Guidance recommendation, evaluating recent background data using Tukey's box plot method for outliers and Sen's Slope/Mann-Kendall methods for potential trends.*

3.2 Groundwater Screening Evaluation

The process of screening constituents detected in groundwater against human health screening levels for groundwater is discussed below and presented in **Figure 6**. The HSRA RRSs evaluated under the VRP approach presented herein include Type 1 and Type 2 (beryllium and cobalt) RRS for off-site residential receptors. The Hazardous Site Response Act Rule 391-3-19.07(1) notes that "*[a]ll risk reduction standards will, when implemented, provide adequate protection of human health and the environment.*" In addition, Rule 391-3-19-.07(3) notes a corrective action, if needed, may be considered complete when "*a site meets any or a combination of the applicable risk reduction standards described in Rule 391-3-19-.07."*

In accordance with standard methodologies approved by the Georgia EPD, the screening level hierarchy for the SSL-related constituents is as follows:

- The higher of the Type 1 or Type 2 RRS for hypothetical off-site residential exposure, which are considered protective of human health for those constituents regulated under HSRA (i.e., beryllium).

- In accordance with standard methodologies approved by the Georgia EPD and because cobalt is not a HSRA-regulated substance, a site-specific risk-based screening value was calculated using the default exposure factors for residential receptors and the methodology found in Appendix III of the HSRA rule (EPD, 2018). Accordingly, the calculated screening value is equivalent to a Type 2 groundwater RRS protective of residential exposures. Toxicity values for beryllium and cobalt used in the calculations were the USEPA-preferred values contained in the RSL Calculator (USEPA, 2022b). The risk-based screening values were calculated using USEPA's RSL calculator assuming a target hazard quotient of 1, consistent with Georgia EPD guidance applicable in other contexts (EPD, 2018). The calculation of a risk-based screening values for beryllium and cobalt are presented in **Appendix C**. Based on the foregoing, the Type 2 RRS for beryllium and the site-specific residential screening level for cobalt were used.

- If site-specific background concentrations are greater than the criteria described above, then the site-specific background concentration is used as the screening level in accordance with the CCR methodology for development of groundwater protection standards (USEPA, 2020). Background was not used as a screening level in this evaluation.

In summation, based on the hierarchy above, groundwater data collected from the wells identified to have SSL-related constituents were compared to residential screening criteria for groundwater.

Table 1 presents the maximum detected concentration of each SSL-related constituent, beryllium 0.011 mg/L and cobalt 0.3 mg/L, which was used to represent potential offsite groundwater quality for comparison to the selected screening levels for beryllium (0.025 mg/L) and cobalt (0.006 mg/L), for hypothetical off-site residential receptors. As noted in **Table 1**, cobalt was detected at concentrations that exceeded its screening level and was retained as a COPI for further evaluation in a refined risk evaluation. However, beryllium was not detected at concentrations that exceeded its screening level and was not retained as a COPI and is not expected to pose a risk to human health or the environment.

4 REFINED RISK EVALUATION

A refined risk evaluation was conducted for the groundwater COPI that was detected at concentrations that exceeded the health-protective screening criteria (cobalt). The refined risk evaluation identified EPCs for cobalt for the purposes of characterizing potential risk to human receptors. Due to cobalt being identified as a COPI in multiple wells spatially separated from one another (BRGWC-33S and BRGWC-38S), two exposure units (north and south) were used in the refined risk evaluation. A cobalt EPC was developed for each exposure unit and if the EPC is greater than the screening level, then the constituent is identified as having the potential for risk that warrants additional evaluation (e.g., performing a surface water evaluation). Cobalt concentrations in the most downgradient well for each exposure unit were below the screening level and a surface water evaluation was not necessary.

4.1 Refined Groundwater Risk Evaluation

Potential risk associated with exposure to cobalt by hypothetical off-site residential receptors was refined using the methodology described in HSRA and VRP and other supporting guidance (EPD, 2018; EPD, 2009, EPD, 2015) and is presented in the following section and on **Figure 8**.

For the refined risk evaluation, groundwater data from samples collected between 2016 and August 2022 from the on-site wells that were identified to have a SSL-related constituent and downgradient monitoring wells/piezometers that represent groundwater flow in the same hydraulically downgradient direction were used to evaluate hypothetical off-site residential exposure.

As noted above, groundwater data used in the risk screening level evaluation were collected from the uppermost aquifer and are considered to be representative of groundwater conditions at the site. The groundwater dataset used in the refined risk evaluation is presented in **Appendix B.**

4.1.1 Groundwater Exposure Point Calculation

The refined risk evaluation for cobalt included the development of an EPC. The EPC is a conservative estimate of potential exposure that is selected to address uncertainty and variability in the dataset (USEPA, 2002). Consistent with guidance for developing groundwater EPCs (USEPA, 2014), 95 percent upper confidence limits of the arithmetic mean (95% UCLs) were calculated using USEPA ProUCL 5.2 software (ProUCL) (USEPA, 2022c) and ProUCL user's guide (USEPA, 2022d).

For the refined risk evaluation, the UCLs for the COPIs in groundwater were calculated for datasets with the following characteristics:

- UCLs for the individual well(s) with an SSL-related constituent;

- UCLs based on combined data from the well(s) with an SSL-related constituent and other well(s)/piezometer(s) in the general vicinity to include additional downgradient monitoring well(s)/piezometer(s) that represent groundwater flow in the same hydraulically downgradient direction; and

- UCLs based on the combined data from the farthest downgradient well(s)/piezometer(s) that are hydraulically downgradient of the well(s) with an SSL-related constituent.

Other assumptions made in the calculation of the UCLs include:

- Primary samples (no duplicates) were used to calculate EPCs as duplicate samples were analyzed for quality assurance purposes.

- If the calculated UCL exceeded the maximum detected concentration, then the maximum detected concentration was used as the EPC.

ProUCL software calculates multiple UCLs and provides a recommended UCL which was selected as the EPC. If there were multiple UCLs recommended by ProUCL, the maximum UCL value was selected as a conservative assumption. **Appendix D-1** provides a detailed summary of the UCLs calculated using the methods described above, and **Appendix D-2** presents figures showing the wells used in the calculation of the EPCs for each groundwater COPI. **Appendix D-3** provides the input and output files associated with the ProUCL software.

Table 2 summarizes the groundwater EPCs selected for cobalt. This table shows the number of samples, the maximum detected concentrations, the UCLs recommended by ProUCL software, and the selected EPCs.

4.1.2 COPI Concentration Trend Analysis

Concentration trends over time were evaluated as one line of evidence in the refined risk evaluation for cobalt. The Mann-Kendall trend test with an alpha value equal to 0.05 and the Theil-Sen line test were conducted on the data from BGWC-33S and BGWC-38S for cobalt to evaluate the trends in concentrations over time. The tests were conducted using the USEPA ProUCL 5.2 software (USEPA, 2022c).

The Mann-Kendall and Thiel-Sen test results are presented on time series graphs in **Appendix D-4** and indicated:

- There is a statistically decreasing trend in cobalt concentrations over time in BRGWC-33S and BRGWC-38S.

Mann Kendall trend analysis requires four data points with at least three detections. Trends may be evaluated at the farthest downgradient piezometers from the well(s) with SSL-related constituents, if necessary, after additional sampling events are conducted at downgradient locations.

4.1.3 Refined Groundwater Risk Evaluation Results

Cobalt was identified as groundwater COPIs in the initial risk screening. In the refined risk evaluation, comparison of the calculated EPC to the screening level was used to identify constituents of interest (COIs) that may pose a potential risk to hypothetical off-site residential receptors exposed through the potential use of groundwater as potable water. If the EPC from the farthest downgradient well(s) is greater than the respective screening level, then the constituent is identified as having the potential for risk that warrants additional evaluation (e.g., performing a surface water evaluation).

4.1.3.1 North Exposure Unit

Cobalt concentrations were detected in 18 out of 18 groundwater samples in well BRGWC-33S at concentrations that exceeded the off-site groundwater screening level for residential receptors. For the refined risk evaluation, the following EPCs were calculated for cobalt using the wells shown in **Appendices D-1** and **D-2a**:

- Data from BRGWC-33S were used to determine if the UCL is less than the screening level (EPC Step 1 in **Appendix D-1**).
- Data from BRGWC-33S and the downgradient wells PZ-15S, PZ-15I, PZ-13S, and PZ-52D were combined to represent potential groundwater exposure associated with the SSL well and hydraulically downgradient wells (EPC Step 2 in **Appendix D-1**).
- Data from PZ-15S, PZ-15I, and PZ-13S were used to represent groundwater exposure using the well that is the farthest hydraulically downgradient of well BRGWC-33S (EPC Step 3 in **Appendix D-1**).

Although the EPC Step 1 (0.050 mg/L) and the EPC Step 2 (0.038 mg/L) exceeded the screening level, the EPC Step 3 (0.0022 mg/L), which includes the farthest downgradient well, was less than the health-protective screening level.

Table 3 presents the results of the refined screening comparing the farthest hydraulically downgradient EPC to the screening criterion. As cobalt was not detected above the applicable screening level in the farthest hydraulically downgradient wells on the site, cobalt in the north exposure unit was not identified as a COI in groundwater for hypothetical off-site residential receptors and is not expected to pose a risk to human health through potable water use.

4.1.3.2 South Exposure Unit

Cobalt concentrations were detected in 17 out of 17 groundwater samples in well BRGWC-38S at concentrations that exceeded the off-site groundwater screening level for residential receptors. For the refined risk evaluation, the following EPCs were calculated for cobalt using the wells shown in **Appendices D-1** and **D-2b**:

- Data from BRGWC-38S were combined to determine if the UCL is lower than the screening level (EPC Step 1 in **Appendix D-1**).

- Data from BRGWC-38S and the downgradient wells PZ-53D, PZ-54, and PZ-70 were combined to represent groundwater potential exposure associated with the SSL well and hydraulically downgradient wells (EPC Step 2 in **Appendix D-1**).

- Data from PZ-54 and PZ-70 were combined to represent groundwater exposure using the wells that are the farthest hydraulically downgradient of well BRGWC-38S (EPC Step 3 in **Appendix D-1**).

Although the EPC Step 1 (0.25 mg/L) and the EPC Step 2 (0.22 mg/L) exceeded the screening level, the EPC Step 3 (0.0056 mg/L), which includes the farthest downgradient well, was less than the health-protective screening level.

Table 3 presents the results of the refined screening comparing the farthest hydraulically downgradient EPC to the screening criterion. As cobalt was not detected above the applicable screening level in the farthest hydraulically downgradient wells on the site, cobalt in the south exposure unit was not identified as a groundwater COI for hypothetical off-site residential receptors and is not expected to pose a risk to human health through potable water use.

4.1.4 Refined Groundwater Risk Evaluation Summary and Conclusions

Detections of the SSL-related constituent cobalt were reported at concentrations above the applicable groundwater screening values. However, the results of the refined groundwater risk evaluation indicate the following:

- Cobalt in the north exposure unit and south exposure unit is not expected to pose a risk to hypothetical off-site residential receptors.

- The individual data points used to calculate the cobalt EPCs to represent potential groundwater exposure for hypothetical off-site residential receptors based on the farthest hydrologically downgradient monitoring wells were below the health-protective screening level.

Accordingly, based on the multiple lines of evidence and various conservative assumptions, further risk evaluation for groundwater is not warranted. Compliance monitoring under the State CCR Rule will continue.

5 UNCERTAINTY ASSESSMENT

USEPA guidance stresses the importance of providing an analysis of uncertainties so that risk managers are better informed when evaluating risk assessment conclusions (USEPA, 1989). The uncertainty assessment provides a better understanding of the key uncertainties that are most likely to affect the risk assessment results and conclusions.

The potential uncertainties associated with the risk evaluation are as follows:

Health-Protective Screening Criteria Uncertainties:

- In accordance with standard methodologies approved by the Georgia EPD, the higher of the Type 1 or Type 2 standard was selected for residential screening criteria. Selection of the screening criteria per industry standards is considered appropriate for risk quantification for Plant Branch. The Hazardous Site Response Act, Rule 391-3-19.07(1) notes that "*[a]ll risk reduction standards will, when implemented, provide adequate protection of human health and the environment*". Thus, this approach is likely to overestimate hypothetical risks for off-site receptors.

- Screening criteria based on RRSs, including beryllium and cobalt, represent the reasonable maximum exposure (RME), which are the highest exposures that are reasonably expected to occur at a site. The RME is defined as "*the highest exposure that is reasonably expected to occur at a site but that is still within the range of possible exposures*" (USEPA, 1989). Further, USEPA (1989) states that the "*intent of the RME is to estimate a conservative exposure case (i.e., well above the average case) that is still within the range of possible exposures.*" Potential receptors will likely have lower exposures than those presented in this risk evaluation (i.e., a majority of the site concentrations will be less than the UCL), which overestimates potential exposure.

Exposure Uncertainties:

- The maximum detected concentrations of beryllium and cobalt were compared to conservative risk-based screening criteria to identify the COPIs. Use of the maximum detected concentration is consistent with standard practice; however, use of the maximum detected concentration for exposure likely overestimates potential risk.

- The constituents included in the risk evaluation may occur naturally in the site geologic setting. Although background concentrations were evaluated, contributions to exposure and risk were assumed to be entirely CCR--related and natural background sources were not quantified. Thus, SSL concentration-related exposures were likely overestimated.

- Hypothetical off-site residential exposure was evaluated using on-site groundwater data from wells around the perimeter and downgradient of AP-E. This comparison makes the conservative assumption that on-site groundwater may potentially migrate to off-site drinking water wells through advective transport in groundwater, but without any attenuation within the aquifer media through factors such as dilution, dispersion, or adsorption. This assumption may overestimate potential exposure and risk to hypothetical off-site receptors.

- EPCs for metals in groundwater were assumed to be 100 percent bioavailable by ingestion and dermal contact. This assumption may tend to overestimate risk.

- An off-site well survey of potential groundwater wells within a three-mile radius of Plant Branch was conducted in 2020 (NewFields, 2020) and updated in January of 2022. The survey consisted of reviewing publicly available federal, state, and county records as well as a windshield survey of the area (**Appendix A**). Geosyntec relied on the data collected by NewFields.

- The evaluation used on-site groundwater data to represent hypothetical off-site exposure, which is a conservative approach that likely results in overestimation of assumed exposure and assumed potential risk. Although off-site potable wells identified in the well survey were not included in the risk evaluation, the presence of these wells do not appear to impact the conclusions of the risk evaluation because concentrations of COPIs are delineated in on-site groundwater.

Toxicity Uncertainties:

- Toxicity factors used to calculate health-protective criteria are established at conservative levels to account for uncertainties and often result in criteria that are many times lower than the levels observed to cause effects in human or animal studies. Therefore, a screening level exceedance does not necessarily equate to an adverse effect.

6 CONCLUSIONS

This risk evaluation for SSL-related constituents in groundwater at AP-E was conducted using methods consistent with Georgia EPD and USEPA guidance and included multiple conservative assumptions. Based on this evaluation, the SSL-constituents evaluated from AP-E (beryllium and cobalt) are not expected to pose a risk to human health or the environment.

Accordingly, no further risk evaluation of groundwater is warranted. Compliance monitoring for AP-E under the State CCR Rule will continue. Georgia Power will proactively evaluate the data and update this risk evaluation, if necessary.

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TABLES

Table 1
SSL-Related Constituent Groundwater Screening
Plant Branch AP-E Risk Evaluation Report[1]
Plant Branch, Milledgeville, GA

CCR Rule Designation	Constituent	CAS No.	Detection Frequency	Exceedance Frequency[2]	Maximum Concentration (mg/L)	Screening Level (mg/L)	Source[3]	Site-Specific Background (mg/L)	COPI? (Y/N)	Rationale[4]
Appendix IV	Beryllium	7440-41-7	17 / 17	0 / 17	0.011	0.025	Type 2 RRS	0.0005	N	BSL
	Cobalt	7440-48-4	35 / 35	35 / 35	0.3	0.006	Site-Specific	0.005	Y	ASL

Notes:

[1] Evaluation includes 2016 to August 2022 groundwater analytical data from wells BRGWC-33S (cobalt) and BRGWC-38S (beryllium and cobalt).

[2] The exceedance frequency is based on the number of samples with detected concentrations that exceed the identified screening level.

[3] The screening levels are the maximum value from the following sources:

- Type 1 RRSs listed in HSRA Appendix III, Table 1 (HSRA-regulated substances only).
- Type 2 RRSs calculated using the EPA RSL calculator with default residential exposure factors listed in the RSL Users Guide (HSRA-regulated substances only).
- Site-Specific values calculated using the EPA RSL calculator with default residential exposure factors listed in the RSL Users Guide.
- EPA Maximum Contaminant Levels (MCLs).
- Site-specific background levels for each constituent were calculated as described in the document A*nnual Groundwater Monitoring and Corrective Action Report - Plant Branch Ash Pond E (AP-E)* (Geosyntec, 2022b).

[4] Rationale for classification of constituent as a COPI or exclusion as a COPI:

- ASL = Above respective screening level
- BSL = Below respective screening level

Definitions:

Grey shading indicates the constituent exceeded its screening level.

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COPI = Constituent of Potential Concern

EPA = United States Environmental Protection Agency

RRS = Risk Reduction Standard

Table 2
Groundwater Exposure Point Concentration Summary
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

CCR Rule Designation	Constituent	CAS No.	Exposure Unit	Detection Frequency	Maximum Concentration (mg/L)	Wells Included in 95% UCL Calculation	95% UCL[1,2] (mg/L)	Recommended UCL Method[1,2]	Selected EPC[2] (mg/L)
Appendix IV	Cobalt	7440-48-4	North	3 / 7	0.0022	PZ-13S, PZ-15S,&PZ-15I	NA	NA	0.0022
			South	2 / 2	0.0056	PZ-54&PZ-70	NA	NA	0.0056

Notes:
[1] NA = Not available. The 95% upper confidence limit on the mean (UCL) was not calculated because the dataset had fewer than 4 detected values.
[2] Groundwater exposure point concentrations (EPCs) calculated in accordance with EPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at: https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917. For further detail on the selected EPC, refer to Appendix D.

Definitions:
CAS = Chemical Abstract Service
CCR = Coal Combustion Residuals
EPC = exposure point concentration
UCL = upper confidence limit on the mean
mg/L = milligram(s) per liter
"<" = detection limit for non-detect result

Table 3
Downgradient Groundwater Residential Refined Evaluation
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

CCR Rule Designation	Constituent	CAS No.	Exposure Unit	Detection Frequency	Exceedance Frequency[1]	Selected EPC (mg/L)	Screening Level (mg/L)	SL Source[2]	COI? (Y/N)	Rationale[3]
Appendix IV	Cobalt	7440-48-4	North	3 / 7	0 / 7	0.0022	0.006	Site-Specific	N	BSL
			South	2 / 2	0 / 2	0.0056		Site-Specific	N	BSL

Notes:

[1] The exceedance frequency is based on the number of samples with detected concentrations that exceed the identified screening level.

[2] The screening values are the maximum value from the following sources:

- Type 1 RRSs listed in HSRA Appendix III, Table 1 (HSRA-regulated substances only).
- Type 2 RRSs calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide (HSRA-regulated substances only).
- Site-Specific values calculated using the USEPA RSL calculator with default residential exposure factor listed in the RSL Users Guide.
- Site-specific background levels for cobalt were calculated as described in the document *Semiannual Groundwater Monitoring and Corrective Action Report - Plant Branch Ash Pond E* (*AP-E*) (Golder, 2022).

[3] Rationale for classification of constituent as a COI or exclusion as a COI:

- ASL = Above respective screening level
- BSL = Below respective screening level
- ND/BSL = Non-detect and below respective screening level

Definitions:

Grey shading = 'Constituent concentration(s) exceeded its respective screening level in the dataset.

CAS = Chemical Abstract Service

CCR = Coal Combustion Residuals

COI = Constituent of Interest

EPA = United States Environmental Protection Agency

GA EPD= Georgia Environmental Protection Division

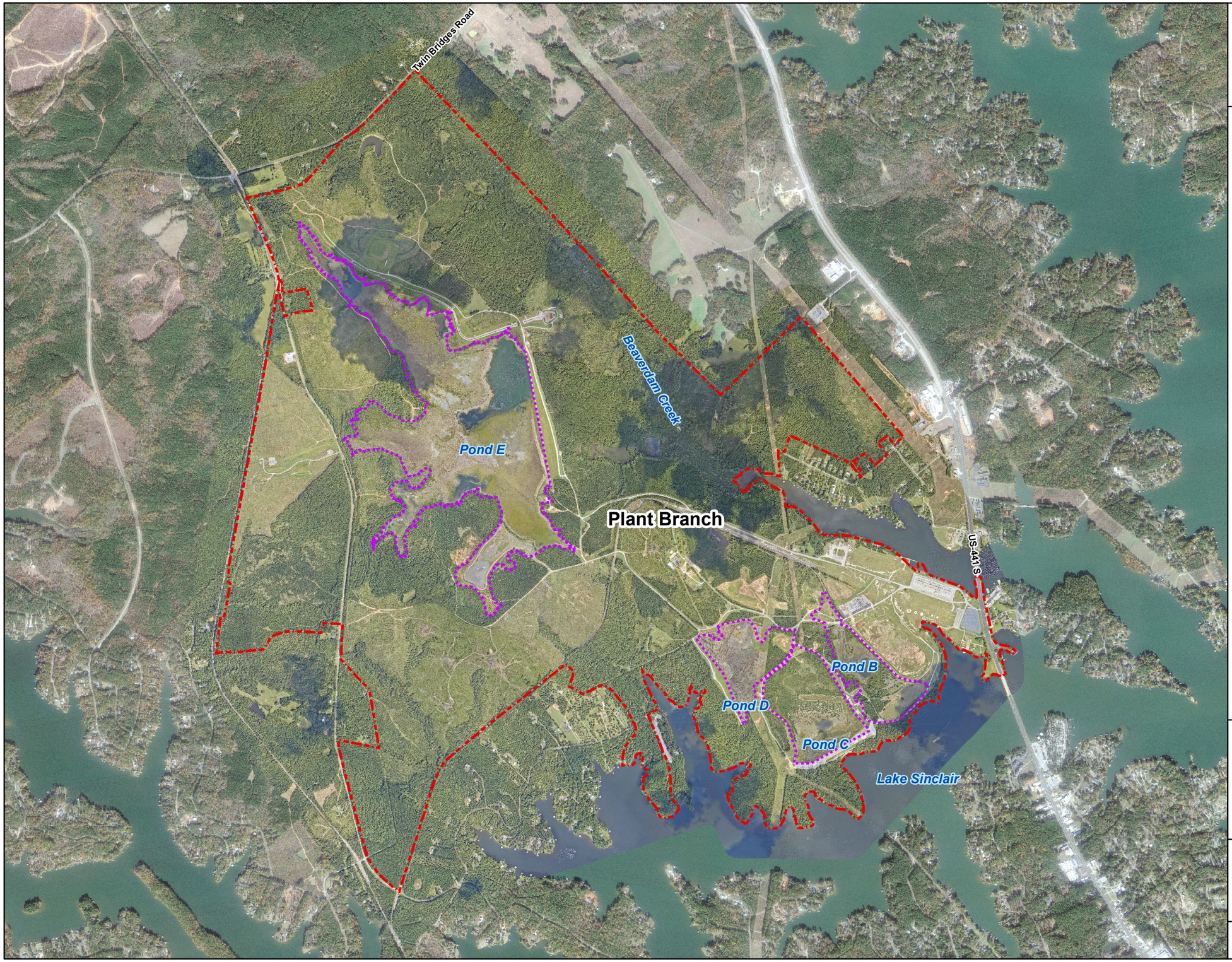
HSRA = [GA EPD] Hazardous Site Response Act

mg/L = milligram(s) per liter

RRS = [GA EPD] Risk Reduction Standard

RSL = [EPA] Regional Screening Level

FIGURES



N

LEGEND

Plant Branch Property Boundary

Approximate Ash Pond Boundary

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

0 2,000 4,000

Scale in Feet

SITE LOCATION MAP

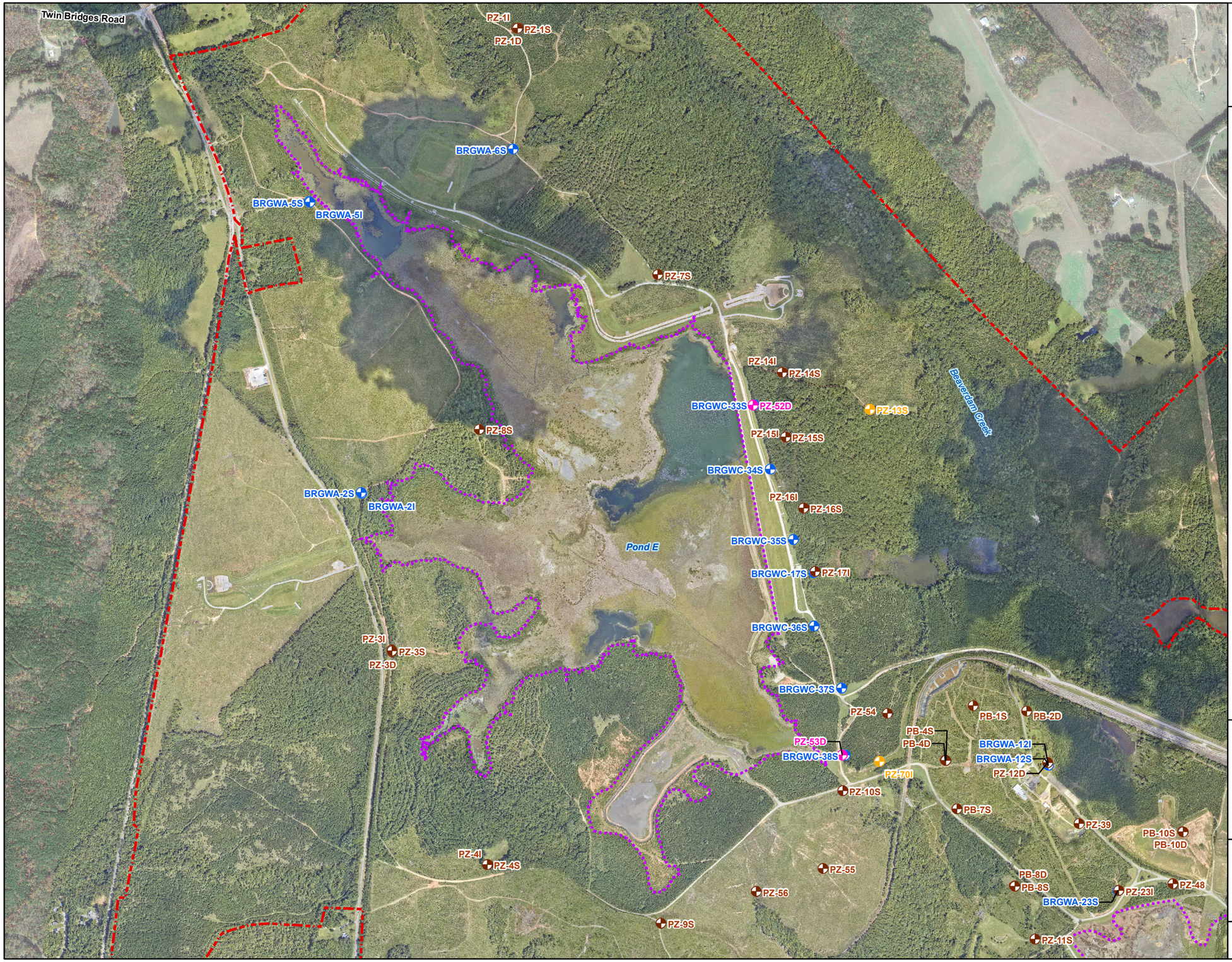
GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE 1



N

LEGEND

- Detection Monitoring Well
- Horizontal Assessment Monitoring Well
- Vertical Assessment Monitoring Well
- Piezometer
- Plant Branch Property Boundary
- Approximate Ash Pond Boundary

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

0 1,000 2,000
Scale in Feet

SITE LAYOUT AND MONITORING WELLNETWORK MAP AP-E

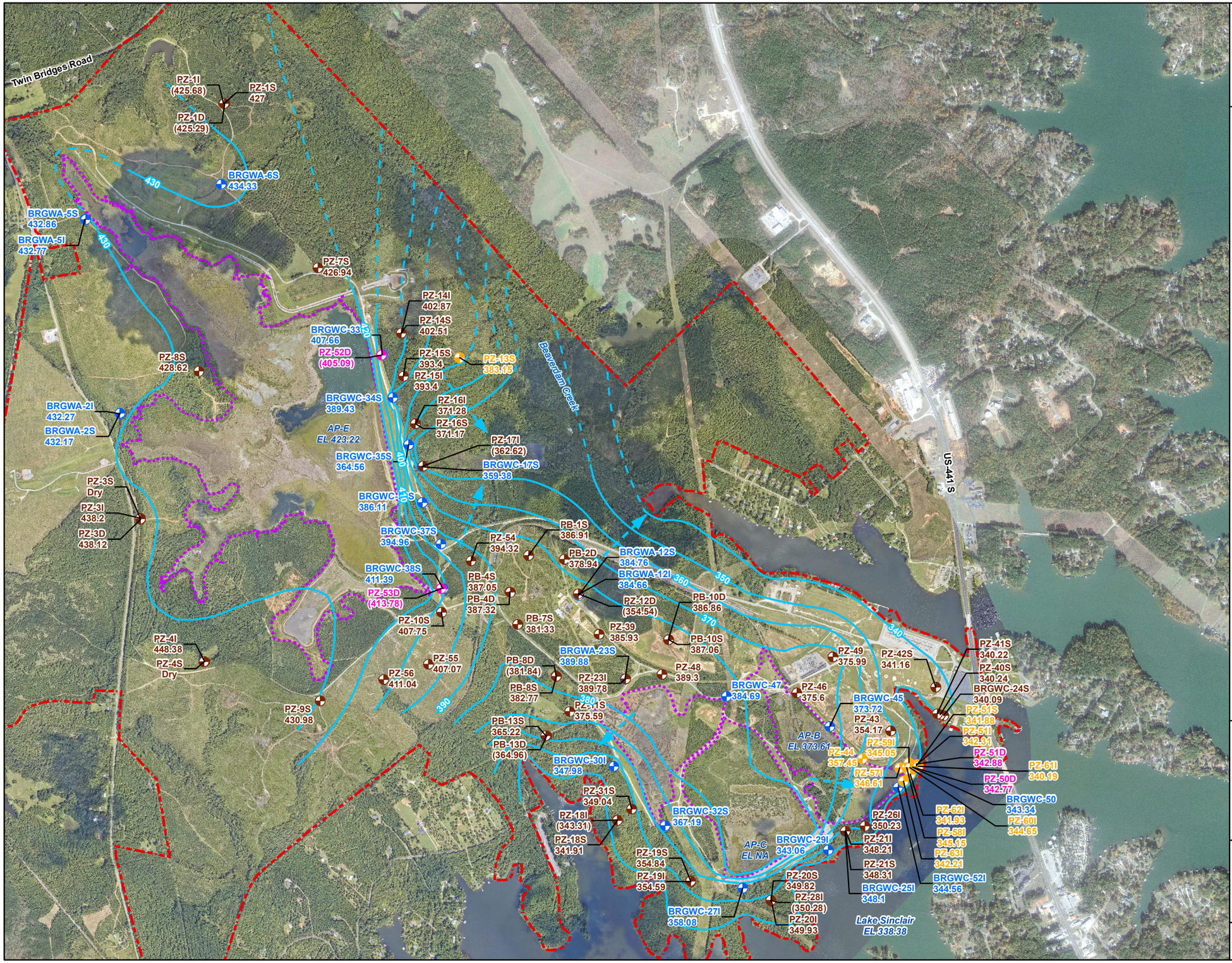
GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE 2



N

LEGEND

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

Notes:
1. Water level elevation recorded on January 31, 2022.
2. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).
3. Groundwater iso-contours based on linear interpolation and extrapolation from known groundwater elevation data, and topographic elevations.
4. Groundwater elevations in parentheses were not used to make the groundwater contours because these wells are screened at a different elevation in the formation/aquifer.
5. NA - not available
6. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
7. Property Boundary Provided by Southern Company Services.
8. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.

0 1,500 3,000
Scale in Feet

POTENTIOMETRIC SURFACE CONTOUR MAP - JANUARY 2022

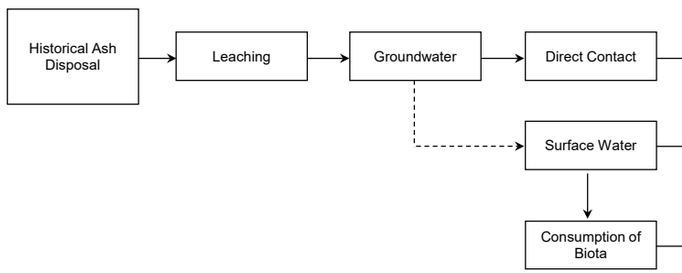
GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE 3



	HUMAN HEALTH AND ECOLOGICAL RISK EVALUATION RECEPTORS									
	HUMAN									ECOLOGICAL
	Current				Future					Current / Future
	On-Site	Off-Site		On- / Off-Site	On-Site		Off-Site		On- / Off-Site	On- / Off-Site
EXPOSURE ROUTE	Worker[1]	Worker[2]	Child and Adult Resident	Child and Adult Recreator[3]	Worker[1]	Child and Adult Resident	Worker[2]	Child and Adult Resident	Child and Adult Recreator	Aquatic Receptors[3]
Ingestion		○	●				○	●		
Dermal Contact		○	●				○	●		
Ingestion				○					○	○
Dermal Contact				○					○	○
Ingestion				○					○	

Legend

A conservative assumption for this assessment was made that groundwater from the site flows to the downgradient surface water.

● Indicates potentially complete pathway to receptors, which are evaluated quantitatively.

○ Indicates potentially complete pathway to receptors, which are evaluated qualitatively.

Footnotes

1. Industrial worker was considered to have no complete pathways because there are no wells on-site that are classified for use as potable wells. On-site construction workers would be expected to have little to no direct contact with on-site groundwater due to safety procedures outlined in their site-specific health and safety plans.
2. Off-site industrial/construction worker addressed through the evaluation of hypothetical off-site residential receptors as health-protective screening levels for residential receptors would be more conservative than industrial and construction worker screening levels.
3. Generalized receptor for ecological health risk evaluation.

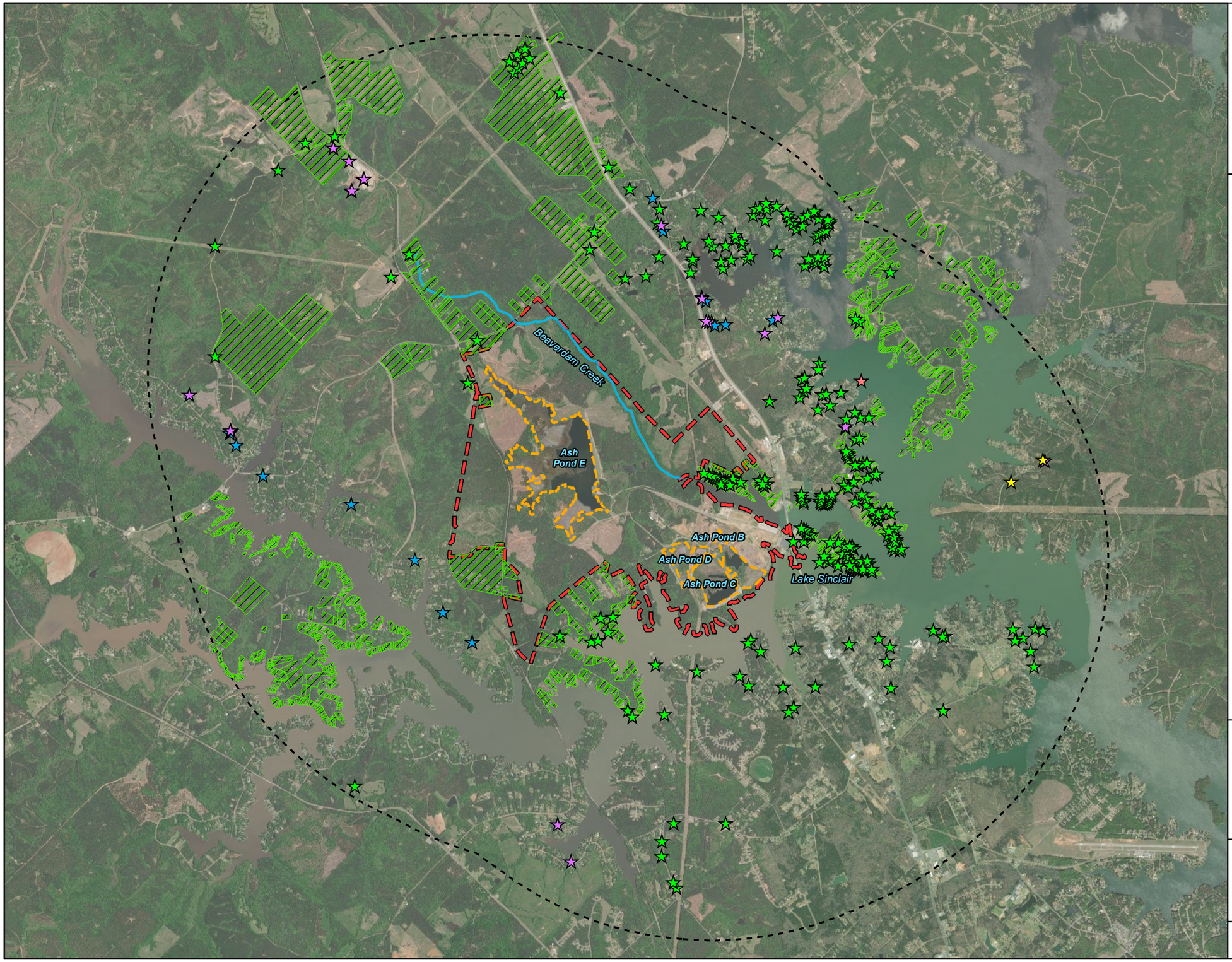
Conceptual Exposure Model

Georgia Power
Plant Branch AP-E

Geosyntec consultants

Kennesaw, GA | MARCH, 2023

Figure 4



N

LEGEND

Off Site Wells

- Private Drinking Well
- Inactive Public Drinking Well
- Public Drinking Well
- Surface Water Intake
- Monitoring Well
- Creek
- 3-Mile Radius
- Parcels Identified as Likely Having a Well
- Approximate Ash Pond Boundary
- Approximate Site Boundary

Notes:
1. Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
2. Coordinate System: NAD 1983 State Plane Georgia West (U.S. Feet).

0 2,500 5,000 10,000 Feet

OFF-SITE WELL SURVEY RESULTS

GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

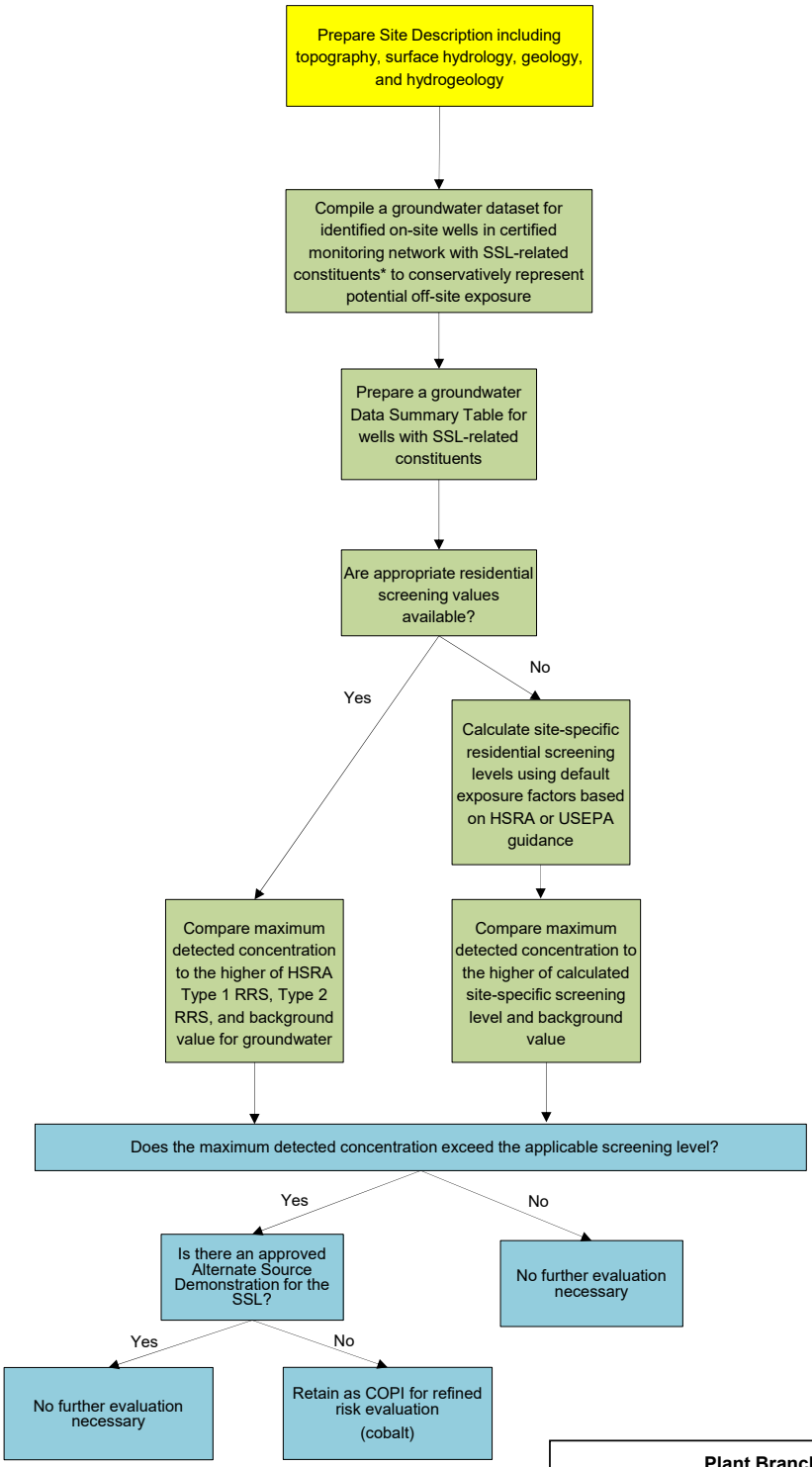
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE 5

Groundwater Risk Screening Approach for AP-E

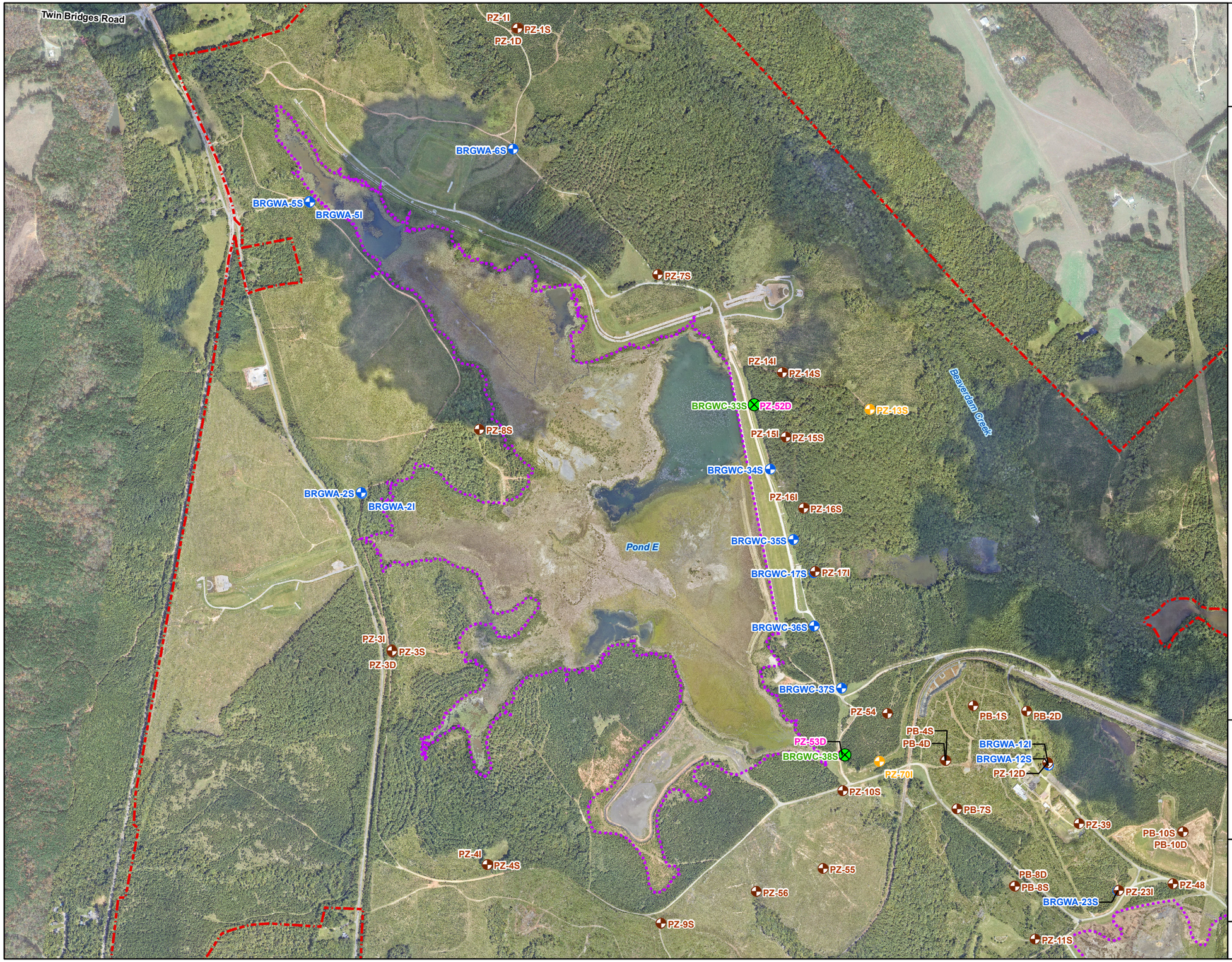


Notes:
* Initial screen evaluates wells at AP-1 with SSL-related constituents beryllium and cobalt
SSL = Statistically Significant Level
COPI = Constituent of Potential Interest
HSRA = Hazardous Site Response Act
RRS = Risk Reduction Standard
USEPA = United States Environmental Protection Agency

Plant Branch AP-E
Groundwater Risk Screening Approach

Figure 6

March 2023



N

LEGEND

- Wells with SSL Related Constituents
- Detection Monitoring Well
- Horizontal Assessment Monitoring Well
- Vertical Assessment Monitoring Well
- Piezometer
- Plant Branch Property Boundary
- Approximate Ash Pond Boundary

Notes:

1. Cobalt State CCR Rule SSL-Related Constituent: BRGWC-33S, and BRGWC-38S.
2. Beryllium State CCR Rule SSL-Related Constituent: BRGWC-38S.
3. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
4. Property Boundary Provided by Southern Company Services.
5. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.

0 1,000 2,000

Scale in Feet

MONITORING WELLS INCLUDED IN RISK SCREEN – AP-E

GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

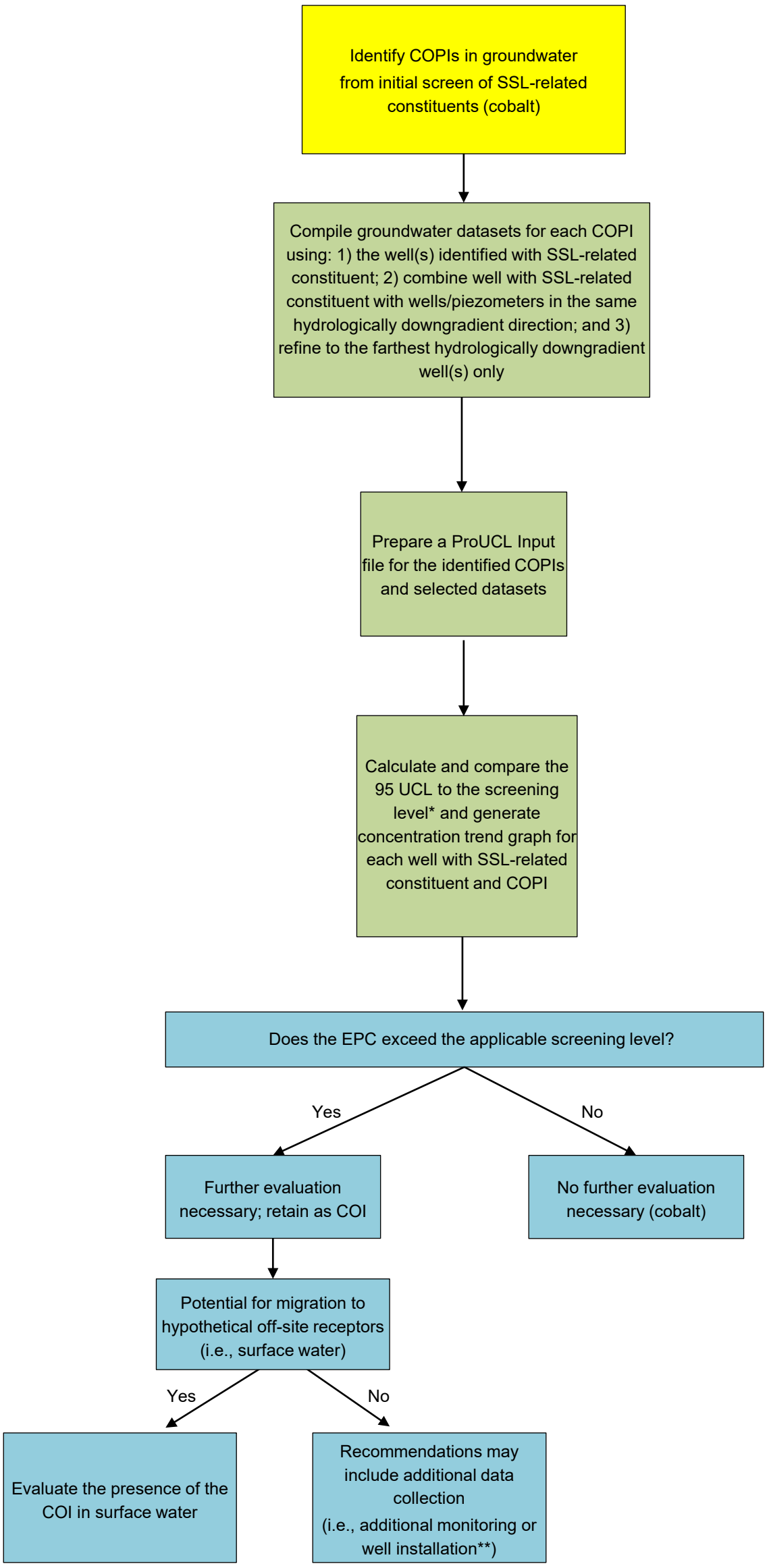
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE 7

Refined Risk Evaluation Approach (Groundwater) for AP-E



Notes:
*If the 95 UCL exceeds the maximum concentration, use the maximum as the EPC.
**This step is not necessary for AP-E
SSL = Statistically Significant Level
COPI = Constituent of Potential Interest
EPC = Exposure Point Concentration
UCL = Upper Confidence Limit
COI = Constituent of Interest

Plant Branch AP-E
Refined Groundwater Risk Evaluation Approach

Figure 8

March 2023

APPENDIX A

Plant Branch Well Survey (Off-Site)

Well Survey

Plant Branch

Ash Ponds B, C, D and E

Putnam County, GA

Prepared for

Georgia Power Company

241 Ralph McGill Blvd., Atlanta, GA 30308

Prepared by

NewFields

1349 W. Peachtree Street, Suite 2000

Atlanta, GA 30309

March 5, 2020

Introduction

Plant Branch is located on the northern shore of Lake Sinclair near Milledgeville and Eatonton in Putnam County.

Newfields conducted a well survey of potential drinking water wells within a three-mile radius of the Coal Combustion Residual (CCR) facilities at Plant Branch: Ash Ponds B, C, D and E. This radius is referred to in this report as the Investigated Area, and is shown on Figure 1.

As part of this survey, NewFields accessed and reviewed information from a number of Federal, State, and County records and online sources, as well as a windshield survey of the Investigated Area. Information from each identified well was then compiled into a geographic information system (GIS) database.

Information Collection

This section summarizes the sources utilized for identifying potential drinking water wells within the Investigated Area.

1. Federal Sources
    a. **United States Geological Survey (USGS).** USGS maintains an inventory database of wells sampled by USGS-affiliated programs for ground-water levels or water quality parameters at any time in the past.[1] Well information and coordinates were downloaded for the state of Georgia and compiled into the GIS database. Wells in this database are labeled 'human drinking water' or 'monitoring wells'; however, many of the monitoring wells appear to be co-located with drinking water wells. Some of these USGS monitoring wells may in fact be private drinking water wells utilized for monitoring purposes by USGS. Some listings in this database are over 50 years old and may be inactive.

       In addition, the USGS data contains information about major surface water intakes, including both industrial and municipal drinking water intakes. Specific information about the operator and use of the water is not included, but can be determined using information from other sources. Three surface water intakes are present on Lake Sinclair. One intake is located on Georgia Power property and was assumed to be associated with former plant operations. The others appear to belong to the Sinclair Water Authority.

    b. **Safe Drinking Water Information System (SDWIS).** This EPA database has listings of public water systems but does not have well location information. SDWIS information was used to help identify the suppliers of public water in the vicinity of the facility. Public water in the area is supplied primarily by the Sinclair Water Authority.

2. State Sources

[1] http://waterdata.usgs.gov/ga/nwis/inventory?introduction

a. **Georgia Environmental Protection Division**

i. **Drinking Water Branch.** EPD maintains records about municipal and industrial wells, whose presence or absence within a radius of a site can be ascertained by contacting the agency. An email was sent to Michael Gillis of EPD on October 23rd, 2019 requesting information about wells in the Investigated Area. He confirmed there is one active well at the Georgia Power Skills Development Center at Plant Branch, and two active wells for the Scenic Shores Subdivision. The Skills Development Center well is located on Georgia Power property approximately 0.25 miles northeast from Ash Pond B. This well is a transient well serving approximately 60 people annually (i.e., the population changes and the system is not regularly serving the same people). The locations of the two Scenic Shores wells were established using a combination of information from the EPD Drinking Water Branch website, parcel data, and aerial photography. These two wells are 2.3 and 2.6 miles northeast from Ash Pond B, across Lake Sinclair. The Scenic Shores system serves a residential population of 1,095.

NewFields also used the Drinking Water Branch website to identify the subdivisions in the Investigated Area that have inactive community water systems. As discussed below, even though these subdivisions are older than the primary public water infrastructure in the area, they were designed to use community systems, not maintain private wells. These systems have since been connected to the Sinclair Water Authority system

ii. **EPD Pesticide Project.** From 2000 to 2004, EPD undertook a project to sample private drinking water wells for pesticides. EPD solicited volunteers state-wide to participate in the well sampling program. The final report includes the list of private water wells sampled, their coordinates, and depths when available.[2] Information about wells within the Investigated Area were compiled into the GIS database.

iii. **Hazardous Site Inventory (HSI) files.** EPD maintains the HSI files for sites which are undergoing state-led corrective action. These files usually contain groundwater data and well surveys. There are no HSI sites or related data or well surveys within the Investigated Area.

iv. **Hazardous Site Response Act (HSRA) notifications.** EPD maintains non-HSI HSRA notification reports (i.e., notifications submitted after releases of reportable substances). NewFields reviewed reports associated with sites in Carroll and Coweta County. No wells were identified within the Investigated Area.

b. **Agricultural and Environmental Services Laboratory (AESL) records.** The University of Georgia's AESL Laboratory tests drinking water samples submitted by private individuals to

[2] https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/PR-55.pdf

their local county extension service. Maps of these sampling results can be viewed online.[3] Precise coordinates are not available, but NewFields was able to use online images to find approximate locations.

3. County Sources
    a. **Health Department Records.** County health departments (DOH) maintain records of the permits for "on-site sewage management systems" (septic tanks). These permits indicate whether the permittee has private or public water supply, and often identify the exact location of the well on a map. Putnam and Branch counties do not maintain these records in a manner where they are easily searchable using geographic criteria and, as a result no wells could be identified from septic records.

    b. **Water Authority Records.** The Sinclair Water Authority stated that water lines in the area were installed approximately 12 years ago. The Authority also confirmed that when the water lines were installed, many smaller community water systems operated by subdivisions stopped using their wells and connected to the Sinclair Water Authority System. Sinclair Water Authority is a surface water system that is drawing their water supply from Lake Sinclair.

    c. **Tax Assessor Records.** NewFields utilized a tax parcel shapefile acquired from a third-party vendor dated January 2019. NewFields joined that information to parcel improvement data provided by the Putnam County Tax Assessor on November 13, 2019. NewFields also acquired a tax parcel shapefile for Baldwin County on October 23, 2019. However, parcel improvement data was not available from Baldwin County. A download of all the parcel data for Hancock County was not available, but parcel was able to use the tax assessors Web site to establish the location of the Scenic Shores Subdivision wells.

4. Windshield Surveys
    a. A windshield survey of the Investigated Area was conducted on November 7, 2019. During the survey wells were visually identified and compiled into the GIS database. The majority of wells identified during the survey were near residences.

Summary

Public water is available throughout the Investigated Area. The water lines are approximately 12 years old; therefore, the majority of the nearby residences were built before municipal water was available. The source of the public water supply in the area is Lake Sinclair. The nearest surface water intake for that system is located approximately 1.75 miles to the northeast of Ash Pond B.

There are three active public wells and eleven inactive public wells in the Investigated Area. The active Skills Development Center well is located on Georgia Power property approximately 0.25 miles northeast from Ash Pond B. This well is a transient well serving approximately 60 people annually. The

[3] http://aesl.ces.uga.edu/water/map/

locations of the two active Scenic Shores wells were established using a combination of information from the EPD Drinking Water Branch website, parcel data, and aerial photography. These two wells are 2.3 and 2.6 miles northeast from Ash Pond B, across Lake Sinclair. The Scenic Shores system serves a residential population of 1,095. Active public wells and the surface water intake are highlighted on Table 1.

Private wells are also present in the Investigated Area. In addition to identifying specific private wells from the above listed sources, NewFields used a combination of parcel data and information about the presence and age of public water infrastructure in Putnam County to identify parcels that may be (or have been) using private well water as their drinking water source. Several subdivisions, including Flat Rock, Forest Village, and Tanglewood, were built with community water systems that are now inactive due the expansion of the Sinclair Water Authority System. These residences were all assumed to now be connected to municipal water and omitted from this analysis regardless of age.

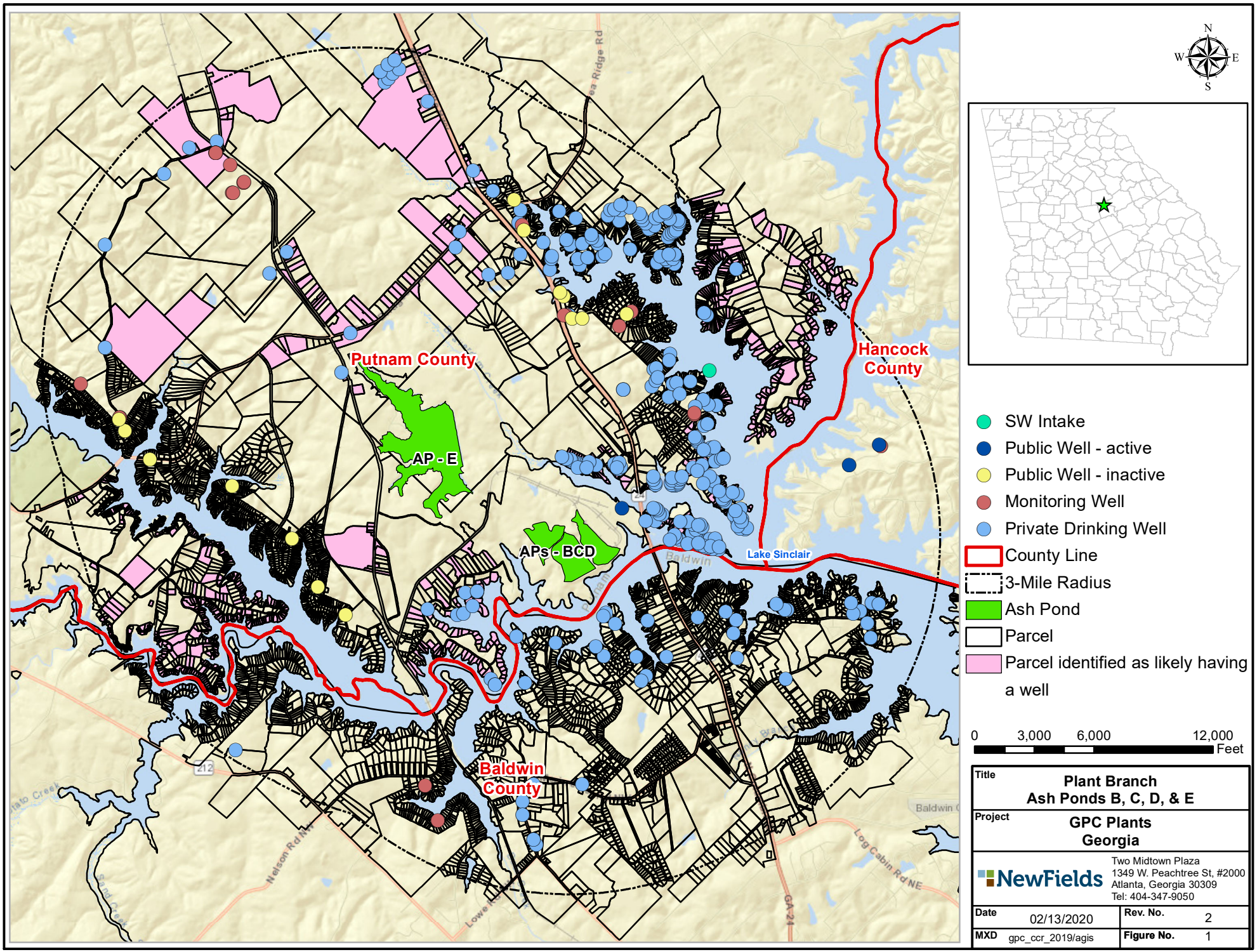
Parcels outside of these subdivisions and built before 2006 were assumed to be associated with a well. Many of these parcels may be (or have been) sharing wells, so a well may not exist for each identified parcel. While these wells are labeled 'drinking water wells' in Table 1, many of those may be inactive.

Parcel improvement data could not be obtained in the Baldwin or Hancock county portions of the Investigated Area, so no parcels were identified in these areas.

Combining well data from all sources with parcel data, NewFields identified 1,143 total parcels with a potentially active or inactive private well within the Investigated Area. Parcel data identified 999 parcels with a potential well. The windshield survey identified 239 wells. Seventeen wells were identified using USGS sources, five from the UGA Laboratory program, and two from the EPD Pesticide Sampling Project. Many wells were identified by multiple sources.[4]

Figure 1 shows points for identified wells in the Investigated Area. The shaded parcels on Figure 1 are the parcels that were identified from parcel data as likely to contain wells. When viewed as a PDF file, the figure is interactive, and wells identified using different sources can be turned on and off.

[4] USGS monitoring wells located on Georgia Power property were also considered not to be drinking water wells and omitted.



Title	Plant Branch Ash Ponds B, C, D, & E
Project	GPC Plants Georgia
NewFields	Two Midtown Plaza 1349 W. Peachtree St, #2000 Atlanta, Georgia 30309 Tel: 404-347-9050
Date	02/13/2020
Rev. No.	2
MXD	gpc_ccr_2019/agis
Figure No.	1

APPENDIX B
Data Used in Risk Evaluation

Appendix B
Groundwater Data
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

Well ID	Sample Date	Constituent	Beryllium	Cobalt
		Units	mg/L	mg/L
		Ash Pond		
BRGWC-33S	9/7/2016	AP-E	**0.0019 J**	**0.0612**
BRGWC-33S	11/17/2016	AP-E	<0.003 ND	**0.0551**
BRGWC-33S	2/22/2017	AP-E	**0.0022 J**	**0.0567**
BRGWC-33S	6/14/2017	AP-E	**0.0019 J**	**0.0557**
BRGWC-33S	9/27/2017	AP-E	**0.0017 J**	**0.049**
BRGWC-33S	2/15/2018	AP-E	<0.003 ND	**0.0536**
BRGWC-33S	6/27/2018	AP-E	**0.002 J**	**0.054**
BRGWC-33S	12/18/2018	AP-E	**0.0021 J**	**0.049**
BRGWC-33S	8/27/2019	AP-E	**0.0019 J**	**0.045**
BRGWC-33S	8/28/2019	AP-E	**0.0019 J**	**0.045**
BRGWC-33S	10/16/2019	AP-E	**0.0018 J**	**0.042**
BRGWC-33S	3/5/2020	AP-E	**0.0018 J**	**0.037**
BRGWC-33S	8/19/2020	AP-E	**0.0014 J**	**0.036**
BRGWC-33S	9/16/2020	AP-E	**0.0015 J**	**0.034**
BRGWC-33S	3/3/2021	AP-E	**0.0013**	**0.028**
BRGWC-33S	9/22/2021	AP-E	**0.0012**	**0.024**
BRGWC-33S	2/1/2022	AP-E	**0.0013**	**0.027**
BRGWC-33S	8/23/2022	AP-E	**0.00241**	**0.0639**
BRGWC-38S	9/7/2016	AP-E	**0.0079**	**0.236**
BRGWC-38S	11/21/2016	AP-E	**0.0092**	**0.298**
BRGWC-38S	2/23/2017	AP-E	**0.01**	**0.277**
BRGWC-38S	6/15/2017	AP-E	**0.0104**	**0.262**
BRGWC-38S	9/28/2017	AP-E	**0.0098**	**0.279**
BRGWC-38S	2/15/2018	AP-E	**0.011 J**	**0.279**
BRGWC-38S	6/28/2018	AP-E	**0.0085**	**0.23**
BRGWC-38S	12/20/2018	AP-E	**0.0092**	**0.25**
BRGWC-38S	8/29/2019	AP-E	**0.0088**	**0.21**
BRGWC-38S	10/16/2019	AP-E	**0.0079**	**0.21**
BRGWC-38S	3/5/2020	AP-E	**0.0082**	**0.22**
BRGWC-38S	8/19/2020	AP-E	**0.0079**	**0.22**
BRGWC-38S	9/17/2020	AP-E	**0.0073**	**0.2**
BRGWC-38S	3/4/2021	AP-E	**0.0077**	**0.2**
BRGWC-38S	9/23/2021	AP-E	**0.0071**	**0.17**
BRGWC-38S	2/1/2022	AP-E	**0.0072**	**0.18**
BRGWC-38S	8/23/2022	AP-E	**0.00854**	**0.173**
PZ-13S	1/15/2019	AP-E	**0.0005 J**	<0.00052 ND

Appendix B
Groundwater Data
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

Well ID	Sample Date	Constituent	Beryllium	Cobalt
		Units	mg/L	mg/L
		Ash Pond		
PZ-13S	10/22/2019	AP-E	**0.0004 J**	**0.00037 J**
PZ-13S	8/23/2022	AP-E	**0.000331 J**	<0.0003 ND
PZ-15I	1/16/2019	AP-E	<0.003 ND	<0.00052 ND
PZ-15I	10/21/2019	AP-E	<0.000074 ND	<0.0003 ND
PZ-15S	1/16/2019	AP-E	**0.00016 J**	**0.001 J**
PZ-15S	10/21/2019	AP-E	**0.00019 J**	**0.0022 J**
PZ-52D	6/19/2020	AP-E	<0.000074 ND	**0.00034 J**
PZ-52D	9/1/2022	AP-E	--	**0.0015**
PZ-53D	6/4/2020	AP-E	<0.000074 ND	**0.0012 J**
PZ-53D	8/23/2022	AP-E	<0.0002 ND	<0.0003 ND
PZ-54	5/21/2020	AP-E	**0.00017 J**	**0.001 J**
PZ-70	9/1/2022	AP-E	<0.0002 ND	**0.0056**

Notes:
Bold = the constituent was detected in the sample.
"--" = No analysis conducted.
mg/L milligrams(s) per liter
< = Non-detect result; the reporting limit is presented
J = Estimated value; the presented value is below the reporting limit but above the method detection limit.
ND = Non-detect result; the reporting limit is presented

APPENDIX C

USEPA RSL Calculator Generated Residential Screening Levels

Appendix C
USEPA RSL Calculator Generated Residential Screening Levels
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

Variable	Value
THQ (target hazard quotient) unitless	1
TR (target risk) unitless	0.00001
LT (lifetime) years	70
K (volatilization factor of Andelman) L/m3	0.5
lsc (apparent thickness of stratum corneum) cm	0.001
EDres (exposure duration - resident) years	26
EDres-c (exposure duration - child) years	6
EDres-a (exposure duration - adult) years	20
ED0-2 (mutagenic exposure duration first phase) years	2
ED2-6 (mutagenic exposure duration second phase) years	4
ED6-16 (mutagenic exposure duration third phase) years	10
ED16-26 (mutagenic exposure duration fourth phase) years	10
EFres (exposure frequency) days/year	350
EFres-c (exposure frequency - child) days/year	350
EFres-a (exposure frequency - adult) days/year	350
EF0-2 (mutagenic exposure frequency first phase) days/year	350
EF2-6 (mutagenic exposure frequency second phase) days/year	350
EF6-16 (mutagenic exposure frequency third phase) days/year	350
EF16-26 (mutagenic exposure frequency fourth phase) days/year	350
ETevent-res-adj (age-adjusted exposure time) hours/event	0.67077
ETevent-res-madj (mutagenic age-adjusted exposure time) hours/event	0.67077
ETres (exposure time) hours/day	24
ETres-c (dermal exposure time - child) hours/event	0.54
ETres-a (dermal exposure time - adult) hours/event	0.71
ETres-c (inhalation exposure time - child) hours/day	24
ETres-a (inhalation exposure time - adult) hours/day	24
ET0-2 (mutagenic inhalation exposure time first phase) hours/day	24
ET2-6 (mutagenic inhalation exposure time second phase) hours/day	24
ET6-16 (mutagenic inhalation exposure time third phase) hours/day	24
ET16-26 (mutagenic inhalation exposure time fourth phase) hours/day	24
ET0-2 (mutagenic dermal exposure time first phase) hours/event	0.54
ET2-6 (mutagenic dermal exposure time second phase) hours/event	0.54
ET6-16 (mutagenic dermal exposure time third phase) hours/event	0.71
ET16-26 (mutagenic dermal exposure time fourth phase) hours/event	0.71
BWres-a (body weight - adult) kg	80
BWres-c (body weight - child) kg	15
BW0-2 (mutagenic body weight) kg	15
BW2-6 (mutagenic body weight) kg	15
BW6-16 (mutagenic body weight) kg	80
BW16-26 (mutagenic body weight) kg	80
IFWres-adj (adjusted intake factor) L/kg	327.95
IFWres-adj (adjusted intake factor) L/kg	327.95
IFWMres-adj (mutagenic adjusted intake factor) L/kg	1019.9
IFWMres-adj (mutagenic adjusted intake factor) L/kg	1019.9
IRWres-c (water intake rate - child) L/day	0.78
IRWres-a (water intake rate - adult) L/day	2.5
IRW0-2 (mutagenic water intake rate) L/day	0.78
IRW2-6 (mutagenic water intake rate) L/day	0.78
IRW6-16 (mutagenic water intake rate) L/day	2.5
IRW16-26 (mutagenic water intake rate) L/day	2.5
EVres-a (events - adult) per day	1
EVres-c (events - child) per day	1
EV0-2 (mutagenic events) per day	1
EV2-6 (mutagenic events) per day	1
EV6-16 (mutagenic events) per day	1
EV16-26 (mutagenic events) per day	1
DFWres-adj (age-adjusted dermal factor) cm2-event/kg	2610650
DFWMres-adj (mutagenic age-adjusted dermal factor) cm2-event/kg	8191633
SAres-c (skin surface area - child) cm2	6365
SAres-a (skin surface area - adult) cm2	19652
SA0-2 (mutagenic skin surface area) cm2	6365
SA2-6 (mutagenic skin surface area) cm2	6365
SA6-16 (mutagenic skin surface area) cm2	19652
SA16-26 (mutagenic skin surface area) cm2	19652

Output generated 03NOV2022:13:59:19

Appendix C
USEPA RSL Calculator Generated Residential Screening Levels
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

Chemical	Beryllium and compounds	Cobalt
CAS Number	7440-41-7	7440-48-4
Mutagen?	No	No
Volatile?	No	No
Chemical Type	Inorganics	Inorganics
Sfo (mg/kg-day)-1	-	-
Sfo Ref		
IUR (ug/m3)-1	0.0024	0.009
IUR Ref	I	P
RfD (mg/kg-day)	0.002	0.0003
RfD Ref	I	P
RfC (mg/m3)	0.00002	0.000006
RfC Ref	I	P
GIABS	0.007	1
Kp (cm/hr)	0.001	0.0004
MW	9.01	58.9
B (unitless)	0.00115	0.00118
t* (hr)	0.283	0.54
τevent (hr/event)	0.118	0.225
FA (unitless)	1	1
In EPD?	Yes	Yes
DAevent (ca)	-	-
DAevent (nc child)	0.0000344	0.000737
DAevent (nc adult)	0.0000594	0.00127
MCL (ug/L)	4	-
Ingestion SL TR=1E-05 (ug/L)	-	-
Dermal SL TR=1E-05 (ug/L)	-	-
Inhalation SL TR=1E-05 (ug/L)	-	-
Carcinogenic SL TR=1E-05 (ug/L)	-	-
Ingestion SL Child THQ=1 (ug/L)	40.1	6.02
Dermal SL Child THQ=1 (ug/L)	63.7	3410
Inhalation SL Child THQ=1 (ug/L)	-	-
Noncarcinogenic SL Child THI=1 (ug/L)	24.6	6.01
Ingestion SL Adult THQ=1 (ug/L)	66.7	10
Dermal SL Adult THQ=1 (ug/L)	83.7	4480
Inhalation SL Adult THQ=1 (ug/L)	-	-
Noncarcinogenic SL Adult THI=1 (ug/L)	37.1	9.99
Screening Level (ug/L)	2.46E+01 nc	6.01E+00 nc

I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

APPENDIX D

Support for Refined Risk Evaluation

Appendix D-1

Exposure Point Concentration Calculation Results

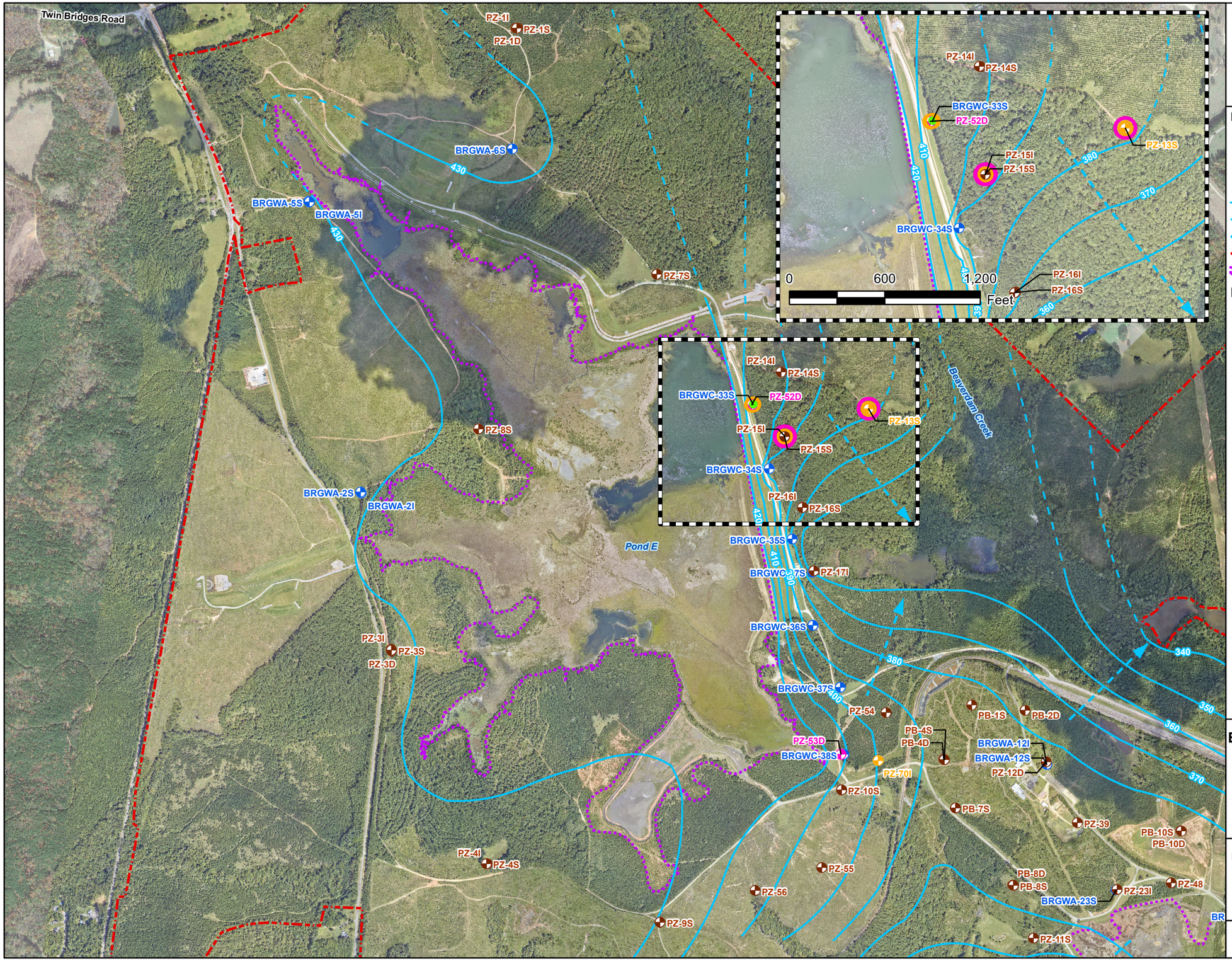
Appendix D
Appendix D-1
Exposure Point Concentration Calculation Results[1]
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

CCR Rule Designation	Constituent	Exposure Unit	Well IDs Included	Maximum Concentration	Detection Frequency	Exceedance Frequency	EPC Step 1 Individual Target Well(s) 2016-2022 (mg/L)	EPC Step 2 Target Well(s) & Downgradient Well(s) 2016-2022 (mg/L)	EPC Step 3 Farthest Downgradient Well(s) 2016-2022 (mg/L)
Appendix IV	Cobalt	North	BRGWC-33S	0.064	18 / 18	18 / 18	0.050		
			BRGWC-33S PZ-13S PZ-15I PZ-15S PZ-52D	0.064	23 / 27	18 / 27		0.038	
			PZ-13S PZ-15I PZ-15S	0.0022	3 / 7	0 / 7			0.0022
		South	BRGWC-38S	0.30	17 / 17	17 / 17	0.25		
			BRGWC-38S PZ-53D PZ-54 PZ-70	0.30	20 / 21	17 / 21		0.22	
			PZ-54 PZ-70	0.0056	2 / 2	0 / 2			0.0056

Notes:
Highlighted value is the EPC selected for the refined screening.
[1] EPCs calculated in accordance with USEPA, 2014. Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance. OSWER Directive 9283.1-42, February 2014. Located at https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917

Appendix D-2

Exposure Point Concentration Figures



LEGEND

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

Exposure Point Concentration Wells

- Step 1 Well
- Step 2 Well
- Step 3 Well

Notes:
1. Exposure Point Concentration (EPC).
2. EPC Step 1 - Individual Target Well(s) 2016-2022.
3. EPC Step 2 - Target Well(s) & Adjacent Well(s) & Downgradient Well(s) 2016-2022.
4. EPC Step 3 - Farthest Downgradient Well(s) 2016-2022.
5. Water elevation contours are based on measurements shown on Figure 3. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88.
6. Property Boundary Provided by Southern Company Services.
7. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.

EXPOSURE POINT CONCENTRATION MAP
COBALT NORTH EXPOSURE UNIT
AP-E

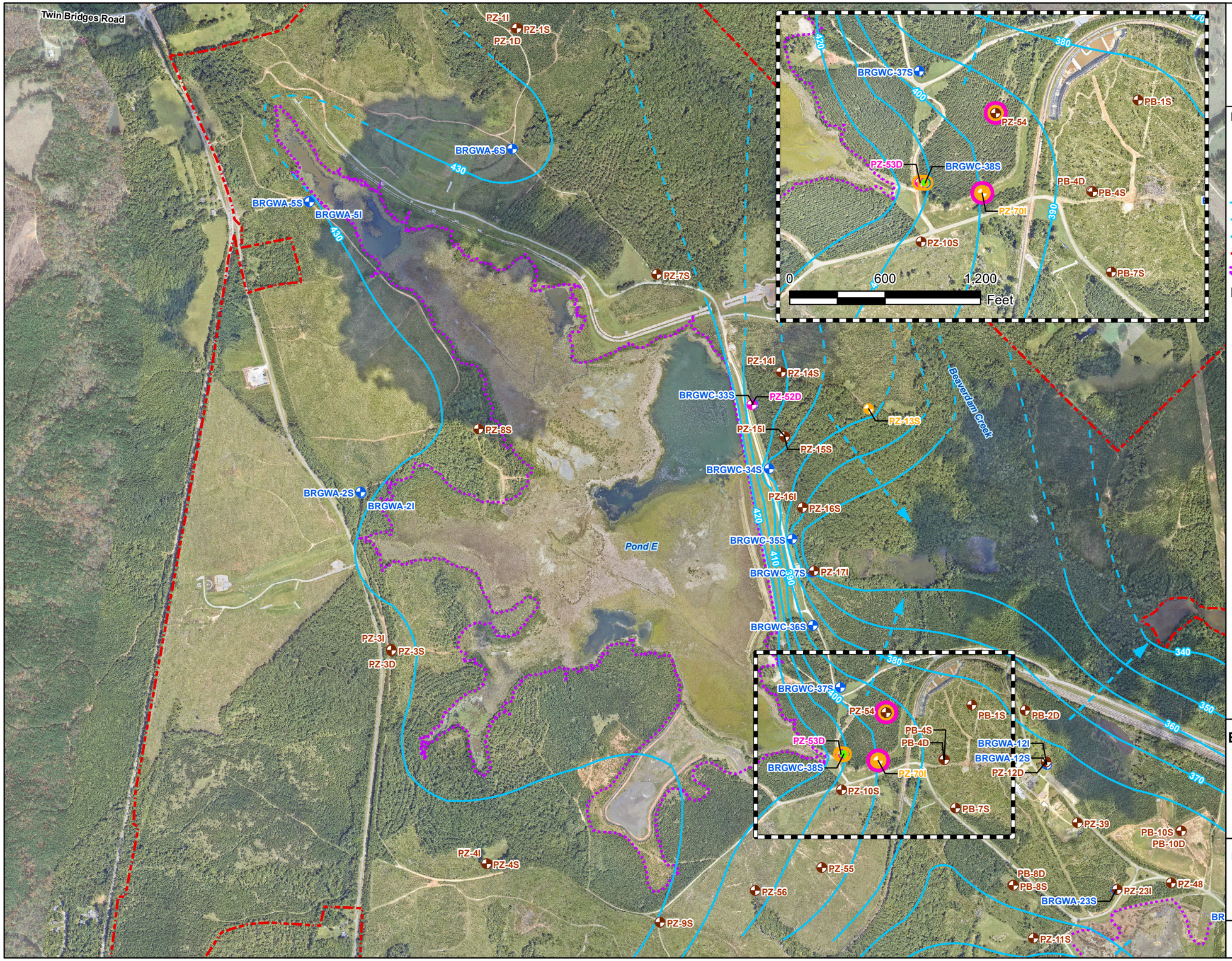
GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE D-2a



N

LEGEND

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

Exposure Point Concentration Wells

- Step 1 Well
- Step 2 Well
- Step 3 Well

Notes:
1. Exposure Point Concentration (EPC).
2. EPC Step 1 - Individual Target Well(s) 2016-2022.
3. EPC Step 2 - Target Well(s) & Adjacent Well(s) & Downgradient Well(s) 2016-2022.
4. EPC Step 3 - Farthest Downgradient Well(s) 2016-2022.
5. Water elevation contours are based on measurements shown on Figure 3. Elevation provided in feet referenced to the North American Vertical Datum (NAVD) 88.
6. Property Boundary Provided by Southern Company Services.
7. Aerial: Google Earth Imagery, November 2019 and Georgia Power Company, August 2022.

0 1,000 2,000
Scale in Feet

EXPOSURE POINT CONCENTRATION MAP
COBALT SOUTH EXPOSURE UNIT
AP-E

GEORGIA POWER
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | MARCH 2023

FIGURE D-2b

Appendix D-3

ProUCL Input/Output Files

Appendix D
Appendix D-3
ProUCL Input
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

Step 1 EPC Calculation Input				Step 2 EPC Calculation Input				Step 3 EPC Calculation Input	
Step1_Cobalt_N	D_Step1_Cobalt_N	Step1_Cobalt_S	D_Step1_Cobalt_S	Step2_Cobalt_N	D_Step2_Cobalt_N	Step2_Cobalt_S	D_Step2_Cobalt_S	Step3_Cobalt_N	D_Step3_Cobalt_N
0.0612	1	0.236	1	0.0612	1	0.236	1	0.00052	0
0.0551	1	0.298	1	0.0551	1	0.298	1	0.00037	1
0.0567	1	0.277	1	0.0567	1	0.277	1	0.0003	0
0.0557	1	0.262	1	0.0557	1	0.262	1	0.00052	0
0.049	1	0.279	1	0.049	1	0.279	1	0.0003	0
0.0536	1	0.279	1	0.0536	1	0.279	1	0.001	1
0.054	1	0.23	1	0.054	1	0.23	1	0.0022	1
0.049	1	0.25	1	0.049	1	0.25	1		
0.045	1	0.21	1	0.045	1	0.21	1		
0.045	1	0.21	1	0.045	1	0.21	1		
0.042	1	0.22	1	0.042	1	0.22	1		
0.037	1	0.22	1	0.037	1	0.22	1		
0.036	1	0.2	1	0.036	1	0.2	1		
0.034	1	0.2	1	0.034	1	0.2	1		
0.028	1	0.17	1	0.028	1	0.17	1		
0.024	1	0.18	1	0.024	1	0.18	1		
0.027	1	0.173	1	0.027	1	0.173	1		
0.0639	1			0.0639	1	0.0012	1		
				0.00052	0	0.0003	0		
				0.00037	1	0.001	1		
				0.0003	0	0.0056	1		
				0.00052	0				
				0.0003	0				
				0.001	1				
				0.0022	1				
				0.00034	1				
				0.0015	1				

Notes:
EPC= Exposure point Concentration

Appendix D
Appendix D-3
ProUCL Output
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.2 1/17/2023 8:01:16 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Step1_Cobalt_N

General Statistics

Total Number of Observations	18	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	0.024	Mean	0.0453
Maximum	0.0639	Median	0.047
SD	0.0121	Std. Error of Mean	0.00285
Coefficient of Variation	0.267	Skewness	-0.33

Normal GOF Test

Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.858	Data appear Normal at 1% Significance Level
Lilliefors Test Statistic	0.141	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.235	Data appear Normal at 1% Significance Level

Data appear Normal at 1% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0503	95% Adjusted-CLT UCL (Chen-1995)	0.0498
		95% Modified-t UCL (Johnson-1978)	0.0503

Gamma GOF Test

A-D Test Statistic	0.491	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.152	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	13.27	k star (bias corrected MLE)	11.1
Theta hat (MLE)	0.00342	Theta star (bias corrected MLE)	0.00409
nu hat (MLE)	477.7	nu star (bias corrected)	399.4
MLE Mean (bias corrected)	0.0453	MLE Sd (bias corrected)	0.0136
		Approximate Chi Square Value (0.05)	354.1
Adjusted Level of Significance	0.0357	Adjusted Chi Square Value	350

Assuming Gamma Distribution

95% Approximate Gamma UCL	0.0511	95% Adjusted Gamma UCL	0.0517

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk Lognormal GOF Test**	
10% Shapiro Wilk Critical Value	0.914	Data appear Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.153	**Lilliefors Lognormal GOF Test**	
10% Lilliefors Critical Value	0.185	Data appear Lognormal at 10% Significance Level	

Data appear Lognormal at 10% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.73	Mean of logged Data	-3.132
Maximum of Logged Data	-2.75	SD of logged Data	0.294

Assuming Lognormal Distribution

95% H-UCL	0.052	90% Chebyshev (MVUE) UCL	0.055
95% Chebyshev (MVUE) UCL	0.0594	97.5% Chebyshev (MVUE) UCL	0.0654
99% Chebyshev (MVUE) UCL	0.0772		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution

Nonparametric Distribution Free UCLs

95% CLT UCL	0.05	95% BCA Bootstrap UCL	0.0499
95% Standard Bootstrap UCL	0.0499	95% Bootstrap-t UCL	0.0504
95% Hall's Bootstrap UCL	0.0501	95% Percentile Bootstrap UCL	0.0499
90% Chebyshev(Mean, Sd) UCL	0.0539	95% Chebyshev(Mean, Sd) UCL	0.0578
97.5% Chebyshev(Mean, Sd) UCL	0.0631	99% Chebyshev(Mean, Sd) UCL	0.0737

Suggested UCL to Use

95% Student's-t UCL	0.0503

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

Step1_Cobalt_S

General Statistics

Total Number of Observations	17	Number of Distinct Observations	13
		Number of Missing Observations	0
Minimum	0.17	Mean	0.229
Maximum	0.298	Median	0.22
SD	0.0397	Std. Error of Mean	0.00963
Coefficient of Variation	0.173	Skewness	0.19

Normal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**	
1% Shapiro Wilk Critical Value	0.851	Data appear Normal at 1% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**	
1% Lilliefors Critical Value	0.241	Data appear Normal at 1% Significance Level	

Data appear Normal at 1% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.246	95% Adjusted-CLT UCL (Chen-1995)	0.245
		95% Modified-t UCL (Johnson-1978)	0.246

Gamma GOF Test

A-D Test Statistic	0.297	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.124	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.209	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	35.26	k star (bias corrected MLE)	29.07
Theta hat (MLE)	0.0065	Theta star (bias corrected MLE)	0.00788
nu hat (MLE)	1199	nu star (bias corrected)	988.5
MLE Mean (bias corrected)	0.229	MLE Sd (bias corrected)	0.0425
		Approximate Chi Square Value (0.05)	916.5
Adjusted Level of Significance	0.0346	Adjusted Chi Square Value	909.2

Assuming Gamma Distribution

95% Approximate Gamma UCL	0.247	95% Adjusted Gamma UCL	0.249

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**
10% Shapiro Wilk Critical Value	0.91	Data appear Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.114	**Lilliefors Lognormal GOF Test**
10% Lilliefors Critical Value	0.19	Data appear Lognormal at 10% Significance Level

Data appear Lognormal at 10% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.772	Mean of logged Data	-1.488
Maximum of Logged Data	-1.211	SD of logged Data	0.175

Assuming Lognormal Distribution

95% H-UCL	0.248	90% Chebyshev (MVUE) UCL	0.258
95% Chebyshev (MVUE) UCL	0.272	97.5% Chebyshev (MVUE) UCL	0.29
99% Chebyshev (MVUE) UCL	0.326		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution

Nonparametric Distribution Free UCLs

95% CLT UCL	0.245	95% BCA Bootstrap UCL	0.245
95% Standard Bootstrap UCL	0.245	95% Bootstrap-t UCL	0.247
95% Hall's Bootstrap UCL	0.246	95% Percentile Bootstrap UCL	0.244
90% Chebyshev(Mean, Sd) UCL	0.258	95% Chebyshev(Mean, Sd) UCL	0.271
97.5% Chebyshev(Mean, Sd) UCL	0.289	99% Chebyshev(Mean, Sd) UCL	0.325

Suggested UCL to Use

95% Student's-t UCL	0.246

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Step2_Cobalt_N

General Statistics

Total Number of Observations	27	Number of Distinct Observations	23
Number of Detects	23	Number of Non-Detects	4
Number of Distinct Detects	21	Number of Distinct Non-Detects	2
Minimum Detect	3.4000E-4	Minimum Non-Detect	3.0000E-4

Maximum Detect	0.0639	Maximum Non-Detect	5.2000E-4
Variance Detects	4.6162E-4	Percent Non-Detects	14.81%
Mean Detects	0.0357	SD Detects	0.0215
Median Detects	0.042	CV Detects	0.601
Skewness Detects	-0.648	Kurtosis Detects	-0.911
Mean of Logged Detects	-3.991	SD of Logged Detects	1.724

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.879	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 1% Significance Level
Lilliefors Test Statistic	0.158	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.209	Detected Data appear Normal at 1% Significance Level

Detected Data appear Approximate Normal at 1% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0305	KM Standard Error of Mean	0.00455
90KM SD	0.0231	95% KM (BCA) UCL	0.0378
95% KM (t) UCL	0.0382	95% KM (Percentile Bootstrap) UCL	0.0378
95% KM (z) UCL	0.038	95% KM Bootstrap t UCL	0.0379
90% KM Chebyshev UCL	0.0441	95% KM Chebyshev UCL	0.0503
97.5% KM Chebyshev UCL	0.0589	99% KM Chebyshev UCL	0.0757

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.865	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.775	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.289	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.188	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.889	k star (bias corrected MLE)	0.802
Theta hat (MLE)	0.0402	Theta star (bias corrected MLE)	0.0445
nu hat (MLE)	40.89	nu star (bias corrected)	36.89
Mean (detects)	0.0357		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.4000E-4	Mean	0.0327
Maximum	0.0639	Median	0.036
SD	0.0211	CV	0.647
k hat (MLE)	0.967	k star (bias corrected MLE)	0.884
Theta hat (MLE)	0.0338	Theta star (bias corrected MLE)	0.037
nu hat (MLE)	52.2	nu star (bias corrected)	47.73
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (47.73, α)	32.87	Adjusted Chi Square Value (47.73, β)	32.08
95% Gamma Approximate UCL	0.0474	95% Gamma Adjusted UCL	0.0486

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0305	SD (KM)	0.0231
Variance (KM)	5.3436E-4	SE of Mean (KM)	0.00455
k hat (KM)	1.738	k star (KM)	1.57
nu hat (KM)	93.86	nu star (KM)	84.77
theta hat (KM)	0.0175	theta star (KM)	0.0194
80% gamma percentile (KM)	0.0469	90% gamma percentile (KM)	0.0628

95% gamma percentile (KM)	0.0782	99% gamma percentile (KM)	0.113

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (84.77, α)	64.55	Adjusted Chi Square Value (84.77, β)	63.42
95% KM Approximate Gamma UCL	0.04	95% KM Adjusted Gamma UCL	0.0407

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.677	**Shapiro Wilk GOF Test**	
10% Shapiro Wilk Critical Value	0.928	Detected Data Not Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.343	**Lilliefors GOF Test**	
10% Lilliefors Critical Value	0.165	Detected Data Not Lognormal at 10% Significance Level	

Detected Data Not Lognormal at 10% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0306	Mean in Log Scale	-4.436
SD in Original Scale	0.0234	SD in Log Scale	1.932
95% t UCL (assumes normality of ROS data)	0.0383	95% Percentile Bootstrap UCL	0.0377
95% BCA Bootstrap UCL	0.0375	95% Bootstrap t UCL	0.0384
95% H-UCL (Log ROS)	0.339		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.595	KM Geo Mean	0.0101
KM SD (logged)	2.126	95% Critical H Value (KM-Log)	4.247
KM Standard Error of Mean (logged)	0.418	95% H-UCL (KM -Log)	0.57
KM SD (logged)	2.126	95% Critical H Value (KM-Log)	4.247
KM Standard Error of Mean (logged)	0.418		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0305	Mean in Log Scale	-4.663
SD in Original Scale	0.0236	SD in Log Scale	2.286
95% t UCL (Assumes normality)	0.0382	95% H-Stat UCL	0.975

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 1% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.0382

When a data set follows an approximate distribution passing only one of the GOF tests,
it is suggested to use a UCL based upon a distribution passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Step2_Cobalt_S

General Statistics

Total Number of Observations	21	Number of Distinct Observations	17
Number of Detects	20	Number of Non-Detects	1
Number of Distinct Detects	16	Number of Distinct Non-Detects	1
Minimum Detect	0.001	Minimum Non-Detect	3.0000E-4
Maximum Detect	0.298	Maximum Non-Detect	3.0000E-4
Variance Detects	0.00821	Percent Non-Detects	4.762%
Mean Detects	0.195	SD Detects	0.0906
Median Detects	0.215	CV Detects	0.464

Skewness Detects	-1.415	Kurtosis Detects	1.189
Mean of Logged Detects	-2.206	SD of Logged Detects	1.787

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.798	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.868	Detected Data Not Normal at 1% Significance Level
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.223	Detected Data Not Normal at 1% Significance Level

Detected Data Not Normal at 1% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.186	KM Standard Error of Mean	0.0214
90KM SD	0.0957	95% KM (BCA) UCL	0.219
95% KM (t) UCL	0.223	95% KM (Percentile Bootstrap) UCL	0.219
95% KM (z) UCL	0.221	95% KM Bootstrap t UCL	0.218
90% KM Chebyshev UCL	0.25	95% KM Chebyshev UCL	0.279
97.5% KM Chebyshev UCL	0.32	99% KM Chebyshev UCL	0.399

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.066	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.768	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.431	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.199	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.009	k star (bias corrected MLE)	0.891
Theta hat (MLE)	0.193	Theta star (bias corrected MLE)	0.219
nu hat (MLE)	40.36	nu star (bias corrected)	35.64
Mean (detects)	0.195		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.001	Mean	0.191
Maximum	0.298	Median	0.21
SD	0.09	CV	0.47
k hat (MLE)	1.045	k star (bias corrected MLE)	0.927
Theta hat (MLE)	0.183	Theta star (bias corrected MLE)	0.206
nu hat (MLE)	43.89	nu star (bias corrected)	38.95
Adjusted Level of Significance (β)	0.0383		
Approximate Chi Square Value (38.95, α)	25.66	Adjusted Chi Square Value (38.95, β)	24.83
95% Gamma Approximate UCL	0.29	95% Gamma Adjusted UCL	0.3

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.186	SD (KM)	0.0957
Variance (KM)	0.00915	SE of Mean (KM)	0.0214
k hat (KM)	3.773	k star (KM)	3.266
nu hat (KM)	158.5	nu star (KM)	137.2
theta hat (KM)	0.0492	theta star (KM)	0.0569
80% gamma percentile (KM)	0.262	90% gamma percentile (KM)	0.324
95% gamma percentile (KM)	0.381	99% gamma percentile (KM)	0.504

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (137.18, α)	111.1	Adjusted Chi Square Value (137.18, β)	109.3

95% KM Approximate Gamma UCL	0.229	95% KM Adjusted Gamma UCL	0.233

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.535	**Shapiro Wilk GOF Test**	
10% Shapiro Wilk Critical Value	0.92	Detected Data Not Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.446	**Lilliefors GOF Test**	
10% Lilliefors Critical Value	0.176	Detected Data Not Lognormal at 10% Significance Level	

Detected Data Not Lognormal at 10% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.186	Mean in Log Scale	-2.353
SD in Original Scale	0.0976	SD in Log Scale	1.868
95% t UCL (assumes normality of ROS data)	0.223	95% Percentile Bootstrap UCL	0.22
95% BCA Bootstrap UCL	0.216	95% Bootstrap t UCL	0.218
95% H-UCL (Log ROS)	2.797		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.487	KM Geo Mean	0.0832
KM SD (logged)	2.114	95% Critical H Value (KM-Log)	4.337
KM Standard Error of Mean (logged)	0.473	95% H-UCL (KM -Log)	6.041
KM SD (logged)	2.114	95% Critical H Value (KM-Log)	4.337
KM Standard Error of Mean (logged)	0.473		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.186	Mean in Log Scale	-2.52
SD in Original Scale	0.098	SD in Log Scale	2.26
95% t UCL (Assumes normality)	0.223	95% H-Stat UCL	10.51

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution

Suggested UCL to Use

95% KM (t) UCL	0.223

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Step3_Cobalt_N

General Statistics

Total Number of Observations	7	Number of Distinct Observations	5
Number of Detects	3	Number of Non-Detects	4
Number of Distinct Detects	3	Number of Distinct Non-Detects	2
Minimum Detect	3.7000E-4	Minimum Non-Detect	3.0000E-4
Maximum Detect	0.0022	Maximum Non-Detect	5.2000E-4
Variance Detects	8.6430E-7	Percent Non-Detects	57.14%
Mean Detects	0.00119	SD Detects	9.2968E-4
Median Detects	0.001	CV Detects	0.781
Skewness Detects	0.881	Kurtosis Detects	N/A
Mean of Logged Detects	-6.976	SD of Logged Detects	0.893

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Note: Sample size is small (e.g., <10), if data are collected using incremental sampling methodology (ISM) approach,
refer also to ITRC Tech Reg Guide on ISM (ITRC 2020 and ITRC 2012) for additional guidance,
but note that ITRC may recommend the t-UCL or the Chebyshev UCL for small sample sizes (n < 7).
The Chebyshev UCL often results in gross overestimates of the mean.
Refer to the ProUCL 5.2 Technical Guide for a discussion of the Chebyshev UCL.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**	
1% Shapiro Wilk Critical Value	0.753	Detected Data appear Normal at 1% Significance Level	
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**	
1% Lilliefors Critical Value	0.429	Detected Data appear Normal at 1% Significance Level	

Detected Data appear Normal at 1% Significance Level

Note GOF tests may be unreliable for small sample sizes

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	6.8810E-4	KM Standard Error of Mean	3.0593E-4
90KM SD	6.6050E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00128	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00119	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00161	95% KM Chebyshev UCL	0.00202
97.5% KM Chebyshev UCL	0.0026	99% KM Chebyshev UCL	0.00373

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.245	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.637	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.224	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.435	Detected data appear Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.214	k star (bias corrected MLE)	N/A
Theta hat (MLE)	5.3756E-4	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	13.28	nu star (bias corrected)	N/A
Mean (detects)	0.00119		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	3.7000E-4	Mean	0.00622
Maximum	0.01	Median	0.01
SD	0.00474	CV	0.761
k hat (MLE)	1.058	k star (bias corrected MLE)	0.7
Theta hat (MLE)	0.00588	Theta star (bias corrected MLE)	0.0089
nu hat (MLE)	14.81	nu star (bias corrected)	9.796
Adjusted Level of Significance (β)	0.0158		
Approximate Chi Square Value (9.80, α)	3.815	Adjusted Chi Square Value (9.80, β)	2.776
95% Gamma Approximate UCL	0.016	95% Gamma Adjusted UCL	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	6.8810E-4	SD (KM)	6.6050E-4
Variance (KM)	4.3626E-7	SE of Mean (KM)	3.0593E-4
k hat (KM)	1.085	k star (KM)	0.715
nu hat (KM)	15.19	nu star (KM)	10.02
theta hat (KM)	6.3402E-4	theta star (KM)	9.6182E-4
80% gamma percentile (KM)	0.00113	90% gamma percentile (KM)	0.00172

95% gamma percentile (KM)	0.00232	99% gamma percentile (KM)	0.00377

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.02, α)	3.952	Adjusted Chi Square Value (10.02, β)	2.889
95% KM Approximate Gamma UCL	0.00174	95% KM Adjusted Gamma UCL	0.00239

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.996	**Shapiro Wilk GOF Test**	
10% Shapiro Wilk Critical Value	0.789	Detected Data appear Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**	
10% Lilliefors Critical Value	0.389	Detected Data appear Lognormal at 10% Significance Level	

Detected Data appear Lognormal at 10% Significance Level

Note GOF tests may be unreliable for small sample sizes

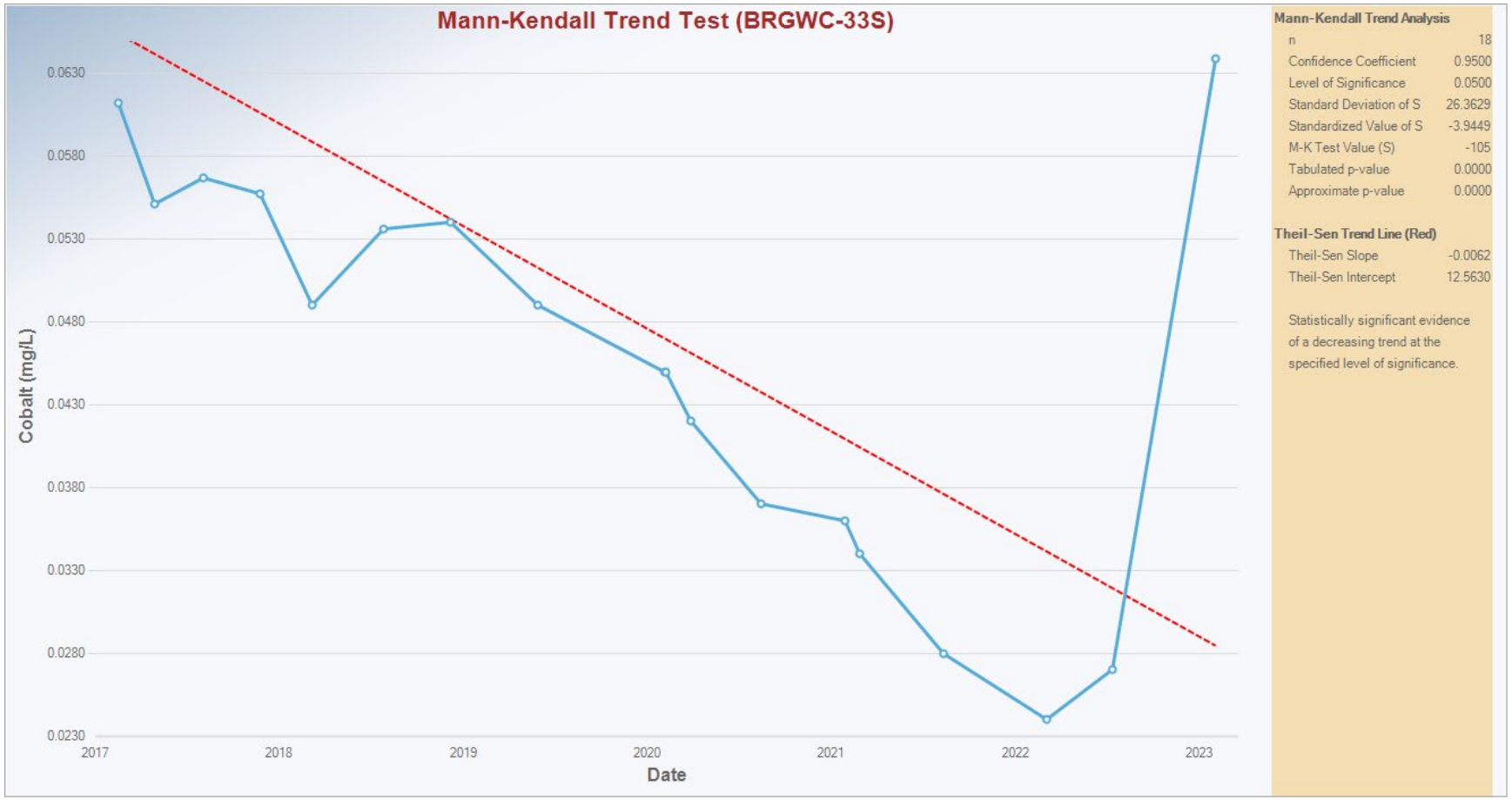
Lognormal ROS Statistics Using Imputed Non-Detects

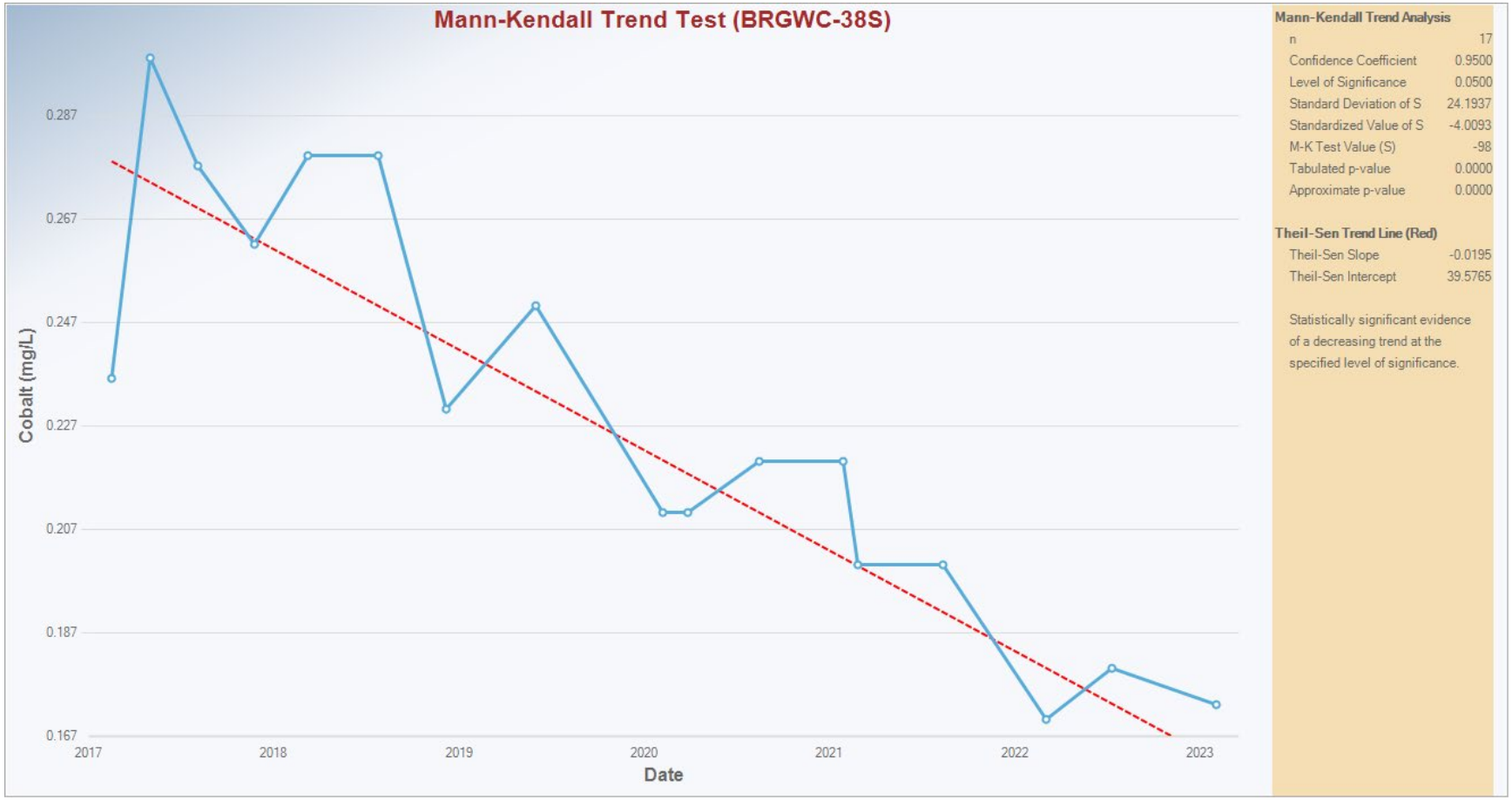
Mean in Original Scale	5.7459E-4	Mean in Log Scale	-8.277
SD in Original Scale	7.8893E-4	SD in Log Scale	1.402
95% t UCL (assumes normality of ROS data)	0.00115	95% Percentile Bootstrap UCL	0.00107
95% BCA Bootstrap UCL	0.00127	95% Bootstrap t UCL	0.00343

Appendix D-4

Groundwater Trend Graphs

Appendix D
Appendix D-4
Groundwater Trend Graphs
Plant Branch AP-E Risk Evaluation Report
Plant Branch, Milledgeville, GA




Mann-Kendall Trend Test (BRGWC-38S)
Cobalt (mg/L)
0.287
0.267
0.247
0.227
0.207
0.187
0.167
2017
2018
2019
2020
2021
2022
2023
Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.1937
Standardized Value of S -4.0093
M-K Test Value (S) -98
Tabulated p-value 0.0000
Approximate p-value 0.0000
Theil-Sen Trend Line (Red)
Theil-Sen Slope -0.0195
Theil-Sen Intercept 39.5765
Statistically significant evidence of a decreasing trend at the specified level of significance.

APPENDIX G

Potable Well Survey Report

Plant Branch
1078-1074 Milledgeville Rd
Eatonton, GA 31024

Inquiry Number: 07204643.1r
December 15, 2022

The EDR GeoCheck® Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION **PAGE**

GEOCHECK ADDENDUM

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

GEOCHECK® - PHYSICAL SETTING SOURCE REPORT

TARGET PROPERTY ADDRESS

PLANT BRANCH
1078-1074 MILLEDGEVILLE RD
EATONTON, GA 31024

TARGET PROPERTY COORDINATES

Latitude (North):	33.202258 - 33ˆ 12’ 8.13’’
Longitude (West):	83.322819 - 83ˆ 19’ 22.15’’
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	283479.7
UTM Y (Meters):	3675922.0
Elevation:	382 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33083-B3 LAKE SINCLAIR WEST, GA
Version Date:	1972

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

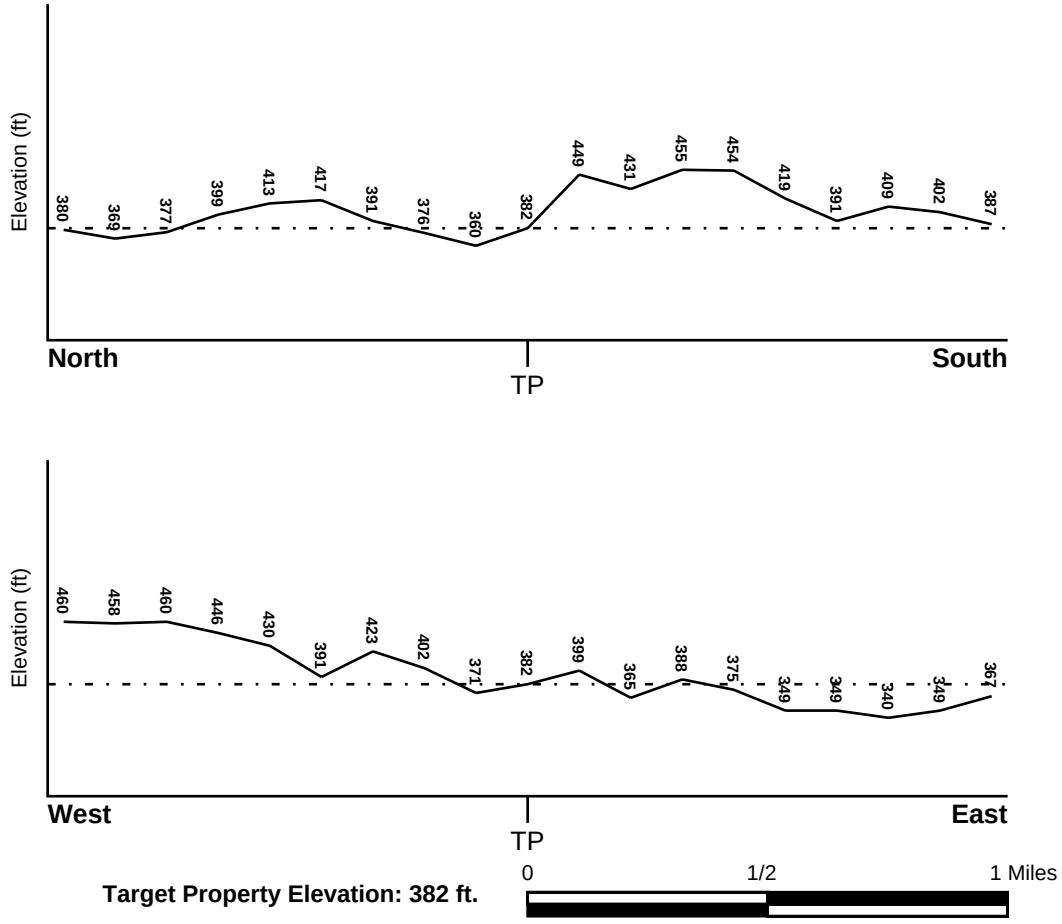
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
13009C0050D	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LAKE SINCLAIR WEST	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Pennsylvanian
Series:	Felsic paragneiss and schist
Code:	mm1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Metamorphic Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	CECIL
Soil Surface Texture:	sandy clay loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.50 Min: 4.50
2	7 inches	11 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
3	11 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
4	50 inches	75 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: sandy loam
loam
fine sandy loam

Surficial Soil Types: sandy loam
loam
fine sandy loam

Shallow Soil Types: clay
sandy clay
gravelly - loam

Deeper Soil Types: loamy fine sand
sandy loam
weathered bedrock

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	2.000
Federal FRDS PWS	2.000
State Database	2.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000262392	1 - 2 Miles NNE
A2	USGS40000262391	1 - 2 Miles NNE
3	USGS40000262403	1 - 2 Miles NNE
B4	USGS40000262292	1 - 2 Miles WSW
5	USGS40000262254	1 - 2 Miles SW
B6	USGS40000262290	1 - 2 Miles WSW
9	USGS40000262386	1 - 2 Miles NE
10	USGS40000262278	1 - 2 Miles WSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

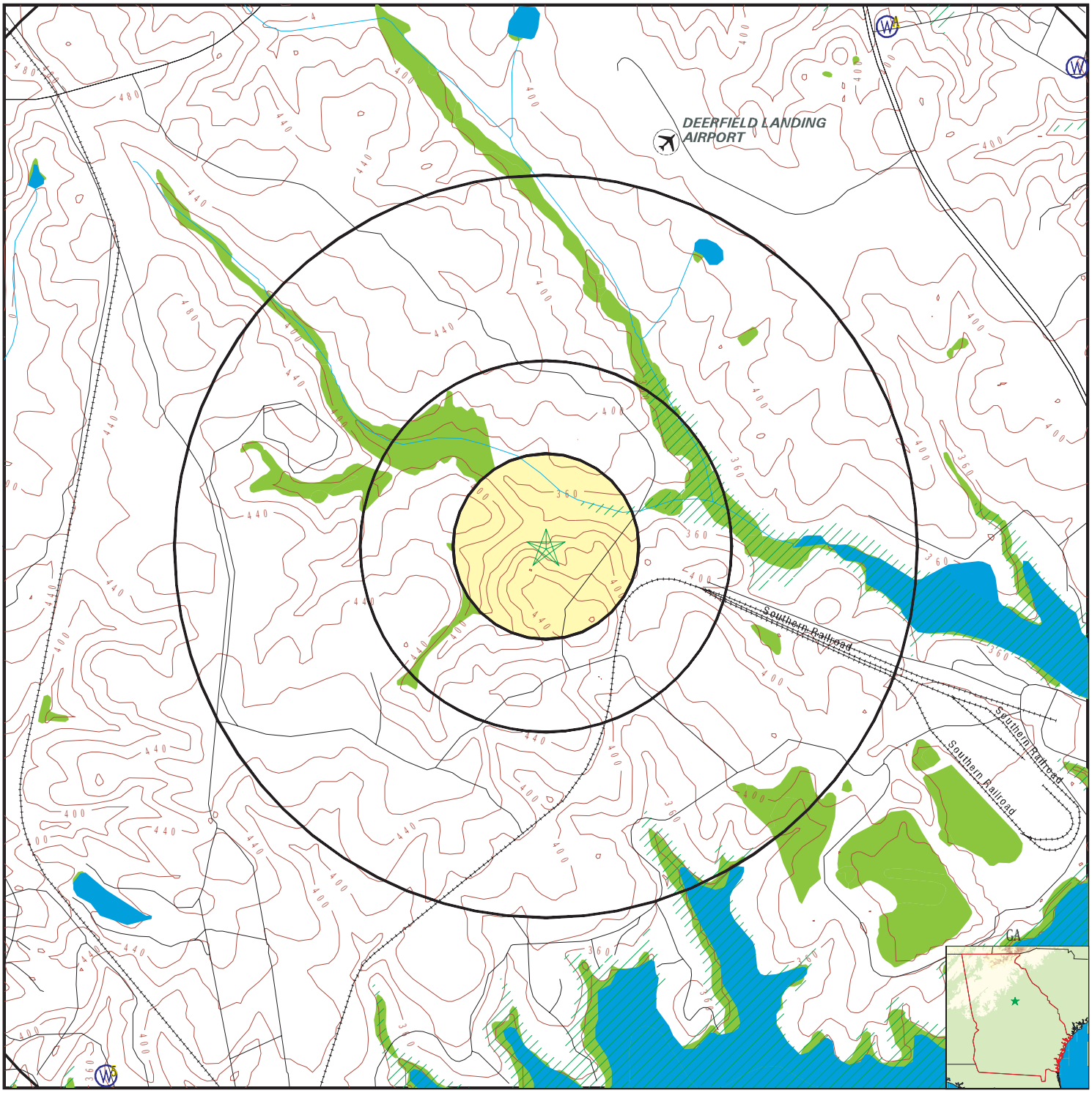
MAP ID	WELL ID	LOCATION FROM TP
C7	GA2370006	1 - 2 Miles SSW
C8	GA2370008	1 - 2 Miles SSW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 07204643.1r



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Wildlife Areas

SITE NAME:	Plant Branch	CLIENT:	Geosyntec Consultants
ADDRESS:	1078-1074 Milledgeville Rd Eatonton GA 31024	CONTACT:	Anthony Szwast
LAT/LONG:	33.202258 / 83.322819	INQUIRY #:	07204643.1r
		DATE:	December 15, 2022 10:21 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NNE
1 - 2 Miles
Higher

FED USGS **USGS40000262392**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z016	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

A2
NNE
1 - 2 Miles
Higher

FED USGS **USGS40000262391**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z017	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

3
NNE
1 - 2 Miles
Lower

FED USGS **USGS40000262403**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z013	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

B4
WSW
1 - 2 Miles
Higher

FED USGS **USGS40000262292**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z021	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

5
SW
1 - 2 Miles
Lower

FED USGS **USGS40000262254**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z020	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

B6
WSW
1 - 2 Miles
Higher

FED USGS **USGS40000262290**

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z023	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

C7
SSW
1 - 2 Miles
Lower

FRDS PWS **GA2370006**

Epa region:	04	State:	GA
Pwsid:	GA2370006	Pwsname:	PINE FOREST SUBDIVISION
Cityserved:	Not Reported	Stateserved:	GA
Zipserved:	Not Reported	Fipscounty:	13237
Status:	Closed	Retpopsrvd:	1003
Pwssvcconn:	388	Psource longname:	Groundwater
Pwstype:	CWS	Owner:	Private
Contact:	ARCHEBELLE, DONNA	Contactorgname:	ARCHEBELLE, DONNA
Contactphone:	706-485-5252	Contactaddress1:	POB 3639
Contactaddress2:	Not Reported	Contactcity:	EATONTON
Contactstate:	GA	Contactzip:	31024-3639
Pwsactivitycode:	I		

Pwsid:	GA2370006	Facid:	15132
Facname:	PARCEL B/451 AVANT RD PLANT #4		

Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

Pwsid:	GA2370006	Facid:	16589
Facname:	160 BEAR CREEK EAST PLANT #5		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

Pwsid:	GA2370006	Facid:	16646
Facname:	143 EDGEWATER DRIVE PLANT #6		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

Pwsid:	GA2370006	Facid:	3517
Facname:	L525/308 LITTLE RIVER TRAILPLANT #3		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

PWS ID:	GA2370006	PWS name:	PINE FOREST SUBDIVISION
Address:	POB 390	Care of:	GREAT SOUTHEAST UTILITY CO.
City:	GREENSBORO	State:	GA
Zip:	306420390	Owner:	PINE FOREST SUBDIVISION
Source code:	Ground water	Population:	629

PWS ID:	GA2370006	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	PINE FOREST SUBDIVISION
PWS type code:	C	Retail population served:	1003
Contact:	ARCHEBELLE, DONNA	Contact address:	663 GODFREY RD.
Contact address:	EATONTON	Contact city:	GA
Contact state:	31	Contact zip:	706-485-52
Contact telephone:	Not Reported		

County:	PUTNAM	Source:	Ground water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, POST
Population:	629		

PWS ID:	GA2370006	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00000564	System name:	PINE FOREST SUBDIVISION
System address:	GREAT SE UTILITY COMPANY	System address:	POB 390
System city:	GREENSBORO	System state:	GA
System zip:	306420390		

Population served:	501 - 1,000 Persons	Treatment:	Treated

Latitude:	335554	Longitude:	0832024

Latitude:	331044	Longitude:	0832025

State:	GA	Latitude degrees:	33
Latitude minutes:	10	Latitude seconds:	44.0000
Longitude degrees:	83	Longitude minutes:	20
Longitude seconds:	25.0000		

State:	GA	Latitude degrees:	33
Latitude minutes:	19	Latitude seconds:	39.0000

Longitude degrees:	83	Longitude minutes:	21
Longitude seconds:	6.0000		

Violation id:	20101	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/2000
Cmp edt:	12/31/2000		

Violation id:	20301	Orig code:	S
State:	GA	Violation Year:	1997
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/1997
Cmp edt:	Not Reported		

Violation id:	20401	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2000
Cmp edt:	Not Reported		

Violation id:	20604	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2004
Cmp edt:	Not Reported		

Violation id:	20705	Orig code:	S
State:	GA	Violation Year:	2003
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2003
Cmp edt:	Not Reported		

Violation id:	20805	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2005
Cmp edt:	Not Reported		

Violation id:	21008	Orig code:	S
State:	GA	Violation Year:	2008
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR

Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	Not Reported		

Violation id:	21109	Orig code:	S
State:	GA	Violation Year:	2009
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2009
Cmp edt:	Not Reported		

Violation id:	21209	Orig code:	S
State:	GA	Violation Year:	2009
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2009
Cmp edt:	07/31/2009		

Violation ID:	20101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal

Violation ID:	20101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St No addtl Formal Action needed		
Enforcement Category:	Informal		

Violation ID:	20101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		

Violation ID:	20201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal

Violation ID:	20301	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal

Violation ID:	20301	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal

Violation ID:	20401	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	07/22/2003
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal

Violation ID:	20401	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	07/24/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	20604	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/23/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	20604	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/01/2004

Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/27/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/14/2005
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/01/2004
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/01/2004
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/08/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/01/2005
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	21008	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/09/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	21109	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	08/05/2009
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	21109	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	10/07/2009
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	21209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	08/19/2009
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	21209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	08/19/2009
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20101
Contaminant:	NITRATE	Violation type:	3
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	12/31/2000 0:00:00
Enforcement date:	9/6/2001 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	0		
PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20101
Contaminant:	NITRATE	Violation type:	3
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	12/31/2000 0:00:00
Enforcement date:	9/6/2001 0:00:00	Enforcement action:	State Public Notif Received

Violation measurement: 0

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: NITRATE
Compliance start date: 1/1/2000 0:00:00
Enforcement date: 9/6/2001 0:00:00
Enforcement action: State No Additional Formal Action Needed
Violation measurement: 0
Population served: 1003
Violation ID: 20101
Violation type: 3
Compliance end date: 12/31/2000 0:00:00

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: LEAD & COPPER RULE
Compliance start date: 10/1/1997 0:00:00
Enforcement date: 9/20/2001 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20301
Violation type: Follow-up and Routine Tap Sampling
Compliance end date: 12/31/2025 0:00:00
Enforcement action: State Intentional no-action

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: LEAD & COPPER RULE
Compliance start date: 10/1/2000 0:00:00
Enforcement date: 7/22/2003 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20401
Violation type: Follow-up and Routine Tap Sampling
Compliance end date: 7/24/2001 0:00:00
Enforcement action: State Intentional no-action

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: LEAD & COPPER RULE
Compliance start date: 10/1/2000 0:00:00
Enforcement date: 7/24/2001 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20401
Violation type: Follow-up and Routine Tap Sampling
Compliance end date: 7/24/2001 0:00:00
Enforcement action: State Compliance Achieved

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: 7000
Compliance start date: 7/1/2004 0:00:00
Enforcement date: 7/1/2004 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20604
Violation type: 71
Compliance end date: 7/23/2004 0:00:00
Enforcement action: State Intentional no-action

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: 7000
Compliance start date: 7/1/2004 0:00:00
Enforcement date: 7/23/2004 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20604
Violation type: 71
Compliance end date: 7/23/2004 0:00:00
Enforcement action: State Compliance Achieved

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: LEAD & COPPER RULE
Compliance start date: 10/1/2003 0:00:00
Enforcement date: 12/1/2004 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20705
Violation type: Follow-up and Routine Tap Sampling
Compliance end date: 7/27/2004 0:00:00
Enforcement action: State Violation/Reminder Notice

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: LEAD & COPPER RULE
Compliance start date: 10/1/2003 0:00:00
Enforcement date: 12/1/2004 0:00:00
Violation measurement: Not Reported
Population served: 1003
Violation ID: 20705
Violation type: Follow-up and Routine Tap Sampling
Compliance end date: 7/27/2004 0:00:00
Enforcement action: State Public Notif Requested

PWS name: PINE FOREST SUBDIVISION
PWS type code: C
Contaminant: LEAD & COPPER RULE
Population served: 1003
Violation ID: 20705
Violation type: Follow-up and Routine Tap Sampling

Compliance start date:	10/1/2003 0:00:00	Compliance end date:	7/27/2004 0:00:00
Enforcement date:	7/14/2005 0:00:00	Enforcement action:	State Public Notif Received
Violation measurement:	Not Reported		

PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20705
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2003 0:00:00	Compliance end date:	7/27/2004 0:00:00
Enforcement date:	7/27/2004 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	7/8/2005 0:00:00
Enforcement date:	7/1/2005 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		

PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	20805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	7/8/2005 0:00:00
Enforcement date:	7/8/2005 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

PWS name:	PINE FOREST SUBDIVISION	Population served:	1003
PWS type code:	C	Violation ID:	21008
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	Not Reported		

C8
SSW **FRDS PWS** **GA2370008**
1 - 2 Miles
Lower

Epa region:	04	State:	GA
Pwsid:	GA2370008	Pwsname:	TALL TIMBERS-OAK OPENINGS
Cityserved:	Not Reported	Stateserved:	GA
Zipserved:	Not Reported	Fipscounty:	13237
Status:	Closed	Retpopsrvd:	733
Pwssvcconn:	279	Psource longname:	Groundwater
Pwstype:	CWS	Owner:	Private
Contact:	ARCHEBELLE, DONNA	Contactorgname:	ARCHEBELLE, DONNA
Contactphone:	706-485-5252	Contactaddress1:	POB 3639
Contactaddress2:	Not Reported	Contactcity:	EATONTON
Contactstate:	GA	Contactzip:	31024-3639
Pwsactivitycode:	I		

Pwsid:	GA2370008	Facid:	15117
Facname:	WELLS 2 & 3 PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

Pwsid:	GA2370008	Facid:	15126
Facname:	116 BLUEGILL RD/L#1 - WELL #5 PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pwsid:	GA2370008	Facid:	21184
Facname:	308 BLUEGILL ROAD-LOT 215 WELL #6 PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

PWS ID:	GA2370008	PWS name:	TALL TIMBERS-OAK OPENINGS
Address:	POB 390	Care of:	GREAT SOUTHEAST UTILITY CO.
City:	GREENSBORO	State:	GA
Zip:	306420390	Owner:	TALL TIMBERS-OAK OPENINGS
Source code:	Ground water	Population:	465

PWS ID:	GA2370008	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	County:	PUTNAM
Source:	Ground water	Treatment Objective:	DISINFECTION
Process:	HYPOCHLORINATION, POST	Population:	465

PWS ID:	GA2370008	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00000465	System name:	TALL TIMBERS-OAK OPENINGS
System address:	GREAT SE UTILITY COMPANY	System address:	POB 390
System city:	GREENSBORO	System state:	GA
System zip:	306420390		

Population served:	101 - 500 Persons	Treatment:	Treated

Latitude:	335554	Longitude:	0832024

Latitude:	331042	Longitude:	0832025

State:	GA	Latitude degrees:	33
Latitude minutes:	10	Latitude seconds:	42.0000
Longitude degrees:	83	Longitude minutes:	20
Longitude seconds:	25.0000		

Violation id:	10101	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/2000
Cmp edt:	12/31/2000		

Violation id:	10201	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/2000
Cmp edt:	12/31/2000		

Violation id:	10301	Orig code:	S
State:	GA	Violation Year:	1995
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/1995

Cmp edt: Not Reported

Violation id:	10501	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2000
Cmp edt:	Not Reported		

Violation id:	10704	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2004
Cmp edt:	Not Reported		

Violation id:	10805	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2005
Cmp edt:	Not Reported		

Violation id:	10906	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2005
Cmp edt:	Not Reported		

Violation id:	11008	Orig code:	S
State:	GA	Violation Year:	2008
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	Not Reported		

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	9200002	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	COLIFORM (TCR)
Violation type:	Max Contaminant Level, Monthly (TCR)		
Violation start date:	070192	Violation end date:	073192
Violation period (months):	001	Violation awareness date:	Not Reported
Major violator:	Not Reported	Maximum contaminant level:	Not Reported
Number of required samples:	Not Reported	Number of samples taken:	Not Reported
Analysis method:	Not Reported	Analysis result:	Not Reported

Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	10/03/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St No addtl Formal Action needed		
Enforcement Category:	Informal		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	05/15/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	05/15/2001
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	10/03/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/06/2001
Enforcement Detail:	St No addtl Formal Action needed		
Enforcement Category:	Informal		
Violation ID:	10301	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/20/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	10501	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	07/22/2003
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	10501	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	08/17/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10704	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/01/2004
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10704	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/23/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/01/2005
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10805	Orig Code:	S

Enforcemnt FY:	2005	Enforcement Action:	07/08/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/17/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/12/2006
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	02/07/2006
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10906	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	02/07/2006
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	11008	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/09/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

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9
NE **FED USGS** **USGS40000262386**
1 - 2 Miles
Higher

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z015	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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10
WSW **FED USGS** **USGS40000262278**
1 - 2 Miles
Higher

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	19Z022	Type:	Well
Description:	Not Reported	HUC:	03070101
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for PUTNAM County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 31024

Number of sites tested: 10

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.190 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Georgia GIS Clearinghouse
Telephone: 706-542-1581

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

A listing of Private Water Well locations
Georgia Department of Public Health
Telephone: (404) 657-2700
A listing of Private Water Well locations

Georgia Public Supply Wells
Source: Georgia Department of Community Affairs
Telephone: 404-894-0127

USGS Georgia Water Wells
Source: USGS, Georgia District Office
Telephone: 770-903-9100

DNR Managed Lands
Source: Department of Natural Resources
Telephone: 706-557-3032
This dataset provides 1:24,000-scale data depicting boundaries of land parcels making up the public lands managed by the Georgia Department of Natural Resources (GDNR). It includes polygon representations of State Parks, State Historic Parks, State Conservation Parks, State Historic Sites, Wildlife Management Areas, Public Fishing Areas, Fish Hatcheries, Natural Areas and other specially-designated areas. The data were collected and located by the Georgia Department of Natural Resources. Boundaries were digitized from survey plats or other information.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION