Prepared for

Georgia Power Company
241 Ralph McGill Blvd NE
Atlanta, Georgia 30308

ASSESSMENT OF CORRECTIVE MEASURES REPORT

PLANT BRANCH ASH POND E (AP-E)

Prepared by

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

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Georgia Power

ASSESSMENT OF CORRECTIVE MEASURES REPORT

Plant Branch
Ash Pond E

CERTIFICATION STATEMENT

I, Lauren Fitzgerald, am a professional engineer and licensed in the State of Georgia. I hereby certify that this *Assessment of Corrective Measures Report, Georgia Power Company – Plant Branch – Ash Pond E (AP-E)* was prepared by, or under the direct supervision of, a Qualified Groundwater Scientist, in accordance with the Georgia Environmental Protection Division Rules of Solid Waste Management. According to 391-3-4-.01, 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." By affixing my professional seal and signature, I hereby acknowledge that this report has been prepared in conformance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10.

Lauren Fitzgerald, Ph.D., P.E.
Project Engineer

Whitney Law, P.E.
Project Director

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ACM	Assessment of Corrective Measures
ANS	Applied Natural Sciences
AP	ash pond
ASD	Alternate Source Demonstration
CCR	coal combustion residuals
CFR	Code of Federal Regulations
cm/sec	centimeters per second
ft	feet
ft bgs	feet below ground surface
ft/day	feet per day
ft/ft	feet per foot
GA EPD	GA Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
ISCO	in-situ chemical oxidation
ISCR	in-situ chemical reduction
ISS	in-situ solidification/stabilization
K_h	horizontal hydraulic conductivity
LDA	large diameter auger
MNA	monitored natural attenuation
O&M	operations and maintenance
P&T	pump and treat
PE	professional engineer
PRB	permeable reactive barriers
PWR	partially weathered rock
RCRA	Resource Conservation and Recovery Act
SSL	statistically significant level
TWR	transitionally weathered rock
US EPA	United States Environmental Protection Agency
ZVI	zero-valent iron

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residual Rule (federal CCR Rule) [40 Code of Federal Regulations (CFR) Part 257, Subpart D] and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants, Inc. (Geosyntec) has prepared this *Assessment of Corrective Measures (ACM) Report* for Georgia Power Company (Georgia Power) Plant Branch (Site) Ash Pond E (AP-E). Pursuant to 40 CFR § 257.96 and Georgia Rule 391-3-4-.10(6)(a), this ACM Report evaluates potential corrective measures to address statistically significant levels (SSLs) of cobalt and beryllium identified at AP-E.

Plant Branch ceased producing electricity prior to October 19, 2015, and therefore pursuant to § 257.50(e), AP-E is not subject to the federal CCR Rule. However, the GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a) promulgates the groundwater monitoring and corrective action regulations stipulated in the federal CCR Rule § 257.90 through § 257.98. For ease of reference, the US EPA CCR rules are cited within this report.

The SSLs of cobalt and beryllium were identified following statistical analysis of analytical groundwater data from the October 2019 semiannual assessment monitoring event (Golder, 2020a). Georgia Power submitted an Alternate Source Demonstration (ASD) to GA EPD for the observed SSLs (Golder, 2020b) 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. Four assessment groundwater monitoring wells, installed to assess the extent of cobalt and beryllium in groundwater downgradient of AP-E, show that cobalt and beryllium are horizontally and vertically delineated and contained within the property boundary. This ACM Report is the first step in identifying viable corrective measures to address SSLs in groundwater associated with AP-E. Based on the results of the ACM, further evaluation may be performed, site-specific studies completed, and a corrective action plan developed and implemented pursuant to § 257.97 and § 257.98.

Georgia Power is conducting a human health and ecological risk evaluation to evaluate constituents that exhibit SSLs in groundwater (i.e., cobalt, beryllium) at AP-E. The risk evaluation will use a conservative, health-protective approach that is consistent with US EPA risk assessment guidance, GA EPD regulations and guidance, and standard practice for risk assessment in the State of Georgia. As part of the risk evaluation, a well survey of potential groundwater wells within a three-mile radius of AP-E will be conducted and

will consist of reviewing federal, state, and county records and online sources in addition to conducting a windshield survey of the area. The risk evaluation will rely on groundwater data collected by Georgia Power from March 2020 to August 2022 in compliance with the federal and state CCR rules. The results of this risk evaluation will be presented in a *Risk Evaluation Report – Georgia Power Company – Plant Branch Ash Pond E* to be included as an appendix to the February 2023 *Semiannual Groundwater Monitoring and Corrective Action Report* (semiannual report).

1.1 Purpose

The purpose of this ACM is to begin the process of selecting corrective measure(s) for groundwater. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures to address the potential migration of CCR constituents in groundwater at AP-E.

Once potential corrective measures are identified in this ACM, they are further evaluated using the criteria outlined in § 257.96 (c), which state that corrective measures assessment should include an analysis of the effectiveness of potential corrective measures that considers the following:

- Performance;
- Reliability;
- Ease of implementation;
- Potential impacts (including safety, cross-media, and exposure);
- The time required to begin and complete the remedy; and
- Any institutional requirements (e.g., permitting or environmental and public health requirements) that could affect implementation of the remedy.

These evaluation criteria are considered for each potential corrective measure. Further evaluation of the technologies will be required to select a corrective measure(s).

1.2 Site Location and Description

Plant Branch is located in Putnam County, Georgia, approximately 8 miles north of Milledgeville. The plant is primarily surrounded by agricultural, residential, and light

commercial land use. 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 (**Figure 1**). The physical address of the plant is 1100 Milledgeville Road, Milledgeville, Georgia 31061.

Plant Branch formerly operated as a coal-fired electric generating facility since the 1960s until being decommissioned in July 2015, at which point it ceased producing electricity. 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 (AP-A), the first ash pond constructed at the Site, 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. Ash Ponds B, C, D (AP-BCD) and AP-E are currently inactive.

Ash Pond E is surrounded by forested, rural land. The ash pond is approximately 348 acres in size and covers four converging valleys and side-channels. The ash pond was first used for CCR disposal in 1982 and stopped receiving CCR in 2015.

1.3 Pond Closure

Georgia Power retired Plant Branch in 2015 and will close AP-E through removal of the CCR material from the CCR unit. Removed CCR will be consolidated in a new, lined onsite CCR landfill. The closure of AP-E in the manner described above provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Corrective measures discussed in this ACM Report are being evaluated to address SSLs in groundwater at the compliance boundary of AP-E. The compliance boundary is the unit boundary where the detection well network is installed.

2.0 CONCEPTUAL SITE MODEL

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 associated with AP-E (Geosyntec, 2020).

2.1 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.

As discussed in the HAR Rev 01, 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.

2.2 Hydrology and Groundwater Flow

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.

Groundwater level data are recorded during each semiannual assessment monitoring event from the well and piezometer networks associated with Plant Branch, depicted on **Figure 2**. The data are used to generate potentiometric surface maps that depict the groundwater flow direction or calculate flow gradients. The potentiometric surface map representing the August 2022 groundwater level data is provided on **Figure 2**.

Groundwater gradient and flow velocity calculations using water level data collected in January 2022 were completed in the *2022 Annual Groundwater and Corrective Action Monitoring Report* (Geosyntec, 2022), which is summarized in the following text. 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 HAR Rev 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 was used to represent average conditions at AP-E which was derived based on the default values for effective porosity recommended by US EPA for a silty sand-type soil (US EPA, 1996). In the northern portion of the site, the horizontal hydraulic gradient between BRGWA-5S and BRGWC-33S was calculated to be 0.005 foot per foot (ft/ft) while in the southern portion of the site, the horizontal hydraulic gradient between PZ-4I and BRGWC-38S was calculated to be 0.009 ft/ft. Accounting for groundwater flow in the northern and southern portions of the Site, the representative horizontal groundwater hydraulic gradient for AP-E is 0.007 ft/ft.

Groundwater flow velocity in the vicinity of AP-E was approximately 0.17 ft/day. Additional details regarding the hydrogeologic conditions in vicinity of AP-E are provided in the HAR Rev 01 and the *2022 Annual Groundwater and Corrective Action Monitoring Report* (Geosyntec, 2022). Updated groundwater flow velocity calculations based on the most recent sampling event conducted in August 2022 will be included in the 2023 semiannual report to be submitted in February 2023.

3.0 NATURE AND EXTENT DELINEATION

The following describes monitoring-related field and assessment activities performed to date in support of (i) delineating the nature and extent of SSLs in groundwater and (ii) evaluating potential corrective measures to address them.

3.1 Groundwater Monitoring & Appendix IV Constituents

3.1.1 Groundwater Monitoring Program

In accordance with § 257.91, a groundwater monitoring system was installed at AP-E that consists of a sufficient number of wells ("detection wells") installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the units (i.e., background conditions) and passing the waste boundary of the units. The number, spacing, and depths of the detection groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions. Based on the Site hydrogeology, the detection well monitoring system is designed to monitor groundwater flow in the overburden, the transition-zone, and the upper bedrock as a single interconnected aquifer system. Detection 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 AP-E detection well network are listed in **Table 1**. The locations of the detection wells are shown on **Figure 3**.

Groundwater is currently monitored in AP-E wells under the assessment monitoring program pursuant to § 257.95. Additional groundwater monitoring details are provided in the *2022 Annual Groundwater and Corrective Action Monitoring Report* (Geosyntec, 2022).

3.1.2 SSLs for Appendix IV Constituents

Groundwater monitoring data collected during the August 2022 assessment monitoring event are being statistically analyzed pursuant to § 257.93(f) and in general accordance with the US EPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (US EPA, 2009). Following federal and state rule requirements, groundwater protection standards (GWPS) are established for statistical comparisons of Appendix IV assessment monitoring parameters. For this ACM Report, Appendix IV GWPS from the statistical analysis completed for the February 2022 assessment monitoring event are provided in **Table 2**. Appendix IV parameters detected

during the February 2022 event were statistically evaluated with the GWPS to assess if concentrations in detection monitoring wells statistically exceeded the GWPS. Details regarding the statistical analyses of the February 2022 sampling event are provided in the *2022 Annual Groundwater and Corrective Action Monitoring Report* (Geosyntec, 2022). Statistical analysis of the August 2022 groundwater monitoring data will be included in the *2023 Semiannual Groundwater Monitoring and Corrective Action Report* to be submitted to GA EPD in February 2023.

The statistical analyses of the February 2022 analytical data from AP-E identified SSLs of cobalt and beryllium in the following wells:

- Cobalt: BRGWC-33S and BRGWC-38S; and
- Beryllium: BRGWC-38S.

3.2 Delineation of SSL Constituents

Four additional groundwater monitoring wells were used to provide additional data to characterize flow conditions downgradient of AP-E and to horizontally and vertically delineate SSLs of cobalt and beryllium in groundwater at AP-E. Assessment wells PZ-13S and PZ-70I were utilized for horizontal delineation and assessment wells PZ-52D and PZ-53D were utilized for vertical delineation of detection wells BRGWC-33S and BRGWC-38S, respectively. Detailed boring and well construction logs for these four assessment wells are provided in **Appendix A**. The locations of these four assessment wells are shown on **Figure 3** and well construction details are also provided in **Table 1**.

Pursuant to § 257.96, groundwater in the vicinity of AP-E continues to be monitored during the ACM phase in accordance with the assessment monitoring program established for the CCR unit in 2019. Groundwater samples were collected from the detection wells and four assessment wells in August 2022 and analyzed for all Appendix IV parameters per § 257.95(b). The groundwater analytical results from this event are summarized in **Table 3**. Laboratory reports associated with the August 2022 results are provided in **Appendix B.**

The August 2022 assessment monitoring event was the first event to assess delineation of SSLs at AP-E. Due to limited data from the assessment wells, confidence intervals will be determined after an adequate number of independent events have been completed. However, the August 2022 analytical results reported for the horizontal assessment wells (PZ-13S and PZ-70I) suggest that SSLs of cobalt and beryllium are horizontally

delineated and contained within the property boundary; for these wells, the cobalt and beryllium concentrations are below their respective GWPS (0.006 mg/L; 0.004 mg/L, respectively). In addition, vertical assessment wells (PZ-52D and PZ-53D) suggest that SSLs of cobalt and beryllium are vertically delineated; for these wells, the cobalt and beryllium concentrations are below their respective GWPS. Iso-concentration maps illustrating delineation for the cobalt and beryllium concentrations in the vicinity of AP-E are provided on **Figures 4** and **5**, respectively.

4.0 GROUNDWATER CORRECTIVE MEASURES

4.1 Objectives of the Corrective Measures

In evaluating the effectiveness of potential corrective measures using the criteria listed in § 257.96(c), including performance, reliability, ease of implementation, potential impacts, time required, and institutional and public health requirements, the following criteria listed in § 257.97(b) must be met by the corrective measure when selected:

- Be protective of human health and the environment;
- Attain applicable groundwater protection standards as specified pursuant to § 257.95(h);
- Control the sources of releases to reduce or eliminate, to the maximum extent feasible, further releases of constituents in Appendix IV to this part to the environment;
- Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems; and
- Comply with standards for management of CCR as specified in § 257.98(d).

Corrective measures selected for evaluation herein for potential use at AP-E are anticipated to satisfy the above criteria to varying degrees of effectiveness.

4.2 Summary of Corrective Measures

The closure of AP-E via removal of CCR materials as described in Section 1.3 is a source control measure that reduces the potential for migration of CCR constituents to groundwater. Corrective measures discussed in this ACM are being evaluated to address SSLs in groundwater at and downgradient of the compliance boundary.

This section presents potential corrective measures capable of remediating the Appendix IV groundwater constituents (i.e., cobalt and beryllium) at AP-E. Each corrective measure is evaluated relative to criteria specified in § 257.96(c) and § 257.97(b). **Table 4** provides a comparative screening of the corrective measures discussed in Section 4.

The following potential corrective measures are considered in this ACM:

- Geochemical Approaches (In-Situ Injection)
- Hydraulic Containment (Pump and Treat)
- In-Situ Solidification/Stabilization
- Monitored Natural Attenuation
- Permeable Reactive Barrier
- Phytoremediation
- Subsurface Vertical Barrier Walls

While in-situ solidification/stabilization (ISS) is generally considered a viable option for either small source areas or targeted zones within a larger footprint, this potential corrective measure is not a viable corrective measure at AP-E. The closure of AP-E as previously described will remove CCR materials from the pond and place them into a permitted onsite landfill. As such, the use of ISS for a fully excavated CCR pond is not an applicable corrective measure at AP-E and no detailed evaluation is provided in **Table 4**.

4.2.1 Geochemical Approaches (In-Situ Injection)

Beryllium and cobalt can be precipitated and/or immobilized under different combinations of pH and redox conditions. A variety of pH and/or redox-altering technologies are available which can incorporate biological processes, chemical oxidants and reductants, and/or mechanical processes such as air sparging. These processes can be used to decrease the mobility of beryllium and cobalt. For example, beryllium and cobalt can be sorbed to iron and manganese oxides or co-precipitated with sulfide minerals.

To understand the geochemical processes that would effectively immobilize beryllium and cobalt in groundwater, site-specific bench-scale and potentially field pilot-scale treatability studies are needed to identify an effective amendment to create the appropriate conditions for the precipitation and/or sorption of this constituent without mobilizing other naturally-occurring constituents. Once precipitated, these minerals are often stable even if geochemical conditions revert back to a different redox environment. However, if not properly designed and implemented, manipulating redox conditions without forming the desired compounds may increase the mobility of naturally-occurring constituents.

Air sparging can be used to provide oxygen to the subsurface in an attempt to precipitate out (or make more “sorptive”) compounds that are generally more soluble and mobile under reducing conditions. This can also support the precipitation of iron and manganese

oxides, which would provide additional sorption sites for constituents such as beryllium and cobalt.

Furthermore, in-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox or pH environment in the subsurface to affect the mobility and/or bioavailability of certain inorganic compounds.

The main limiting process in these in-situ remedial approaches is the delivery of the compounds within the area of interest. Mixing and contact with the target constituents are necessary and can be difficult in heterogeneous materials and fine-grained materials.

The attenuation of beryllium and cobalt is expected to occur under both aerobic (via sorption to manganese or iron oxides) and anaerobic conditions (via formation of sulfide minerals). Therefore, in-situ injections are considered a potentially viable corrective measure to address beryllium and cobalt in groundwater at AP-E, especially in smaller, more localized areas. This technology will be retained for further evaluation.

4.2.2 Hydraulic Containment (Pump and Treat)

Generally, hydraulic containment (or control) refers to the use of groundwater extraction to artificially induce a hydraulic gradient and capture or control the migration of impacted groundwater. One example, groundwater pump and treat (P&T), is often considered to be a viable remedial technology at many sites (US EPA, 1996). This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature or sewer system, reinjection into the aquifer, or reuse. Groundwater P&T is often relatively slow and costly as a means to restore groundwater quality over a long-term period, but can be effective as an interim measure, or combined with another measure, to provide hydraulic containment to limit constituent migration toward a potential receptor.

Groundwater extraction for hydraulic control can often effectively address the variety of inorganic constituents encountered at CCR sites, including beryllium and cobalt. Extraction technologies also have the ability to overcome the limitations of in situ injection-based technologies (i.e., mixing and contact with affected materials). Space constraints are mainly limited to the above-ground conveyance and treatment component of a P&T system since extraction wells can generally be fit into relatively tight spaces at the edge of waste or other points of compliance.

Extracted groundwater may need to be treated prior to discharge (depending on discharge permit requirements) but does have the potential to be used for irrigation (e.g., of a cover

system or other vegetated areas at the Site) or dust suppression purposes. It could also be used as moisture conditioning of dry ash that is being landfilled. Therefore, P&T is a potentially viable corrective measure for beryllium and cobalt in groundwater at AP-E and will be retained for further evaluation.

4.2.3 Monitored Natural Attenuation

The US EPA defines monitored natural attenuation (MNA) as the reliance on natural attenuation processes (within the context of a carefully controlled and monitored site cleanup approach) to achieve site-specific remediation objectives within a time frame that is reasonable compared to that offered by other more active methods. The natural attenuation processes that are at work in such a remediation approach include a variety of physical, chemical, or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. These in-situ processes include biodegradation; dispersion; dilution; sorption; volatilization; radioactive decay; and chemical or biological stabilization, transformation, or destruction of contaminants (US EPA, 2015).

Attenuation mechanisms for inorganic constituents, such as beryllium and cobalt, are either physical or chemical. Physical attenuation mechanisms such as dilution and dispersion may be appropriate as a polishing step (e.g., at the boundaries of impacted groundwater, when source control is complete, a separate active remedy is being used, and appropriate land use and groundwater controls are in place). Source control measures planned for AP-E include closure by removal of CCR materials from AP-E and placement into a new, permitted onsite landfill. Chemical attenuation mechanisms through sorption or oxidation reduction reactions discussed in more detail below may be viable as a stand-alone corrective measure.

As stated by US EPA (2015): “MNA may, under certain conditions (e.g., through sorption or oxidation-reduction reactions), effectively reduce the dissolved concentrations and/or toxic forms of inorganic contaminants in groundwater and soil. Both metals and non-metals (including radionuclides) may be attenuated by sorption reactions such as precipitation, adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Oxidation-reduction (redox) reactions can transform the valence states of some inorganic contaminants to less soluble and thus less mobile forms (e.g., hexavalent uranium to tetravalent uranium) and/or to less toxic forms (e.g., hexavalent chromium to trivalent chromium).” Beryllium and cobalt undergo sorption to iron and manganese oxides and, depending on specific redox conditions, may also form sparingly soluble sulfide minerals via abiotic or biotic processes.

The US EPA uses four phases to establish whether MNA can be successfully implemented at a given site. The phases (or steps) include:

- Phase I: Demonstration that the groundwater plume is *not expanding*.
- Phase II: Determination that the *mechanism and rate* of the attenuation process are sufficient.
- Phase III: Determination that the *capacity* of the aquifer is sufficient to attenuate the mass of contaminant within the plume and the *stability* of the immobilized contaminant is sufficient to resist re-mobilization.
- Phase IV: Design of a *performance monitoring program* based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Physical and chemical MNA mechanisms for beryllium and cobalt, including dilution, dispersion, sorption, and precipitation, can be operational without the potential for additional mass of beryllium or cobalt migrating to downgradient groundwater. Even under current conditions, attenuation processes for cobalt and beryllium are already occurring as evidenced by groundwater data from assessment wells, which indicates reduction in cobalt and beryllium concentrations to below GWPS at a short distance downgradient of the wells showing SSLs. Additionally, in the February 2022 statistical analysis, cobalt and beryllium show statistically significant decreasing concentrations over time in the SSL wells (**Figure 6**). Therefore, MNA is a potentially viable corrective measure for beryllium and cobalt in groundwater at AP-E and will be retained for further evaluation.

4.2.4 Permeable Reactive Barriers

Permeable reactive barriers (PRBs) can present a viable alternative for in-situ treatment of cobalt. The technology typically involves the installation of a subsurface wall constructed with reactive media such as zero-valent iron (ZVI), biologically active media (to induce oxidizing or reducing conditions), or clays, apatite, zeolites, and/or peat moss (to promote ionic exchange and/or sorption). PRBs have proven to be effective in passively treating several inorganic constituents found at CCR sites, including arsenic, selenium, and chromium (e.g., ITRC, 2011). The use of PRBs for cobalt has been tested (e.g., Ludwig et al., 2002), but additional site-specific testing is needed to confirm the applicability of this technology to cobalt removal from groundwater. Limited information

is available on the effectiveness of PRBs on the removal of beryllium. Further research and testing are required to see if beryllium could be attenuated by a PRB.

PRBs can be installed in downgradient locations using conventional excavation methods or one-pass trenching methods. Excavated trenches get back-filled with reactive media to create a barrier that treats dissolved constituents as they passively flow through the PRB with the groundwater (e.g., ITRC, 2011). These systems can either be constructed as continuous "walls" or as "funnel-and-gate" systems where (impermeable) slurry walls create a "funnel" that directs groundwater to permeable "treatment gates" filled with reactive materials. Since the costs for reactive materials (e.g., ZVI or similar) are generally higher than bentonite-based slurry wall construction, these configurations with a smaller treatment area help to lower construction and maintenance costs.

The installation depths of a PRB unit are generally limited to about 90 ft below ground surface (ft bgs), which is suitable for AP-E where SSLs are observed less than 40 ft bgs. The installation of a PRB generally requires more space than extraction wells, but the system does not require above-ground treatment components and therefore, the overall treatment footprint is likely to be smaller compared to a P&T system.

While additional subsurface investigations, aquifer testing, reactive media testing, and compatibility testing of groundwater and a potential slurry wall component of a PRB will be needed to further evaluate the feasibility of installing a PRB at BRGWC-38S and BRGWC-33S, the technology is currently considered to be a potentially viable corrective measure to address beryllium and cobalt in groundwater at AP-E. Therefore, this technology will be retained for further evaluation.

4.2.5 Phytoremediation

Phytoremediation is the use of plants to degrade, immobilize, or contain constituents in soil, groundwater, surface water, and sediments. Over recent decades, phytoremediation has emerged as a viable alternative to more active and costly environmental cleanup technologies, especially for large areas with relatively low levels of constituents in shallow soils or groundwater. The effectiveness of groundwater remediation using traditional phytoremediation approaches may be limited by compacted soil conditions that impede root penetration, or target groundwater that is too deep for root access. Given that groundwater wells at AP-E that exhibited SSLs for beryllium and cobalt are screened between 16 and 38 ft bgs, traditional plantings for phytoremediation are not expected to be successful. However, more recently, an engineered approach to phytoremediation, the *TreeWell*® system (which is a proprietary system developed by Applied Natural Sciences

[ANS]), has been shown to overcome these constraints by utilizing a specialized lined planting unit constructed with optimum planting media designed to promote downward root growth, encourage constituent treatment, and focus groundwater extraction from a targeted depth interval (e.g., Gatliff et al., 2016).

By installing a cased "well" for tree planting using large diameter auger (LDA) technology, extraction of deeper groundwater zones (i.e., in excess of 50 ft bgs) can be achieved since the surface of the "well" is sealed and only groundwater from a targeted zone is allowed into the cased-off borehole. This type of system mirrors a traditional mechanical extraction system using the trees as pumps. The *TreeWell* system can be used for both hydraulic control of groundwater and for treatment of constituents via degradation (for organic constituents) or immobilization/containment mechanisms (for organic and inorganic constituents). With respect to the site-specific conditions, the system would be applied for hydraulic control, but beryllium and cobalt are expected to be either immobilized within the root zone or incidentally taken up into the tree biomass.

The advantage of the system includes no above-ground water management needs and limited long-term operations and maintenance (O&M) requirements following the establishment of the tree system. Such systems have been observed to meet design hydraulic control parameters typically by the end of the third growing season, when properly designed and spaced. The layout for a *TreeWell* remediation system is generally based on groundwater flow modeling assuming a design uptake rate of approximately 40 to 60 gallons per day per tree.

Based on the current understanding of groundwater flow velocities downgradient of AP-E (approximately 62 feet/year), a phytoremediation approach would appear to be viable. An engineered phytoremediation approach will be retained for further evaluation.

4.2.6 Subsurface Vertical Barrier Walls

Subsurface vertical barrier walls (sometimes referred to as slurry walls) have been used for seep control and groundwater cutoff at impoundments and waste disposal units for more than three decades. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective.

This approach involves placing a barrier to groundwater flow in the subsurface, frequently around the source area (or the downgradient limits of the source area), to prevent future migration of dissolved constituents in groundwater from beneath the

source to downgradient areas. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near a surface water feature. A variety of barrier materials can be used, including cement and/or bentonite slurries or various mixtures of soil with cement or bentonite, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile.

The installation of these low-permeability walls is similar to the methods described for PRBs above. In general, the applicability of slurry walls is limited by the depth of installation, which is approximately 90 ft below ground surface. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations.

Groundwater pumping is generally required upgradient of the barrier wall to maintain an inward hydraulic gradient. The extracted groundwater would likely require treatment in an above-ground treatment system.

While additional subsurface investigations, aquifer testing, and wall compatibility testing with the groundwater chemistry will be needed to further evaluate the feasibility as well as the placement of a barrier wall at BRGWC-38S and BRGWC-33S, the technology is currently considered to be a potentially viable corrective measure to address beryllium and cobalt in groundwater at AP-E and will be retained for further evaluation. However, it is more likely to be a component of a potential PRB application rather than a stand-alone corrective measure.

5.0 REMEDY SELECTION PROCESS

The purpose of this ACM is to begin the process of selecting corrective measure(s) for groundwater based on further evaluation using the criteria outlined in § 257.96. The following sections present the pond closure and site management strategy, additional data gathering, schedule, reporting, and next steps.

5.1 Pond Closure and Site Management Strategy

Georgia Power plans to close AP-E via removal of the CCR materials from the unit for on-site disposal at a new, permitted landfill. During the pond closure, temporary changes in site conditions may occur. Additionally, the site conceptual model may need to be refined and/or updated from the current understanding as more data are collected. Georgia Power plans to proactively utilize adaptive site management to support the remedial strategy and address potential changes in site conditions as appropriate. Under an adaptive site management strategy, a remedial approach will be selected whereby: (1) a corrective measure will be installed or implemented to address current conditions; (2) the performance of the corrective measure will be monitored, evaluated, and reported semiannually; (3) the conceptual site model will be updated as more data are collected; and (4) adjustments and augmentations will be made to the corrective measure(s), as needed, to assure that performance criteria and site remedial goals are met.

5.2 Additional Data Gathering

Additional data, data analysis, and site-specific evaluation are necessary to refine the conceptual site model and to further evaluate the feasibility of each corrective measure presented herein such that an appropriate groundwater corrective measure may be selected. Some of the data needed to refine the conceptual site model may be collected concurrent with routine groundwater monitoring events under the assessment monitoring program, or during supplementary sampling, if required. However, additional data collection that includes aquifer testing, groundwater modeling, material compatibility testing, bench scale studies, and/or field pilot tests may require an estimated one to two additional years to complete. Once sufficient data are available to select a focused number of corrective measures or a combination of corrective measures that would provide an effective groundwater remedy, necessary steps will be taken to implement a remedy at the Site in accordance with § 257.98.

5.3 Schedule, Reporting, and Next Steps

It is anticipated that additional data collection will begin in 2023. Georgia Power will prepare semiannual progress reports to document Site groundwater conditions, results associated with additional data gathering identified in Section 5.2 and in **Table 4**, and the progress in selecting and designing the remedy in accordance with § 257.97(a) beginning in July 2023. These reports will be posted to Georgia Power's website.

A draft remedy selection report will be submitted to GA EPD for review and concurrence on the proposed remedy and, at least 30 days prior to the final selection of remedy or remedies, a public meeting to discuss the results of the corrective measures assessment will be held pursuant to § 257.96(e). The final remedy selection report will be developed as outlined in § 257.97(a). Once the remedy has been selected, the implementation of the remedy will be initiated in accordance with § 257.98.

6.0 REFERENCES

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TABLES

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

Well ID	Hydraulic Location	Installation Date	Easting [1]	Northing [1]	Ground Surface Elevation [2] (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-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
AP-E Assessment Monitoring Well Network										
PZ-13S	Downgradient E	3/19/2014	2555276.64	1168011.19	406.5	409.97	382.2	372.2	34.7	10
PZ-70I	Downgradient E	8/16/2022	2555374.08	1164326.66	422.9	425.70	383.4	373.4	50.0	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

Notes:
-- = not applicable
ft = feet
ft BGS = feet below ground surface
(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

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

Analyte	Units	MCL	CCR-Rule Specified[1]	Background Limit[2] Feb. 2022	GWPS[3]
Antimony	mg/L	0.006	N/A	0.003	0.006
Arsenic	mg/L	0.01	N/A	0.005	0.01
Barium	mg/L	2	N/A	0.063	2
Beryllium	mg/L	0.004	N/A	0.0005	0.004
Cadmium	mg/L	0.005	N/A	0.0005	0.005
Chromium	mg/L	0.1	N/A	0.016	0.1
Cobalt	mg/L	N/A	0.006	0.005	0.006
Fluoride	mg/L	4	N/A	0.19	4
Lead	mg/L	N/A	0.015	0.0013	0.015
Lithium	mg/L	N/A	0.04	0.089	0.089
Mercury	mg/L	0.002	N/A	0.00021	0.002
Molybdenum	mg/L	N/A	0.1	0.01	0.1
Selenium	mg/L	0.05	N/A	0.005	0.05
Thallium	mg/L	0.002	N/A	0.001	0.002
Combined Radium-226/228	pCi/L	5	N/A	1.55	5

Notes:
CCR = Coal Combustion Residuals
GWPS = Groundwater Protection Standard
MCL = Maximum Contaminant Level
mg/L = milligrams per liter
pCi/L = picocuries per liter
N/A = Not Applicable
Background limits and GWPS are applicable to the February 2022 semiannual event.
(1) On February 22, 2022, the Georgia Environmental Protection Division (GA EPD) adopted the federally promulgated GWPS for cobalt, lithium, lead, and molybdenum.
(2) The background limits were used when determining the GWPS under 40 CFR 257.95(h) and GA EPD Rule 391-3-4-.10(6)(a).
(3) 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.

Table 3
Summary of Groundwater Analytical Results - August 2022
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	1.1	<0.0052	1.67	<0.0052	0.0403	1.04	1.2
	Calcium	4.65	13.9	18.2	14.3	3.97	43.6	119	75	68.5	48.1	3.7	37.1	9.69	69	76.4	42.6
	Chloride	2.18	2.02	3.59	3.64	2.39	5	30.3	6.17	6.53	7.96	1.97	6.42	4.2	6.24	4.94	10.8
	Fluoride	<0.033	<0.033	<0.033	<0.033	<0.033	0.274	0.187	0.14	<0.033	0.194	0.105	0.609	0.128	0.14	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	7.33	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	340	348	172
	TDS	45	117	101	107	52	370	614	452	507	418	40	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	0.012	0.00954	0.0379	0.0241	0.014	0.0512	0.0409	0.0249	0.0339	0.0296	0.026	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	0.00021 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	0.0015	<0.0003	0.0056
	Fluoride	<0.033	<0.033	<0.033	<0.033	<0.033	0.274	0.187	0.14	<0.033	0.194	0.105	0.609	0.128	0.14	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	0.0024	<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	1.7	0.735	2.3	0.203	0.152	1.94	1.86	3.1	1.38	2.37	3.12	1.83	--	3.04	1.57
	Selenium	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00208 J	0.0061	<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

Notes:
-- = Parameter was not analyzed
< = Indicates the parameter was not detected above the analytical method detection limit (MDL).
J = Indicates the parameter was estimated and detected between the MDL and the reporting limit (RL).
TDS = total dissolved solids
(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 4
Evaluation of Remedial Technologies
Plant Branch AP-E, Putnam County, Georgia

Geosyntec consultants

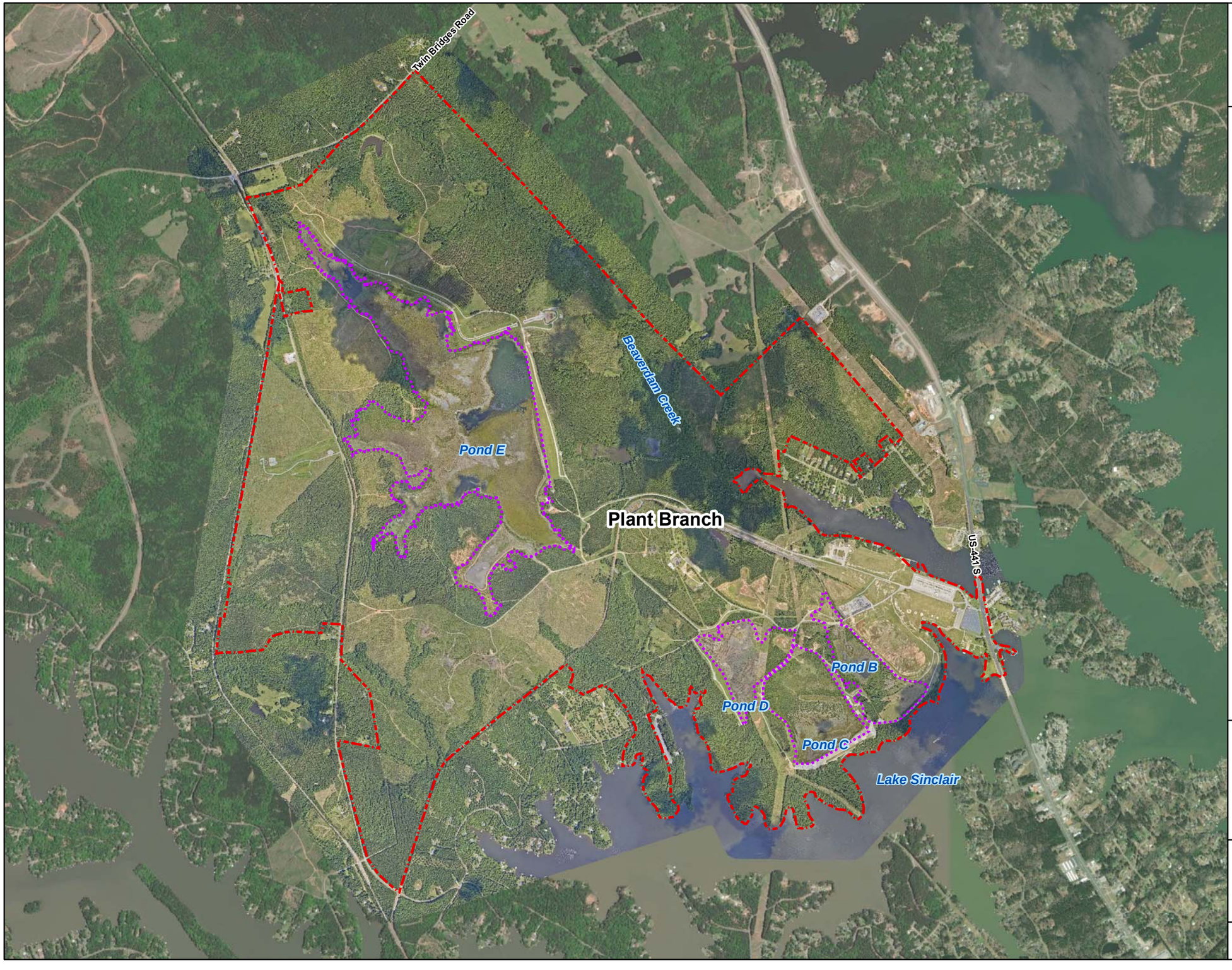
	Regulatory Citation for Criteria:	40 CFR 257.96(C)(1)		40 CFR 257.96(C)(1)	40 CFR 257.96(C)(1)
Corrective Measure	**Description**	**Performance**	**Reliability**	**Ease of Implementation**	**Potential Impacts**
Geochemical Approaches (In-Situ Injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to promote either anaerobic or aerobic attenuation of beryllium (Be) and cobalt (Co). However, the main attenuation mechanism for Be and Co is sorption, which is more dependent on pH than redox. Under anaerobic conditions, Be and Co would be attenuated within sparingly soluble sulfide minerals. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Be and Co onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Be and Co.	The effective immobilization of Be and Co at neutral to alkaline pH can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. This immobilization has been shown at other sites under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Be and Co in groundwater.	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. The potential for clogging of aquifer matrix and/or injection well infrastructure is an implementation consideration. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.
Hydraulic Containment ("Pump and Treat")	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved Be and Co.	Pump and treat (P&T) is effective at providing hydraulic control, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At BRGWC-38S and BRGWC-33S, implementation of the corrective measure is contingent on completing additional assessment activities (i.e., high-resolution site characterization, pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Be and Co. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Be and Co at BRGWC-38S and Co at BRGWC-33S, are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Be and Co, the main attenuation processes include sorption to iron and manganese oxides and for Co, formation of sparingly soluble sulfide minerals.	Physical and chemical MNA mechanisms for Be and Co, including dilution, dispersion, sorption, and oxidation reduction reactions, can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for Be and Co are already occurring at the site as evidenced by data from the assessment wells. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted. The attenuation processes already at work for Be and Co at BRGWC-38S and for Co at BRGWC-33S will further enhance the effectiveness of MNA.	Reliable as long as the aquifer conditions that result in Be and Co attenuation remain favorable (and/or are being enhanced) and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Be and Co, or in combination with a second technology.	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.
Permeable Reactive Barrier	Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either zero valent iron (ZVI)-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the removal of Co. The carbon could be composed of peat moss, mulch or another carbon source. The effectiveness of a PRB on the removal of Be is relatively unknown. Further research and testing is required to see if Be could be attenuated by a PRB. Exact placement of the PRB is contingent on finalization of the nature and extent characterization. PRBs can also be constructed as “funnel and gate” systems, where a barrier wall directs groundwater to a smaller “treatment gate” filled with reactive media.	PRBs have been shown to effectively address Co in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for removal/immobilization of the constituent. The approach is expected to achieve GWPS for Co as impacted groundwater passes through the reactive barrier. Additional testing is required to select the appropriate sorptive media mix (e.g., to address Be).	Reliable groundwater corrective measure, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.	Moderate to difficult. Trenching at depth (up to 40 feet) would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary.	Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.
Phytoremediation / *TreeWells*	Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-E, this corrective measure would likely use an engineered (proprietary) TreeWell phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of Be and Co within the root zone as well as incidental uptake of dissolved Be and Co with groundwater is expected to occur concurrent with hydraulic control.	Once established (typically at the end of the third growing season), a TreeWell system is effective for providing hydraulic containment of groundwater, and potential reduction of Be and Co concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Additional aquifer testing and/or groundwater flow modeling may be needed to confirm the suitability of this technology.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell units.	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above and below-ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. A barrier wall might be used in conjunction with a “funnel and gate” system for a PRB rather than a stand-alone technology. Barrier walls can also be used in downgradient applications; to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls can be installed up to approximately 90 ft below ground surface (bgs), and groundwater impacts at the site are observed at depths less than 40 ft bgs. Within the context of BRGWC-33S and BRGWC-38S, groundwater could either be directed to “treatment gates” for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is typically not the primary objective.	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.

Table 4
Evaluation of Remedial Technologies
Plant Branch AP-E, Putnam County, Georgia

Geosyntec consultants

	40 CFR 257.96(C)(2)	40 CFR 257.96(C)(3)		
Corrective Measure	**Time Requirement to Begin/Complete**	**Institutional Requirements**	**Other Env or Public Health Requirements**	**Relative Costs**
Geochemical Approaches (In-Situ Injection)	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.	No institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Potential for mobilization of redox-sensitive constituents exists during implementation of an anerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)
Hydraulic Containment ("Pump and Treat")	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for Be and Co.	Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen.	Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)
Monitored Natural Attenuation (MNA)	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame following pond closure. Engineering measures will be implemented to minimize potential impacts to the subsurface during closure activities and routine groundwater monitoring will be used to verify that groundwater impacts remain stable or decrease over time.	No institutional requirements are expected at this time.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S.	Low
Permeable Reactive Barrier	Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot-testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick.	No institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Following installation, the remedy is passive (but may require replacement). However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary
Phytoremediation / *TreeWells*	The design phase will require some groundwater modeling for optimal placement of the TreeWell units, which may take up to 6 months. Additional aquifer testing and design may be required, which may take up to 24 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.	No institutional requirements are expected at this time.	None expected at this point. Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements
Subsurface Vertical Barrier Walls	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, design and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.	No institutional requirements are expected at this time.	Based on downgradient sampling results, there currently are no complete exposure pathways for potential receptors downgradient of BRGWC-38S and BRGWC-33S. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)

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: ESRI Imagery, April 2019 and Georgia Power Company, August 2022.

0 2,000 4,000

Scale in Feet

SITE LOCATION MAP

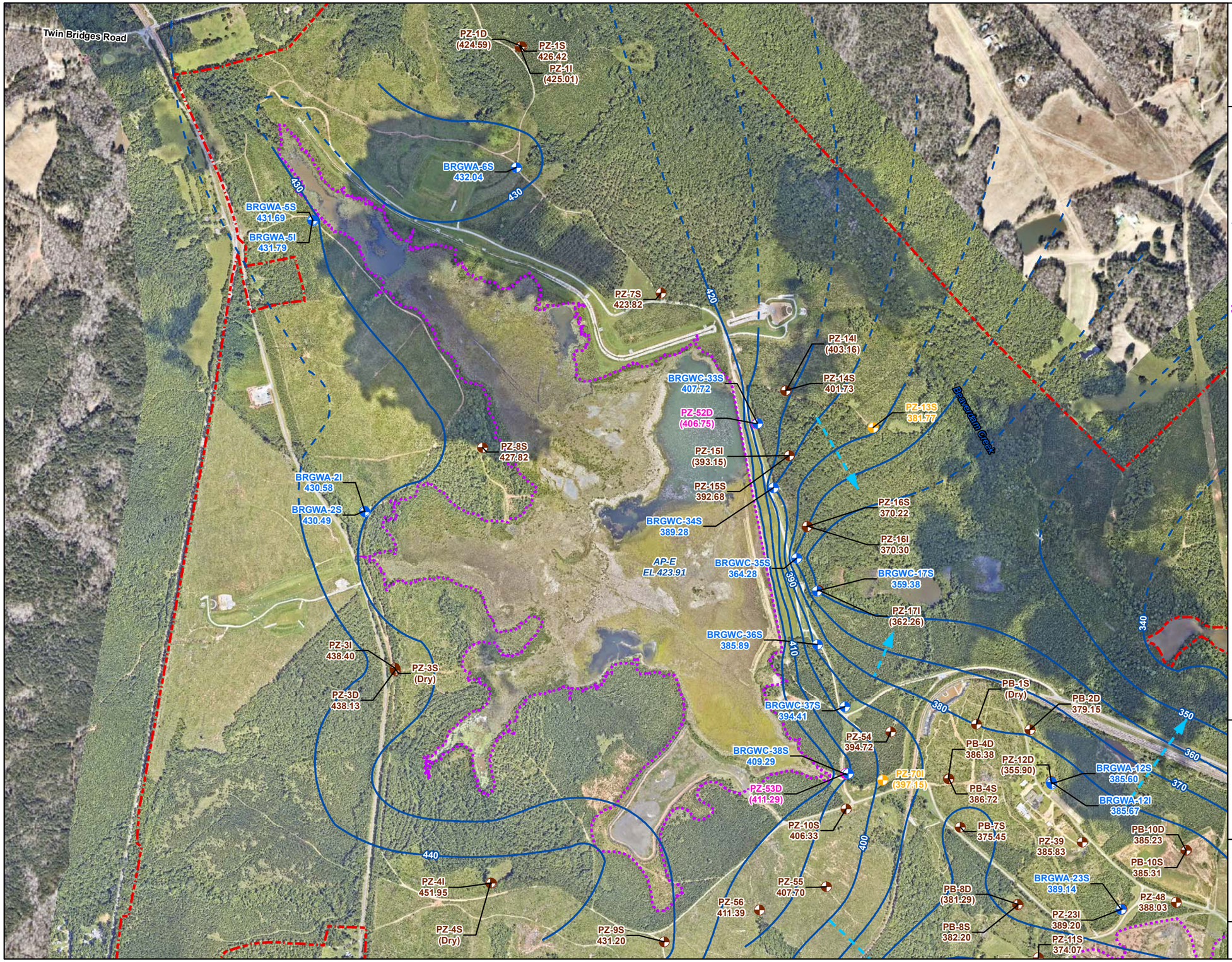
GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA | DECEMBER 2022

FIGURE 1



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 Boundry
- Approximate Ash Pond Boundary

Notes:
1. Water level elevation recorded on August 22, 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. Coordinate System: NAD 1983 State Plane Georgia West_FIPS (U.S. Feet).
6. Property Boundary Provided by Southern Company Services.
7. Aerial: Nearmap Imagery, January 2022 and Georgia Power Company, August 2022.

0 1,000 2,000
Scale in Feet

POTENTIOMETRIC SURFACE CONTOUR MAP - AUGUST 2022

GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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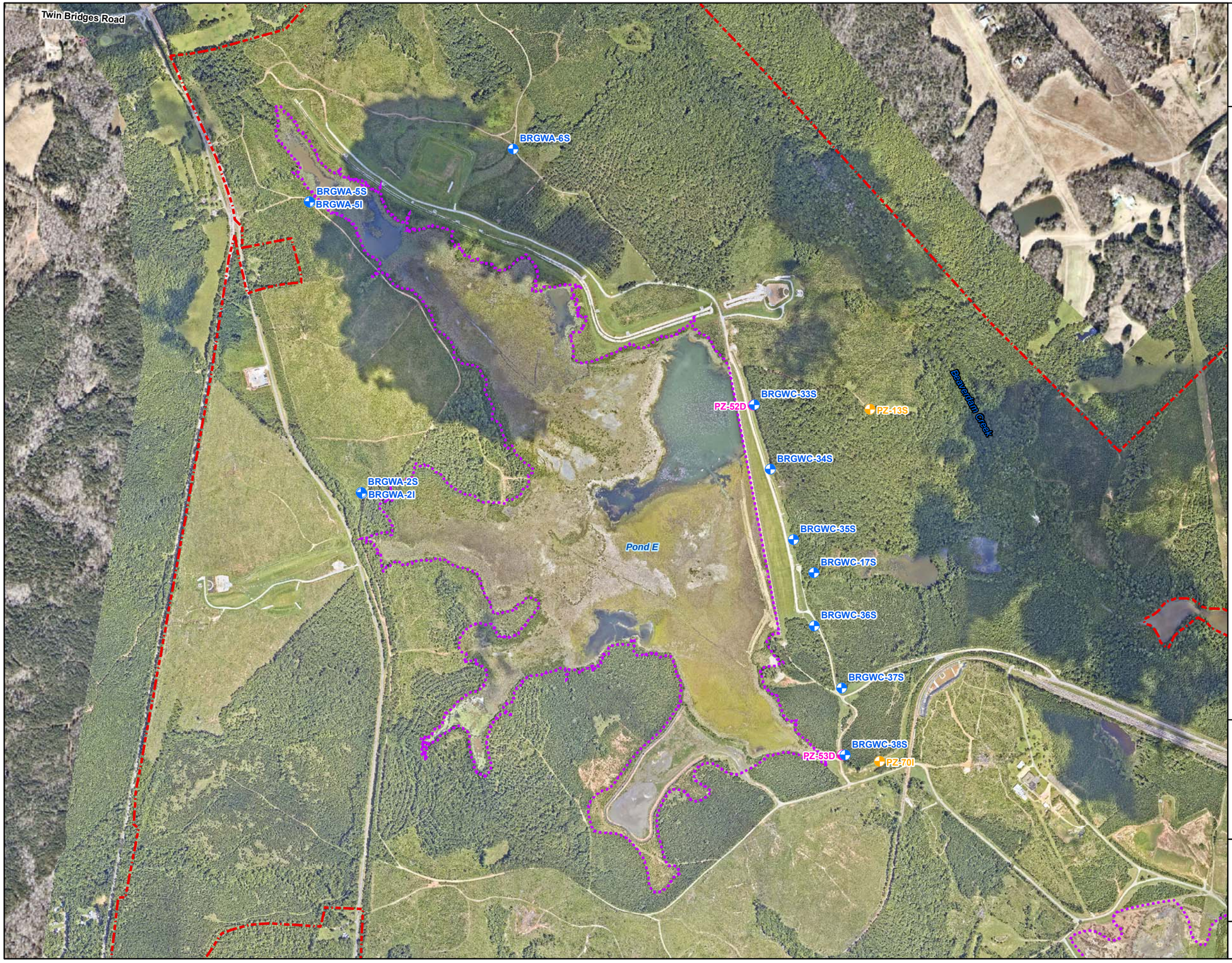
FIGURE 2



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: Nearmap Imagery, January 2022 and Georgia Power Company, February 2022.

0 1,000 2,000
Scale in Feet

AP-E SITE PLAN MONITORING WELL LOCATION MAP

GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

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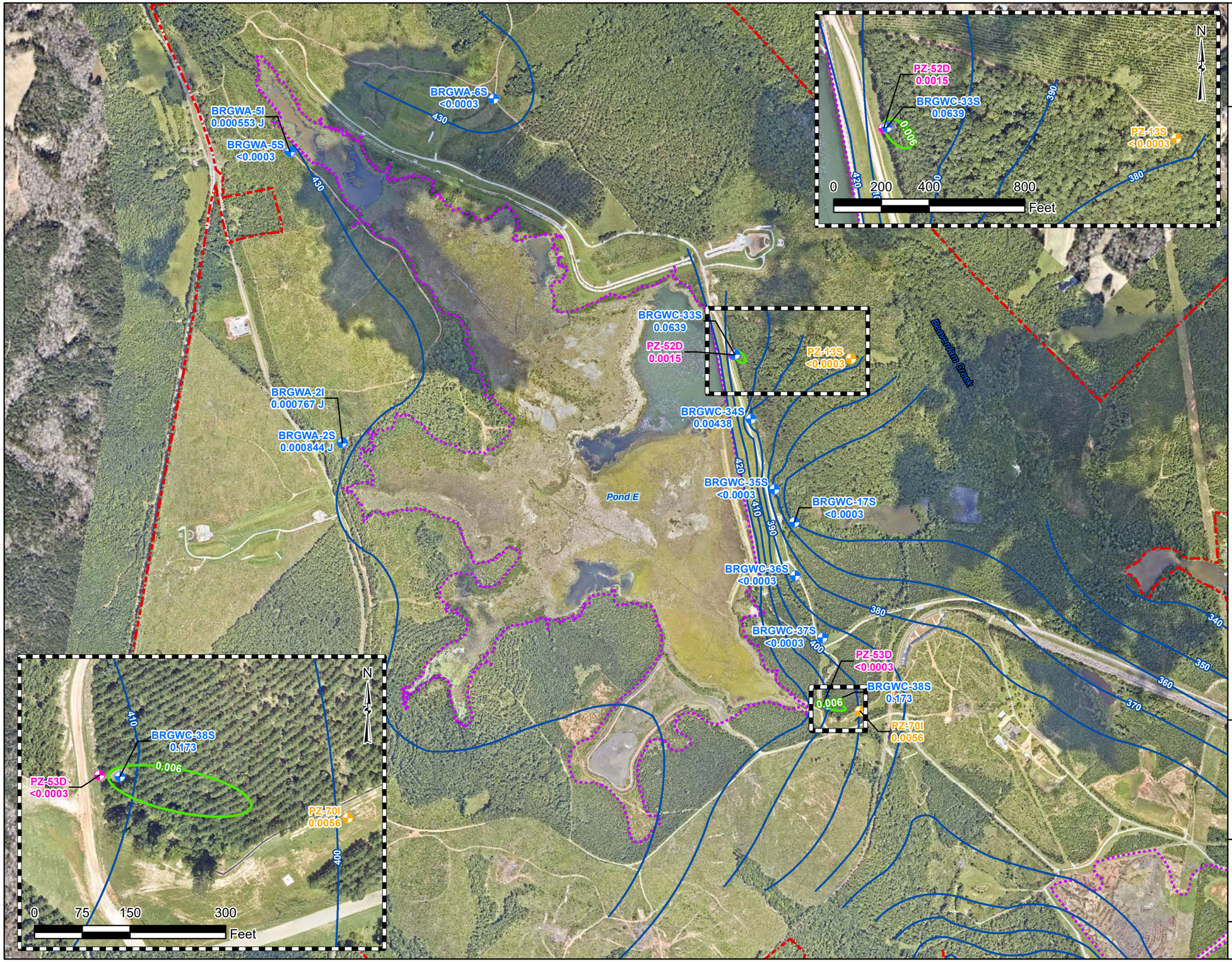
FIGURE 3



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: Nearmap Imagery, January 2022 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
PUTNAM COUNTY, GEORGIA

Prepared For: Georgia Power
Prepared By: Geosyntec consultants

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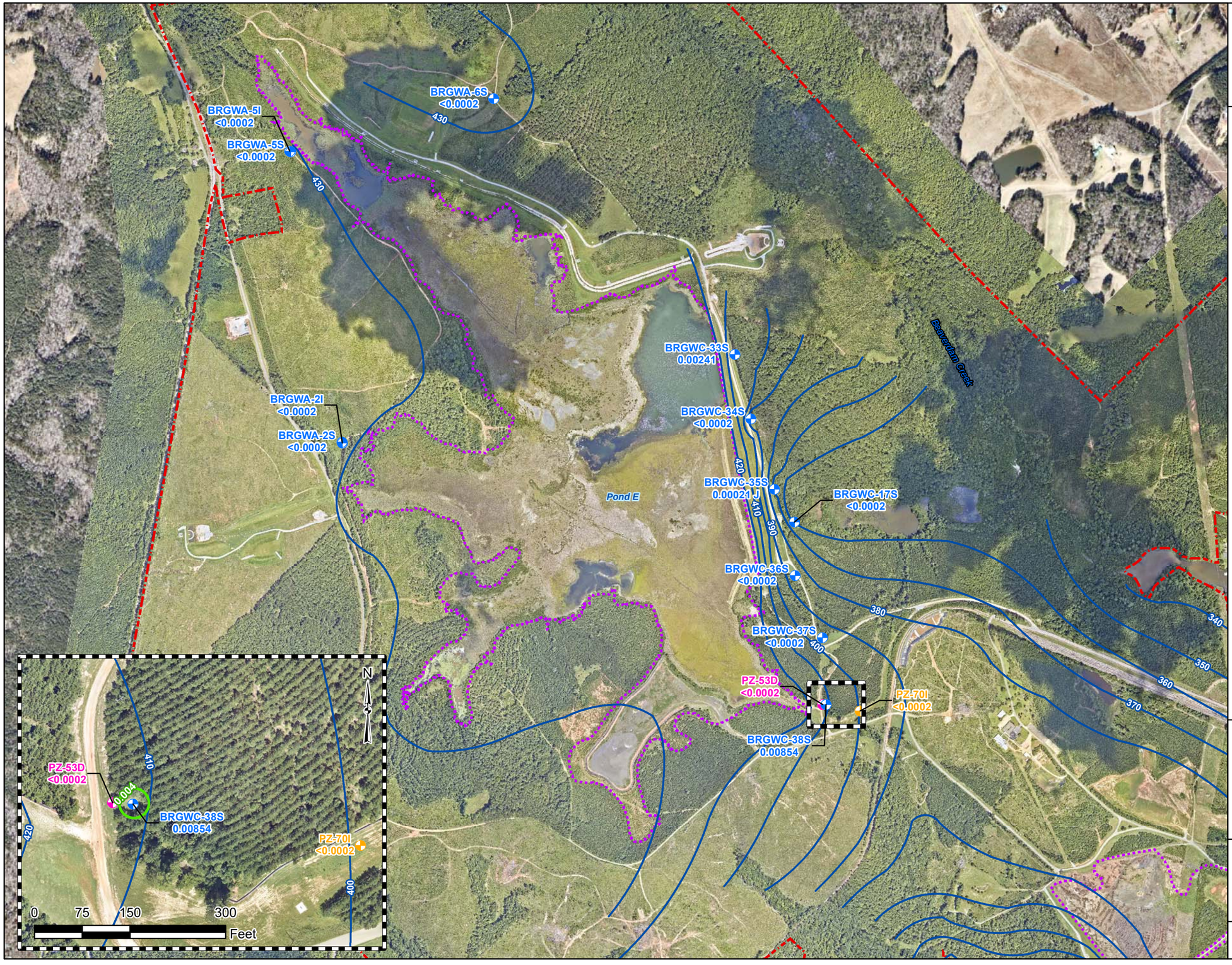
FIGURE 4



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: Nearmap Imagery, January 2022 and Georgia Power Company, August 2022.

0 1,000 2,000
Scale in Feet

ISO-CONCENTRATION MAP, BERYLLIUM - AUGUST 2022

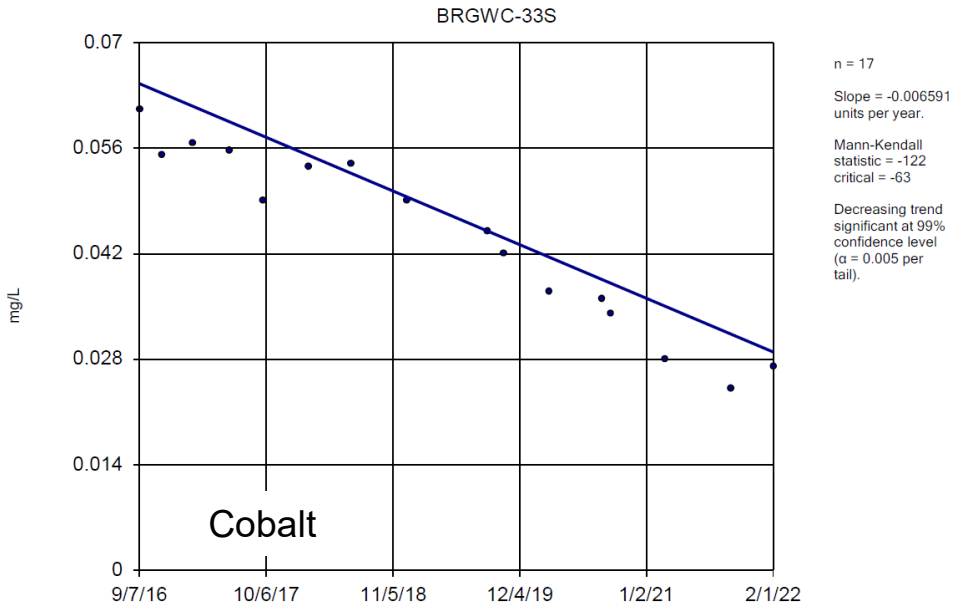
GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

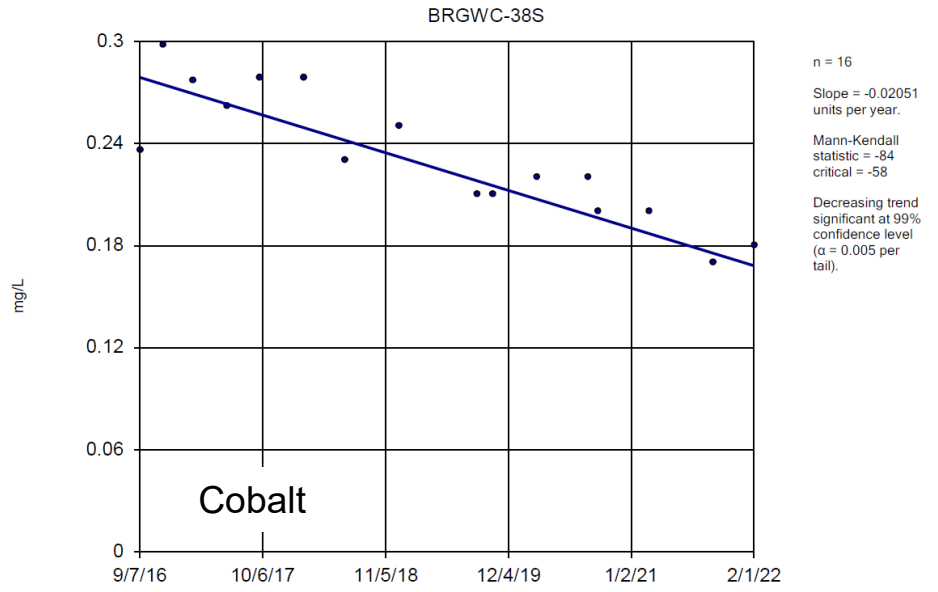
Prepared For: Georgia Power

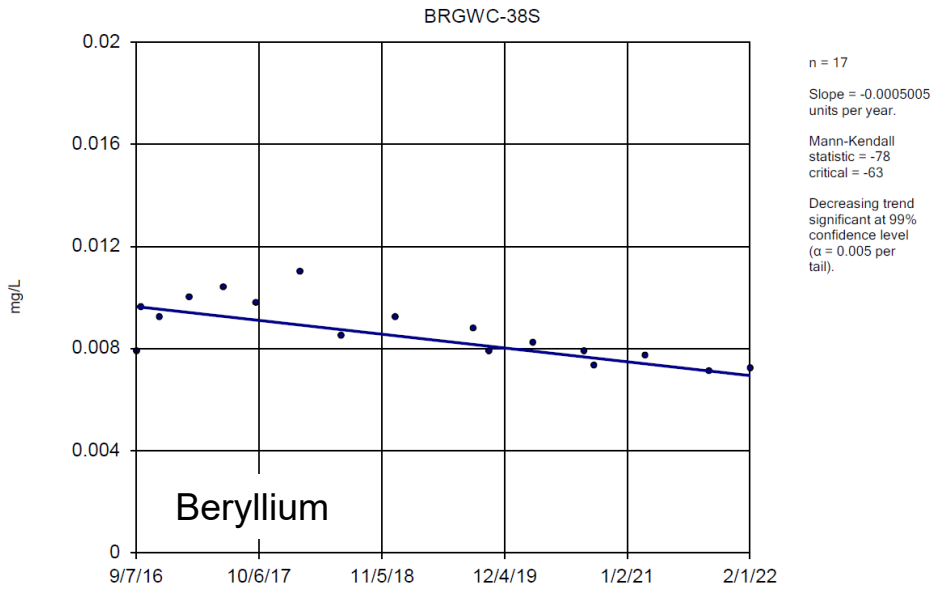
Prepared By: Geosyntec consultants

KENNESAW, GA | DECEMBER 2022

FIGURE 5







Notes:
1. Time trends generated for data reported through February 2022.

Cobalt and Beryllium Time Trends in BRGWC-33S and BRGWC-38S

GEORGIA POWER COMPANY
PLANT BRANCH
PUTNAM COUNTY, GEORGIA

Geosyntec consultants

Kennesaw, GA | December 2022

Figure 6

APPENDIX A

Boring and Well Construction Logs

BORING PZ-13 S
PAGE 1 OF 1
ES

SOUTHERN COMPANY

LOG OF TEST BORING

SOUTHERN COMPANY SERVICES, INC.
EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Branch Hydrogeologic Study
LOCATION Milledgeville, GA

DATE STARTED 3/18/2014 **COMPLETED** 3/19/2014 **SURF. ELEV.** Not Surveyed **COORDINATES:**
CONTRACTOR SCS Field Services **EQUIPMENT** CME 550 **METHOD** Hollow Stem Auger
DRILLED BY S. Denty **LOGGED BY** W. Shaughnessy **CHECKED BY** **ANGLE** **BEARING**
BORING DEPTH 36 ft. **GROUND WATER DEPTH: DURING** **COMP.** **DELAYED** 19.9 ft. after 170 hrs.
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION (Weak / Moderate / Strong)	GROUNDWATER OBSERVATIONS	WELL DATA
5		- CL: residuum dry, very stiff, silty CLAY, red with yellow-red mottles, sand, micas			Completion: protective aluminum cover with bollards; 4-foot square concrete pad
10		- ML: saprolite dry, medium stiff, clayey SILT, medium stiff, red-yellow with pale yellow mottles, micas			
15		- ML: saprolite dry, medium stiff, clayey SILT, yellow-brown, white and brown with black mottles, micas			
20		- MH: saprolite wet, soft, clayey SILT, gray-brown and red-brown with black mottles, sand, micas			Annular Seal: bentonite pellets; Filter: silica filter sand
25		- MH: saprolite wet, soft, clayey SILT, gray-brown and red-brown with black mottles, sand, micas			
30		- MH: saprolite wet, stiff, sandy SILT, brown, white and pale brown, micas			**Standpipe: 2" OD PVC (SCH 40)** Screen: 10 ft; pre-pack
35		- MH: saprolite wet, very stiff, sandy SILT, brown, white and pale brown, micas			Sump:0.400000000000006 ft. Cave-in to 34.7 ft.
		Bottom of borehole at 36.0 feet.			
40					

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 4/29/14 10:50 - \\ALTRCFP01\X2WSHAUG$\DESKTOP\BRANCH\PLANT BRANCH PIEZOMETERS.GPJ

RECORD OF BOREHOLE PZ-52D

SHEET 1 of 2

PROJECT: Plant Branch
PROJECT NUMBER: 1666254-01
DRILLED DEPTH: 59.50 ft
LOCATION: 13' west of BRGWC-33S

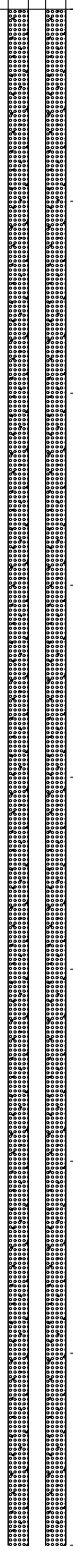
DRILL RIG: C 600 Track Mounted
DATE STARTED: 5/14/20
DATE COMPLETED: 5/14/20

NORTHING: 1,168,053.90
EASTING: 2,554,051.70
GS ELEVATION: 414.3
TOC ELEVATION: 417.03 ft

DEPTH W.L.: 46.5
ELEVATION W.L.: 367.8'
DATE W.L.: 5/15/2020
TIME W.L.: 0735

DEPTH (ft)	ELEVATION (ft)	DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLE NO.	TYPE	REC
0		0.00 - 10.00 Air knife hole, water level ~ 5 feet bgs from SCS during hole clearing			404.3			
10	405	10.00 - 11.00 silty CLAY, red 2.5 YR 5/8, wet, slightly plastic, cohesive, soft. Residual soil	CL		10.00 403.3			
		11.00 - 17.00 silty SAND, very fine to medium sand, 7.5 YR 4/6 strong brown, weathered biotite gneiss, SAPROLITE, subhorizontal foliation, micaceous, medium grained gneiss, moist to wet, cohesive, non-PLASTIC, firm. Poorly sorted medium grained sand (quartz and plagioclase) 0.1 ft thick lenses from 13 - 15.5 feet	SM		11.00 397.3	1	ROTO SONIC	10.00 7.00
15	400	17.00 - 20.00 silty SAND, very fine to medium sand, variegated white, brown, orange, very dark brown to black, SAPROLITE, weathered biotite gneiss, cohesive, stiff, non-plastic, mosit to wet. Quartz-plagioclase-biotite ferrous oxide oxidation throughout	SM		17.00 394.3	2	ROTO SONIC	10.00 10.00
20	395	20.00 - 28.00 SILTY SAND, very fine to medium sand, variegated white, brown, orange, very dark brown to black, SAPROLITE, weakly foliated, weatehred biotite gneiss, cohesive, stiff, non-plastic, mosit to wet quatz-plagioclase-biotite oxidation staining throughout	SM		20.00 386.3			
25	390	28.00 - 28.50 Transitional weathered rock (TWR), biotite gneiss	TWR		385.8 28.50			
30	385	28.50 - 37.00 BIOTITE GNEISS, medium grained, phaneritic hornblende-quartz-plagioclase-biotite. Foliation orientation varies from subhorizontal to near vertical, weakly foliated from 31.5-32 feet, oxidation staining throughout, white and black foliations at 31 ft, 32.5 ft, and 33.5 ft	GNIESS		377.3	3	ROTO SONIC	9.00 10.00
35	380	37.00 - 47.00 INTERLAYERED BIOTITE GNEISS AND TWR, poor recovery due to subsurface materials and drilling methodology, rock recovered is oxidized throughout and appears less coherent section above, fractured	GNIESS		37.00	4	ROTO SONIC	2.50 10.00
40	375	Log continued on next page						

PIEZOMETER DIAGRAM and NOTES



WELL CONSTRUCTION DETAILS

WELL CASING
Interval: 0' - 49.5'
Material: Sch 40 PVC
Diameter: 2"
Joint Type: Threaded

WELL SCREEN
Interval: 49.5' - 59.5'
Material: 0.010" Slotted Schedule 40 PVC Pre-Pack Screen
Diameter: 2
Slot Size: 0.10
End Cap: 4"

FILTER PACK
Interval: 47' - 59.5'
Type: #1 Sand

FILTER PACK SEAL
Interval: 43' - 47'
Type: 3/8" Pel-Plug

ANNULUS SEAL
Interval: 0' - 43'
Type: AquaGuard Bentonite Grout

WELL COMPLETION
Pad: 4' x 4' x 2"
Protective Casing: Aluminum

DRILLING METHODS
Soil Drill: Sonic
Rock Drill: Sonic

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Cascade Drilling
DRILLER: Fref Kraus

GA INSPECTOR: Shannon George, PG
CHECKED BY: Brian Steele, PG DATE: 6/23/20

GOLDER

BOREHOLE RECORD PLANT_BRANCH_20200603.GPJ PIEDMONT.GDT 7/27/20

RECORD OF BOREHOLE PZ-52D

PROJECT: Plant Branch
PROJECT NUMBER: 1666254-01
DRILLED DEPTH: 59.50 ft
LOCATION: 13' west of BRGWC-33S

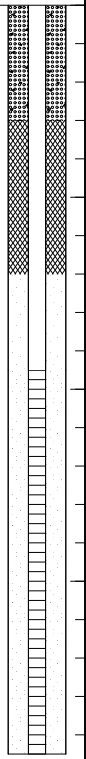
DRILL RIG: C 600 Track Mounted
DATE STARTED: 5/14/20
DATE COMPLETED: 5/14/20

NORTHING: 1,168,053.90
EASTING: 2,554,051.70
GS ELEVATION: 414.3
TOC ELEVATION: 417.03 ft

DEPTH W.L.: 46.5
ELEVATION W.L.: 367.8'
DATE W.L.: 5/15/2020
TIME W.L.: 0735

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLES: SAMPLE NO.	TYPE	REC
40		37.00 - 47.00 INTERLAYERED BIOTITE GNEISS AND TWR, poor recovery due to subsurface materials and drilling methodology, rock recovered is oxidized throughout and appears less coherent section above, fractured *(Continued)*	GNIESS		367.3	4	ROTO SONIC	2.50 / 10.00
45	370							
50	365	47.00 - 59.50 BIOTITE GNEISS, medium grained, phaneritic hornblende-quartz-plagioclase-biotite, foliation orientation varies overall ~ 45 degrees from horizontal, weakly foliated, fractures/oxidation, minor oxidation at 50 ft, 51.5 ft, and 54.5 ft	GNIESS		47.00	5	ROTO SONIC	10.00
55	360							
	355				354.8	6	ROTO SONIC	2.50 / 2.50
60		Boring completed at 59.50 ft						
65	350							
70	345							
75	340							
80	335							

PIEZOMETER DIAGRAM and NOTES



WELL CONSTRUCTION DETAILS

WELL CASING
Interval: 0' - 49.5'
Material: Sch 40 PVC
Diameter: 2"
Joint Type: Threaded

WELL SCREEN
Interval: 49.5' - 59.5'
Material: 0.010" Slotted Schedule 40 PVC Pre-Pack Screen
Diameter: 2
Slot Size: 0.10
End Cap: 4"

FILTER PACK
Interval: 47' - 59.5'
Type: #1 Sand

FILTER PACK SEAL
Interval: 43' - 47'
Type: 3/8" Pel-Plug

ANNULUS SEAL
Interval: 0' - 43'
Type: AquaGuard Bentonite Grout

WELL COMPLETION
Pad: 4' x 4' x 2"
Protective Casing: Aluminum

DRILLING METHODS
Soil Drill: Sonic
Rock Drill: Sonic

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Cascade Drilling
DRILLER: Fref Kraus

GA INSPECTOR: Shannon George, PG
CHECKED BY: Brian Steele, PG DATE: 6/23/20

GOLDER

BOREHOLE RECORD PLANT_BRANCH_20200603.GPJ PIEDMONT.GDT 7/27/20

RECORD OF BOREHOLE PZ-53D

PROJECT: Plant Branch
PROJECT NUMBER: 1666254-01
DRILLED DEPTH: 144.00 ft
LOCATION: 28' west of BRGWC-38S

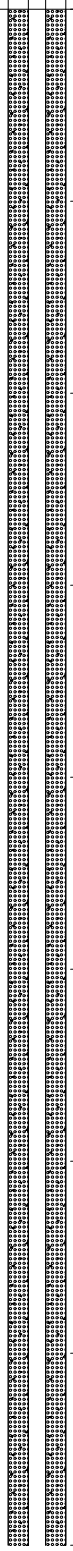
DRILL RIG: C 600 Track Mounted
DATE STARTED: 5/16/20
DATE COMPLETED: 5/17/20

NORTHING: 1,164,393.80
EASTING: 2,554,984.30
GS ELEVATION: 431.6
TOC ELEVATION: 434.68 ft

DEPTH W.L.: 14.2'
ELEVATION W.L.: 417.4'
DATE W.L.: 5/19/2020
TIME W.L.: 745

DEPTH (ft)	ELEVATION (ft)	DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLE NO.	TYPE	REC
0	430	0.00 - 10.00 HYDROVAC HOLE, ML, SILT, red, plastic to slightly plastic, cohesive, firm to stiff, dry to moist			421.6			
10	420	10.00 - 15.00 ML, clayey sandy SILT, fine sand, micaceous throughout, red, very weak foliation, trace relict foliation, non-plastic to slightly plastic, soft, dry to moist, primarily very weathered biotite gneiss SAPROLITE	ML		10.00 416.6	1	ROTO SONIC	10.00 10.00
15	415	15.00 - 19.00 SM, silty SAND, very fine to fine sand, weakly foliated, cohesive, soft, non-plastic, moist, primarily very weathered metagranite	SM		15.00 412.6			
20	410	19.00 - 29.00 ML, clayey sandy SILT, ine sand, micaceous throughout, red, very weak foliation, trace relict foliation, non-plastic to slightly plastic, soft, dry to moist, primarily metagranite SAPROLITE 18'-20', biotite gneiss 20'-23.5', metagranite 23.5'-29'	ML		19.00 402.6	2	ROTO SONIC	10.00 10.00
25	405							
30	400	29.00 - 39.00 ML, clayey sandy SILT, fine sand, pale brown orange dark brown to black, subhorizontal foliation, moderately foliated, quartz-plagioclase-biotite, cohesive, soft to firm, wet, SM; 29'-30' and 34'-35'	ML		29.00 392.6	3	ROTO SONIC	12.50 10.00
35	395							
40		Log continued on next page	SP		39.00	4		

PIEZOMETER DIAGRAM and NOTES



WELL CONSTRUCTION DETAILS

WELL CASING
Interval: 0' - 129.4'
Material: Sch 40 PVC
Diameter: 2"
Joint Type: Threaded

WELL SCREEN
Interval: 129.4' - 139.4'
Material: 0.010" Slotted Schedule 40 PVC Pre-Pack Screen
Diameter: 2"
Slot Size: 0.010"
End Cap: 3"

FILTER PACK
Interval: 126.6' - 140'
Type: #1 Sand

FILTER PACK SEAL
Interval: 121' - 126.6'
Type: 3/8" Pel-Plug

ANNULUS SEAL
Interval: 0' - 121'
Type: AquaGuard Bentonite Grout

WELL COMPLETION
Pad: 4' x 4' x 2"
Protective Casing: Aluminum

DRILLING METHODS
Soil Drill: Sonic
Rock Drill: Sonic

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Cascade Drilling
DRILLER: Fred Kraus

GA INSPECTOR: Shannon George, PG
CHECKED BY: Brian Steele, PG DATE: 6/23/20

GOLDER

RECORD OF BOREHOLE PZ-53D

PROJECT: Plant Branch
PROJECT NUMBER: 1666254-01
DRILLED DEPTH: 144.00 ft
LOCATION: 28' west of BRGWC-38S

DRILL RIG: C 600 Track Mounted
DATE STARTED: 5/16/20
DATE COMPLETED: 5/17/20

NORTHING: 1,164,393.80
EASTING: 2,554,984.30
GS ELEVATION: 431.6
TOC ELEVATION: 434.68 ft

DEPTH W.L.: 14.2'
ELEVATION W.L.: 367.8'
DATE W.L.: 5/19/2020
TIME W.L.: 745

DEPTH (ft)	ELEVATION (ft)	DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLE NO.	TYPE	REC	PIEZOMETER DIAGRAM and NOTES	WELL CONSTRUCTION DETAILS
40		39.00 - 42.00 SP, SAND, poorly graded, sme silt, medium to coarse sand, reddish brown, subangular to angular, non-cohesive, non-plastic, loose, moist to wet.	SP		389.6					
	390	39.8'-42' SAPROLITE, biotitte gneiss with granite interlayers, moderately foliated, white to pale brown to yellowish brown to very dark brown, medium to coarse grained, little to some oxidation, moist, cohesive, non-plastic, very stiff *(Continued)*			42.00					
45		42.00 - 49.00 CL/CH, sandy CLAY, dary grayish brown with interlayers of white, very stiff to hard, moist, plastic, weathered biotite gneiss	CL-CH			4	ROTO SONIC	14.00 10.00		
	385				382.6					
50		49.00 - 53.00 SM, silty SAND, fine to medium sand, with clay, brown, weathered gneiss, quartz-plagioclase-biotite, weakly foliated, very stiff to hard, non-plastic, moist	SM		49.00					
	380				378.6					
55		53.00 - 63.00 SM, silty clayey SAND, fine to coarse sand, subangular to angular, brown, weathered gneiss quartz-plagioclase-biotite, medium grained, subhorizontal foliation, cohesive, stiff to very stiff, moist, non-plastic to plastic, SAPROLITE			53.00	5	ROTO SONIC	10.50 10.00		
	375		SM							
60										
	370				368.6					
65		63.00 - 65.00 CL, silty sandy CLAY, fine sand, brown to light olive brown, weathered gneiss, micaceous, moderately to weakly foliated, cohesive, plastic, moist to wet, w~PL, firm to very stiff	CL		63.00 366.6	6	ROTO SONIC	12.00 10.00		
	365	65.00 - 69.00 SM, silty SAND, very fine to medium sand, pale brown, slightly weathered to weathered gneiss biotite-quartz-plagioclase/feldspar	SM		65.00 362.6					
70		69.00 - 70.00 SP-SM, Sand with Silt, very fine to medium sand, poorly graded, weathered biotite gneiss, weakly foliated to no foliation, dark grayish brown, wet, loose, non-plastic	SP-SM		69.00 361.6 70.00	7	ROTO SONIC	5.50 4.50		
	360	70.00 - 73.50 ML, clayey sandy SILT, fine to medium sand, angular, brown to dark grayish brown, dry to moist, non-plastic	ML							
		73.00 - 75.00 SP-SM, Sand with Silt, very fine to coarse sand, poorly graded, not foliated, weathered biotite gneiss	SP-SM		358.1 356.6	8	ROTO SONIC	6.50 5.50		
75		75.00 - 79.00 SM, silty SAND, fine to coarse sand, TWR/SAPROLITE, interlayered SM and TWR, feldspathic biotite gneiss, coarse gravel throughout, firm to very hrd, dry	SM		75.00 352.6					
	355		ML		79.00	9		9.50 10.00		
80		Log continued on next page								

WELL CASING
Interval: 0' - 129.4'
Material: Sch 40 PVC
Diameter: 2"
Joint Type: Threaded

WELL SCREEN
Interval: 129.4' - 139.4'
Material: 0.010" Slotted Schedule 40 PVC Pre-Pack Screen
Diameter: 2"
Slot Size: 0.010"
End Cap: 3"

FILTER PACK
Interval: 126.6' - 140'
Type: #1 Sand

FILTER PACK SEAL
Interval: 121' - 126.6'
Type: 3/8" Pel-Plug

ANNULUS SEAL
Interval: 0' - 121'
Type: AquaGuard Bentonite Grout

WELL COMPLETION
Pad: 4' x 4' x 2"
Protective Casing: Aluminum

DRILLING METHODS
Soil Drill: Sonic
Rock Drill: Sonic

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Cascade Drilling
DRILLER: Fred Kraus

GA INSPECTOR: Shannon George, PG
CHECKED BY: Brian Steele, PG DATE: 6/23/20

GOLDER

RECORD OF BOREHOLE PZ-53D

PROJECT: Plant Branch
PROJECT NUMBER: 1666254-01
DRILLED DEPTH: 144.00 ft
LOCATION: 28' west of BRGWC-38S

DRILL RIG: C 600 Track Mounted
DATE STARTED: 5/16/20
DATE COMPLETED: 5/17/20

NORTHING: 1,164,393.80
EASTING: 2,554,984.30
GS ELEVATION: 431.6
TOC ELEVATION: 434.68 ft

DEPTH W.L.: 14.2'
ELEVATION W.L.: 367.8'
DATE W.L.: 5/19/2020
TIME W.L.: 745

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLES SAMPLE NO.	TYPE	REC	PIEZOMETER DIAGRAM and NOTES	WELL CONSTRUCTION DETAILS
80		79.00 - 85.00 ML, sandy SILT, fine to medium sand, angular, brown, subhorizontal foliation, wet from drilling *(Continued)*	ML		346.6	9	ROTO SONIC	9.50/10.00		
85	350	85.00 - 89.00 SM, silty SAND, fine to coarse sand, some gravel, weathered felspathic biotite gneiss, SAPROLITE/TWR	SM		85.00 342.6					
90	345	89.00 - 93.00 ML, clayey sandy SILT, very fine to medium sand, subanglar to angular, dark grayish brown to grayish brown, fain foliation	ML		89.00 338.6					
95	340	93.00 - 99.00 SM, silty SAND, very fine to coarse sand, pale brown, weakly foliated, weathered geniss, SAPROLITE	SM		93.00 332.6	10	ROTO SONIC	8.00/10.00		
100	335	99.00 - 102.50 ML, sandy SILT, and silty SAND, veryfine to medium sand, grayish brown to brown, not foliated, very weathered feldspathic geniss, non-plastic to slightly plastic, firm, wet, SAPROLITE	ML		99.00 329.1					
105	330	102.50 - 105.00 SM, silty SAND, very fine to coarse sand, some gravel, subangular to angular, pale brown, weathered gneiss, relict foliation, moderate foliation, hard, non-plastic, dry	SM		102.50 326.6	11	ROTO SONIC	7.00/10.00		
	325	105.00 - 109.00 No recovery			105.00 322.6					
110	320	109.00 - 113.00 ML/SM, sandy SILT and silty SAND, very fine to medium sand, grayish brown to brown, no foliation wet, non-plastic to plastic,	ML		109.00 318.6					
115		113.00 - 115.00 SM, silty SAND, fine to coarse sand, weathered gneiss, weakly foliated, hard, SAPROLITE	SM		113.00 316.6	12	ROTO SONIC	6.00/10.00		
	315	115.00 - 119.00 No recovery			115.00 312.6					
120		Log continued on next page	ML		119.00	13		9.50/10.00		

WELL CASING
Interval: 0' - 129.4'
Material: Sch 40 PVC
Diameter: 2"
Joint Type: Threaded

WELL SCREEN
Interval: 129.4' - 139.4'
Material: 0.010" Slotted Schedule 40 PVC Pre-Pack Screen
Diameter: 2"
Slot Size: 0.010"
End Cap: 3"

FILTER PACK
Interval: 126.6' - 140'
Type: #1 Sand

FILTER PACK SEAL
Interval: 121' - 126.6'
Type: 3/8" Pel-Plug

ANNULUS SEAL
Interval: 0' - 121'
Type: AquaGuard Bentonite Grout

WELL COMPLETION
Pad: 4' x 4' x 2"
Protective Casing: Aluminum

DRILLING METHODS
Soil Drill: Sonic
Rock Drill: Sonic

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Cascade Drilling
DRILLER: Fred Kraus

GA INSPECTOR: Shannon George, PG
CHECKED BY: Brian Steele, PG DATE: 6/23/20

GOLDER

RECORD OF BOREHOLE PZ-53D

PROJECT: Plant Branch
PROJECT NUMBER: 1666254-01
DRILLED DEPTH: 144.00 ft
LOCATION: 28' west of BRGWC-38S

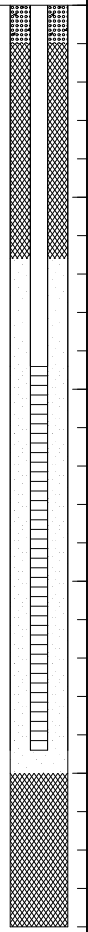
DRILL RIG: C 600 Track Mounted
DATE STARTED: 5/16/20
DATE COMPLETED: 5/17/20

NORTHING: 1,164,393.80
EASTING: 2,554,984.30
GS ELEVATION: 431.6
TOC ELEVATION: 434.68 ft

DEPTH W.L.: 14.2'
ELEVATION W.L.: 367.8'
DATE W.L.: 5/19/2020
TIME W.L.: 745

DEPTH (ft)	ELEVATION (ft)	DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLE NO.	TYPE	REC
120		119.00 - 122.50 ML/SM, sandy SILT and silty SAND, very fine to medium sand, some coarse sand, some weathered gneiss cobbles up to 1.5", dark grayish brown, no foliation, biotite gneiss cobbles are weakly foliated, cohesive, non-plastic to slightly plastic, soft to hard, wet *(Continued)*	ML		309.1			
	310	122.50 - 127.00 SM, silty SAND, fine to coarse sand, weathered gneiss, weakly foliated, hard, SAPROLITE	SM		122.50	13	ROTO SONIC	9.50 / 10.00
125					304.6			
	305	127.00 - 129.00 ML/SM, sandy SILT and silty SAND, very fine to medium sand, some coarse sand, some weathered gneiss cobbles up to 1.5", dark grayish brown, no foliation, biotite gneiss cobbles are weakly foliated, cohesive, non-plastic to slightly plastic, soft to hard, wet	ML		127.00 302.6			
130		129.00 - 131.00 ML, clayey sandy SILT	ML		129.00 300.6			
	300	131.00 - 138.00 SM, silty SAND, fine and medium sand, gray to dark olive gray, interlayered weathered biotite gneiss and amphibolite, SAPROLITE	SM		131.00	14	ROTO SONIC	10.00 / 10.00
135					293.6			
	295	138.00 - 139.00 TWR, transitionally weathered rock, weathered biotite gneiss	TWR		138.00 292.6			
140		139.00 - 144.00 BR, Biotite Gneiss, medium grained, quartz-hornblende-plagioclase, oxidation and fracture zone at 142'-143.5'	BR		139.00	15	ROTO SONIC	5.00 / 5.00
	290				287.6			
		Boring completed at 144.00 ft						
145	285							
150	280							
155	275							
160								

PIEZOMETER DIAGRAM and NOTES



WELL CONSTRUCTION DETAILS

WELL CASING
Interval: 0' - 129.4'
Material: Sch 40 PVC
Diameter: 2"
Joint Type: Threaded

WELL SCREEN
Interval: 129.4' - 139.4'
Material: 0.010" Slotted Schedule 40 PVC Pre-Pack Screen
Diameter: 2"
Slot Size: 0.010"
End Cap: 3"

FILTER PACK
Interval: 126.6' - 140'
Type: #1 Sand

FILTER PACK SEAL
Interval: 121' - 126.6'
Type: 3/8" Pel-Plug

ANNULUS SEAL
Interval: 0' - 121'
Type: AquaGuard Bentonite Grout

WELL COMPLETION
Pad: 4' x 4' x 2"
Protective Casing: Aluminum

DRILLING METHODS
Soil Drill: Sonic
Rock Drill: Sonic

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Cascade Drilling
DRILLER: Fred Kraus

GA INSPECTOR: Shannon George, PG
CHECKED BY: Brian Steele, PG DATE: 6/23/20

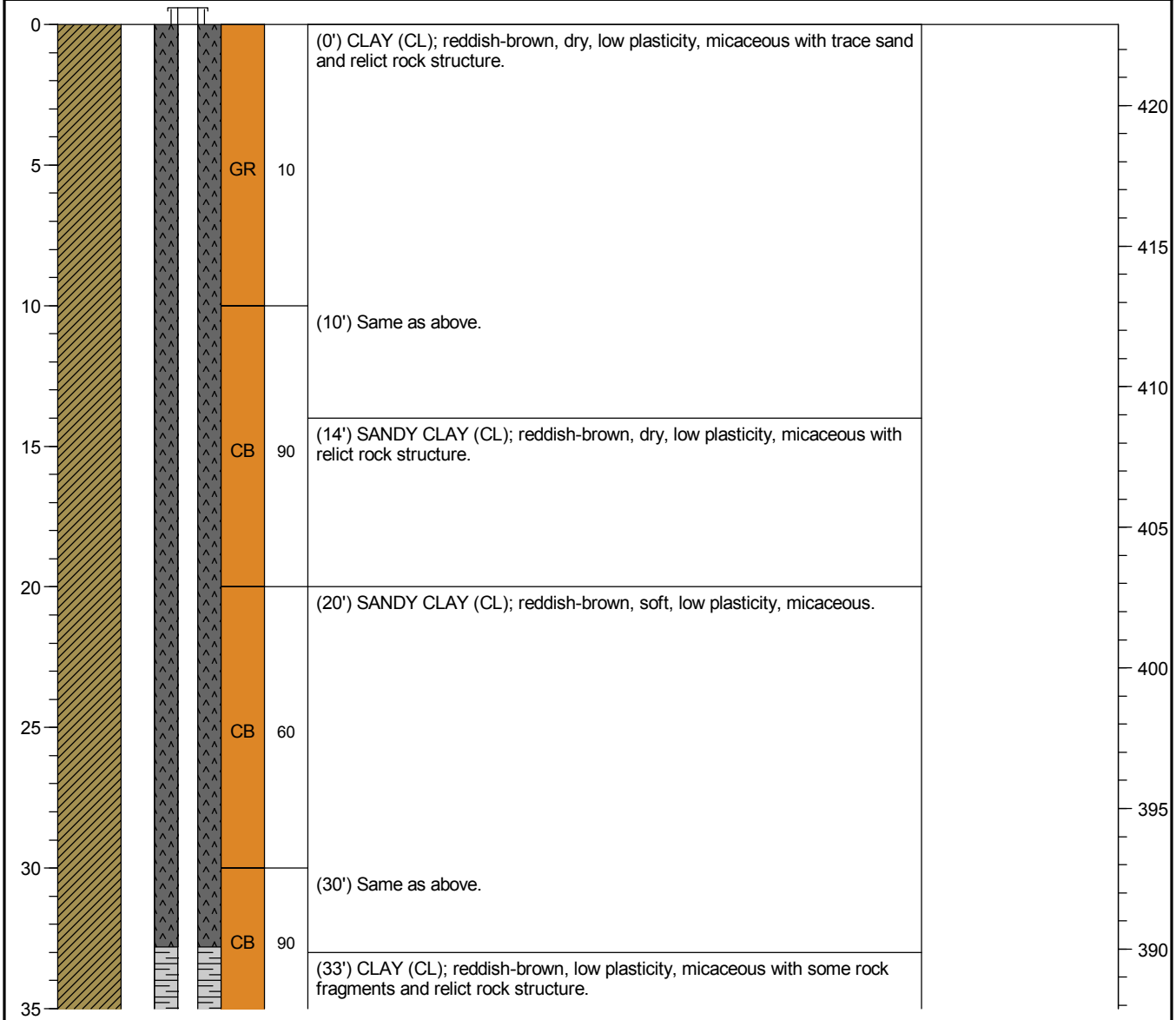
GOLDER

Geosyntec consultants
engineers | scientists | innovators

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

WELL LOG
Well No. PZ-70
Page: 1 of 2

Drilling Start Date:	**08/16/2022**	Boring Depth (ft):	**55**	Well Depth (ft):	**50**
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 During Drilling (ft):	**--**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**TSI-150**	Ground Surface Elevation:	**422.88 ft amsl**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**C. Franklin**	Top of Casing Elevation:	**425.70 ft amsl**	Seal Material(s):	**Grout, Bentonite**
Logged By:	**D. Kegley**	North, East (Y,X):	**1164326.66, 2555374.08**	Filter Pack:	**20/40 Sand**



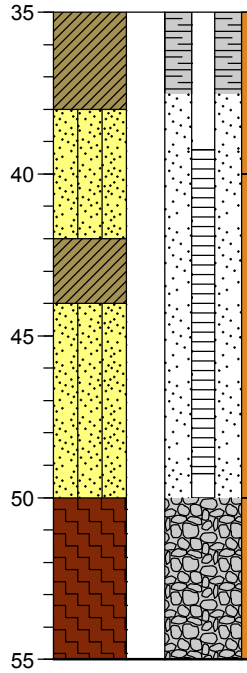
NOTES: Boring cleared with hand auger from 0-10 feet bgs. Well (+2.82 feet stickup) completed with aboveground protective casing set in concrete.

Geosyntec consultants
engineers | scientists | innovators

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

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

Drilling Start Date:	**08/16/2022**	Boring Depth (ft):	**55**	Well Depth (ft):	**50**
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 During Drilling (ft):	**--**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**TSI-150**	Ground Surface Elevation:	**422.88 ft amsl**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**C. Franklin**	Top of Casing Elevation:	**425.70 ft amsl**	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 AMSL)
					385
35	CB	90	(38') SILTY SAND (SM); reddish-brown, loose, trace clay.		
40	CB	80	(40') SILTY SAND (SM); reddish-brown, loose, coarse sand with some gravel.		380
			(42') SANDY CLAY (CL); reddish-brown, moist, low to medium plasticity, relict rock structure.		
45			(44') SILTY SAND (SM); light brown, loose, trace gravel and trace clay.		375
50	CB	60	(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.

APPENDIX B

Laboratory Analytical Reports

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 08, 2022

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

Re: Branch CCR Groundwater Compliance Upgradient
Work Order: 590838

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. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

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

Sincerely,

Erin Trent

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: 590838 GEL Work Order: 590838

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: September 8, 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 ComplianceUpgradient

Client Sample ID:	BRGWA-2S	Project:	GPCC00101
Sample ID:	590838001	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	23-AUG-22 10:55		
Receive Date:	24-AUG-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		5.95			SU			EOS1	08/23/22	1055	2308296	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.18	0.0670	0.200	mg/L		1	JLD1	08/25/22	1258	2308691	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		0.452	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	1046	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/02/22	2334	2308385	4
Barium		0.0120	0.000670	0.00400	mg/L	1.00	1					
Chromium	J	0.00908	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000844	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0763	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		0.439	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		3.36	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	1430	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1043	2308385	6
Boron	J	0.00532	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		4.65	0.0800	0.200	mg/L	1.00	1					
Magnesium		4.86	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0391	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		45.0	2.38	10.0	mg/L			CH6	08/25/22	1700	2308573	7
Titration and Ion Analysis												

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Certificate of Analysis

Report Date: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-2S
Sample ID: 590838001
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		32.6	1.45	4.00	mg/L			HH2	09/04/22	1338	2309339	8
Bicarbonate alkalinity (CaCO3)		32.6	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	08/26/22	0900	2308382
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	RM4	08/25/22	1146	2308547

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-2I
Sample ID: 590838002
Matrix: WG
Collect Date: 23-AUG-22 10:10
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		6.67			SU			EOS1	08/23/22	1010	2308296	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.02	0.0670	0.200	mg/L		1	JLD1	08/25/22	1428	2308691	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		5.66	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	1048	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/02/22	2352	2308385	4
Barium		0.00954	0.000670	0.00400	mg/L	1.00	1					
Chromium	U	ND	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000767	0.000300	0.00100	mg/L	1.00	1					
Iron		0.183	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium		0.0262	0.00300	0.0100	mg/L	1.00	1					
Potassium		5.88	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		5.73	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	1439	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1107	2308385	6
Boron	J	0.00592	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		13.9	0.0800	0.200	mg/L	1.00	1					
Magnesium		8.82	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0134	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00240	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		117	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: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-2I
Sample ID: 590838002
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		62.4	1.45	4.00	mg/L			HH2	09/04/22	1342	2309339	8
Bicarbonate alkalinity (CaCO3)		62.4	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	1146	2308547

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 8, 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 ComplianceUpgradient

Client Sample ID:	BRGWA-5S	Project:	GPCC00101
Sample ID:	590838003	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	23-AUG-22 10:00		
Receive Date:	24-AUG-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		6.36			SU			EOS1	08/23/22	1000	2308296	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.59	0.0670	0.200	mg/L		1	JLD1	08/25/22	1457	2308691	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		0.521	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	1049	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0003	2308385	4
Barium		0.0379	0.000670	0.00400	mg/L	1.00	1					
Chromium	J	0.00435	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron		0.151	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		0.635	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		4.03	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	1441	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1110	2308385	6
Boron	J	0.00538	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	ND	0.000300	0.00100	mg/L	1.00	1					
Calcium		18.2	0.0800	0.200	mg/L	1.00	1					
Magnesium		8.51	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0140	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		101	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: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-5S
Sample ID: 590838003
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		73.8	1.45	4.00	mg/L			HH2	09/04/22	1343	2309339	8
Bicarbonate alkalinity (CaCO3)		73.8	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	1146	2308547

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-5I
Sample ID: 590838004
Matrix: WG
Collect Date: 23-AUG-22 10:15
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		6.24			SU			EOS1	08/23/22	1015	2308296	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		3.64	0.0670	0.200	mg/L		1	JLD1	08/25/22	1527	2308691	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		2.21	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	1051	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0006	2308385	4
Barium		0.0241	0.000670	0.00400	mg/L	1.00	1					
Chromium	J	0.00647	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000553	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		0.909	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		4.93	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	1446	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1113	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		14.3	0.0800	0.200	mg/L	1.00	1					
Magnesium		10.4	0.0100	0.0300	mg/L	1.00	1					
Manganese	U	ND	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00151	0.000200	0.00100	mg/L	1.00	1					
Solids Analysis												
SM2540C Dissolved Solids "As Received"												
Total Dissolved Solids		107	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: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-5I
Sample ID: 590838004
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		72.8	1.45	4.00	mg/L			HH2	09/04/22	1344	2309339	8
Bicarbonate alkalinity (CaCO3)		72.8	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	1146	2308547

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-6S
Sample ID: 590838005
Matrix: WG
Collect Date: 23-AUG-22 09:50
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		6.51			SU			EOS1	08/23/22	0950	2308296	1
Ion Chromatography												
EPA 300.0 Anions Liquid "As Received"												
Chloride		2.39	0.0670	0.200	mg/L		1	JLD1	08/25/22	1557	2308691	2
Fluoride	U	ND	0.0330	0.100	mg/L		1					
Sulfate		0.479	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	1053	2308549	3
Metals Analysis-ICP-MS												
SW846 3005A/6020B "As Received"												
Arsenic	U	ND	0.00200	0.00500	mg/L	1.00	1	BAJ	09/03/22	0010	2308385	4
Barium		0.0140	0.000670	0.00400	mg/L	1.00	1					
Chromium		0.0143	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	ND	0.000300	0.00100	mg/L	1.00	1					
Iron	J	0.0701	0.0330	0.100	mg/L	1.00	1					
Lead	U	ND	0.000500	0.00200	mg/L	1.00	1					
Lithium	J	0.00314	0.00300	0.0100	mg/L	1.00	1					
Potassium		0.685	0.0800	0.300	mg/L	1.00	1					
Selenium	U	ND	0.00150	0.00500	mg/L	1.00	1					
Sodium		2.44	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	1448	2308385	5
Beryllium	U	ND	0.000200	0.000500	mg/L	1.00	1	BAJ	09/03/22	1116	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		3.97	0.0800	0.200	mg/L	1.00	1					
Magnesium		4.06	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00329	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		52.0	2.38	10.0	mg/L			CH6	08/26/22	1530	2309029	7
Titration and Ion Analysis												

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: September 8, 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 ComplianceUpgradient

Client Sample ID: BRGWA-6S
Sample ID: 590838005
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		58.2	1.45	4.00	mg/L			HH2	09/04/22	1346	2309339	8
Bicarbonate alkalinity (CaCO3)		58.2	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	1146	2308547

The following Analytical Methods were performed:

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

Notes:

Column headers are defined as follows:

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

QC Summary

Report Date: September 8, 2022

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

Contact: **Joju Abraham**

Workorder: **590838**

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: **590838**

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: **590838**

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

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

QC Summary

Workorder: **590838**

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: **590838**

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: **590838**

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

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

QC Summary

Workorder: **590838**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis-Mercury											
Batch 2308549											
QC1205175101 MB											
Mercury				U	ND	mg/L				JP2	08/26/22 10:07
QC1205175104 590719007 MS											
Mercury	0.00200	U	ND		0.00152	mg/L		73.9*	(75%-125%)		08/26/22 10:28
QC1205175106 590719007 PS											
Mercury	2.00	U	ND		1.51	ug/L		73.5*	(80%-120%)		08/26/22 10:31
QC1205175105 590719007 SDILT											
Mercury		U	ND	U	ND	ug/L	N/A		(0%-10%)		08/26/22 10:30
Solids Analysis											
Batch 2308573											
QC1205175155 590720002 DUP											
Total Dissolved Solids			161		159	mg/L	1.25		(0%-5%)	CH6	08/25/22 17:00
QC1205175152 LCS											
Total Dissolved Solids	300				301	mg/L		100	(95%-105%)		08/25/22 17:00
QC1205175151 MB											
Total Dissolved Solids				U	ND	mg/L					08/25/22 17:00
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

QC Summary

Workorder: **590838**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis												
Batch 2309339												
QC1205176799 590838001 DUP												
Alkalinity, Total as CaCO3			32.6		32.2	mg/L	1.23		(0%-20%)	HH2	09/04/22	13:40
Bicarbonate alkalinity (CaCO3)			32.6		32.2	mg/L	1.23		(0%-20%)			
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A					
QC1205176801 590857001 DUP												
Alkalinity, Total as CaCO3		J	3.40	J	3.60	mg/L	5.71 ^		(+/-4.00)		09/04/22	13:53
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

QC Summary

Workorder: **590838**

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

J	Value is estimated
N	Metals--The Matrix spike sample recovery is not within specified control limits
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
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.

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
590838001	BRGWA-2S
590838002	BRGWA-2I
590838003	BRGWA-5S
590838004	BRGWA-5I
590838005	BRGWA-6S
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%)

Product: **Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**
Analytical Method: SW846 7470A
Analytical Procedure: GL-MA-E-010 REV# 38
Analytical Batch: 2308549

Preparation Method: SW846 7470A Prep
Preparation Procedure: GL-MA-E-010 REV# 38
Preparation Batch: 2308547

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

GEL Sample ID#	Client Sample Identification
590838001	BRGWA-2S
590838002	BRGWA-2I
590838003	BRGWA-5S
590838004	BRGWA-5I
590838005	BRGWA-6S
1205175101	Method Blank (MB)**CVAA**
1205175102	Laboratory Control Sample (LCS)
1205175105	590719007(NonSDGL) Serial Dilution (SD)
1205175103	590719007(NonSDGD) Sample Duplicate (DUP)
1205175104	590719007(NonSDGS) Matrix Spike (MS)
1205175106	590719007(NonSDGPS) Post Spike (PS)

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

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement
The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike also did not meet the required control limits; thus, confirming matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1205175104 (Non SDG 590719007MS)	Mercury	73.9* (75%-125%)

Post Spike (PS) Recovery Statement
The percent recoveries (%R) obtained from the PS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The PS did not meet the recommended quality control acceptance criteria for percent recoveries for all applicable analytes and verifies the presence of matrix interferences.

Sample	Analyte	Value
1205175106 (Non SDG 590719007PS)	Mercury	73.5* (80%-120%)

General Chemistry

Product: **Ion Chromatography**
Analytical Method: EPA 300.0
Analytical Procedure: GL-GC-E-086 REV# 30
Analytical Batch: 2308691

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

GEL Sample ID#	Client Sample Identification
590838001	BRGWA-2S
590838002	BRGWA-2I
590838003	BRGWA-5S
590838004	BRGWA-5I
590838005	BRGWA-6S
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) and 1205175348 (BRGWC-33SPS) 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.

Product: **Solids, Total Dissolved**
Analytical Method: SM 2540C
Analytical Procedure: GL-GC-E-001 REV# 19
Analytical Batch: 2308573

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

GEL Sample ID#	Client Sample Identification
590838001	BRGWA-2S
1205175151	Method Blank (MB)
1205175152	Laboratory Control Sample (LCS)
1205175155	590720002(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: **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
590838002	BRGWA-2I
590838003	BRGWA-5S
590838004	BRGWA-5I
590838005	BRGWA-6S
1205176098	Method Blank (MB)
1205176099	Laboratory Control Sample (LCS)
1205176100	590857001(BRGWC-33S) Sample Duplicate (DUP)

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

Data Summary:

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

continuing calibration, instrument controls and process controls where applicable.

Product: **Alkalinity**
Analytical Method: SM 2320B
Analytical Procedure: GL-GC-E-033 REV# 14
Analytical Batch: 2309339

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

GEL Sample ID#	Client Sample Identification
590838001	BRGWA-2S
590838002	BRGWA-2I
590838003	BRGWA-5S
590838004	BRGWA-5I
590838005	BRGWA-6S
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.

590838, 590840

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

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

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: J. Brackett — 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 (NI)	Radium 226 & 228 SW-846 9315, 9320 (NI)	<-- Preservative Type (6)	Comments
BR GWA-2S	08/23/22	1055	G	N	WG			7	✓	✓	✓	✓		field pH = 5.95
BR GWA-2I	08/23/22	1010	G	N	WG			7	✓	✓	✓	✓		field pH = 6.67
BR GWA-5S	08/23/22	1000	G	N	WG			7	✓	✓	✓	✓		field pH = 6.36
BR GWA-5I	08/23/22	1015	G	N	WG			7	✓	✓	✓	✓		field pH = 6.24
BR GWA-6S	08/23/22	0950	G	N	WG			7	✓	✓	✓	✓		field pH = 6.51
														field pH =
														field pH =
														field pH =
														field pH =
														field pH =

Note: extra sample is required for sample specific QC

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

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

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	8/24/22	0845	1	8/24/22	0845
2	8/24	127	2	8/24/22	127
3			3		

> *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: GPCC	**SDG/AR/COC/Work Order:** 590838, 590840, 590845, 590851, 590855, 590856, 590857, 590859 ET
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 _____ Date _____ Page _____ of _____

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 08 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	2019−165
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

September 20, 2022

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

Re: Branch CCR Groundwater Compliance Upgradient
Work Order: 590840

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. 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: 590840 GEL Work Order: 590840

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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceUpgradient

Client Sample ID: BRGWA-2S
Sample ID: 590840001
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	0.281	+/-1.08	1.96	+/-1.08	3.00	pCi/L			JXC9	09/16/22	1054	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		0.531	+/-1.10		+/-1.11		pCi/L			NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.250	+/-0.237	0.372	+/-0.242	1.00	pCi/L			LXP1	09/16/22	0859	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	77.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceUpgradient

Client Sample ID: BRGWA-2I
Sample ID: 590840002
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	1.44	+/-1.61	2.70	+/-1.65	3.00	pCi/L			JXC9	09/16/22	1054	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.70	+/-1.63		+/-1.67		pCi/L			NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.266	+/-0.278	0.452	+/-0.281	1.00	pCi/L			LXP1	09/16/22	0859	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	79.4	(15%-125%)

Notes:

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

Column headers are defined as follows:

DF: Dilution Factor
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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceUpgradient

Client Sample ID: BRGWA-5S
Sample ID: 590840003
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	-0.505	+/-1.08	2.12	+/-1.08	3.00	pCi/L			JXC9	09/16/22	1054	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		0.735	+/-1.11		+/-1.12		pCi/L			NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.735	+/-0.287	0.208	+/-0.324	1.00	pCi/L			LXP1	09/16/22	0859	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	79.1	(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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceUpgradient

Client Sample ID: BRGWA-5I
Sample ID: 590840004
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		2.04	+/-1.20	1.81	+/-1.30	3.00	pCi/L			JXC9	09/16/22	1054	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.30	+/-1.22		+/-1.32		pCi/L			NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.260	+/-0.221	0.311	+/-0.224	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	80.8	(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

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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceUpgradient

Client Sample ID: BRGWA-6S
Sample ID: 590840005
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	0.0663	+/-0.883	1.68	+/-0.883	3.00	pCi/L			JXC9	09/16/22	1054	2309177	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		0.203	+/-0.913		+/-0.913		pCi/L			NXL1	09/20/22	0955	2309181	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.137	+/-0.234	0.419	+/-0.235	1.00	pCi/L			LXP1	09/16/22	0934	2309179	3

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2309177	75.9	(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

Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 590840

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
590840001	BRGWA-2S
590840002	BRGWA-2I
590840003	BRGWA-5S
590840004	BRGWA-5I
590840005	BRGWA-6S
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
590840001	BRGWA-2S
590840002	BRGWA-2I
590840003	BRGWA-5S
590840004	BRGWA-5I
590840005	BRGWA-6S
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.

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **590840**

Report Date: September 20, 2022

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: **590840**

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.

590838, 590840

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

GEL Laboratories LLC
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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 Ponds Fax #
Address: 241 Ralph McGill Blvd SE, Atlanta GA 30308
Collected By: J. Brantley 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
BR GWA-2S	08/23/22	1055	G	N	WG			7	✓	✓	✓	✓	field pH = 5.95	Note: extra sample is required for sample specific QC
BR GWA-2I	08/23/22	1010	G	N	WG			7	✓	✓	✓	✓	field pH = 6.67	
BR GWA-5S	08/23/22	1000	G	N	WG			7	✓	✓	✓	✓	field pH = 6.36	
BR GWA-5I	08/23/22	1015	G	N	WG			7	✓	✓	✓	✓	field pH = 6.24	
BR GWA-6S	08/23/22	0950	G	N	WG			7	✓	✓	✓	✓	field pH = 6.51	
													field pH =	
													field pH =	
													field pH =	
													field pH =	
													field pH =	

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		8/24/22	0845		8/24/22	
2		8/24	127		8/24/22	127 0845
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, 590859 E.T
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 _____ Date _____ Page _____ of _____

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 20 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

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: 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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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

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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
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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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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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
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-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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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
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
Address : 241 Ralph McGill Blvd NE, Bin 10160

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

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

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

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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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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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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
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

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.

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	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

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	Note: extra sample is required for sample specific QC
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

GL-CHL-SR-001 Rev 7

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 = 7.18
PZ-13S	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

September 29, 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: 591883,590859 and 591353

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.

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: 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 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: 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 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: 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 Erin B Trent

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: September 29, 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		1.57	+/-1.19		+/-1.22		pCi/L			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
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: September 23, 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		0.152	+/-1.33		+/-1.33		pCi/L			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
Address : Company
241 Ralph McGill Blvd NE, Bin 10160

Atlanta, Georgia 30308

Report Date: September 23, 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		+/-1.41		pCi/L			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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Company : Georgia Power Company, Southern
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Atlanta, Georgia 30308

Report Date: September 23, 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		1.38	+/-1.08		+/-1.10		pCi/L			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: September 23, 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		+/-1.23		pCi/L			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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Atlanta, Georgia 30308

Report Date: September 23, 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		+/-1.05		pCi/L			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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Atlanta, Georgia 30308

Report Date: September 23, 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		0.972	+/-0.900		+/-0.913		pCi/L			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

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Atlanta, Georgia 30308

Report Date: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E

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		+/-1.19		pCi/L			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

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Atlanta, Georgia 30308

Report Date: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E

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		2.37	+/-1.49		+/-1.53		pCi/L			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

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Certificate of Analysis

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

Report Date: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E

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		+/-1.50		pCi/L			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

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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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E

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		+/-1.59		pCi/L			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

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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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E

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		1.83	+/-1.20		+/-1.23		pCi/L			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

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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: September 20, 2022

Contact: Joju Abraham

Project: Branch CCR Groundwater ComplianceAP - E

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		+/-1.33		pCi/L			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

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **591883**

Report Date: September 29, 2022

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.

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **591353**

Report Date: September 23, 2022

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.

GEL LABORATORIES LLC

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

QC Summary

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

Atlanta, Georgia

Contact: **Joju Abraham**

Workorder: **590859**

Report Date: September 20, 2022

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.

Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 591883

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.

Radiochemistry
Technical Case Narrative
Georgia Power Company
SDG #: 591353

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 #: 590859

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.

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	<-- 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

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	Note: extra sample is required for sample specific QC
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

GL-CHL-SR-001 Rev 7

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

590851, 590855, 590852, 590857, 590858

Client: GPCC	SDG/AR/COC/Work Order: 590838, 590840, 590845, ET
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

List of current GEL Certifications as of 29 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

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	Project:	GPCC00101
Sample ID:	591887001	Client ID:	GPCC001
Matrix:	WG		
Collect Date:	01-SEP-22 12:32		
Receive Date:	02-SEP-22		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Field Data												
Client collected Field pH "As Received"												
Field pH		7.70			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
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

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

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

GEL Laboratories LLC

Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

gel.com

Chain of Custody and Analytical Request

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

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

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.)	(7) Known or possible Hazards	Total number of containers	Cl, F, SO4, TDS EPA 300, SM 2540C	Metals * EPA 6020B	Dissolved Metals * EPA 6020B	Comments Note: extra sample is required for sample specific QC
<-- Preservative Type (6)										NI	NI	
PZ-52D	09/01/22	1232	G	N	WG			3	✓	✓		field pH = 7.70

Chain of Custody Signatures

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