



**REPORT**

# 2021 Annual Groundwater Monitoring and Corrective Action Report

*Georgia Power Company - Plant Branch  
Ash Pond BCD*

Submitted to:



**Georgia Power Company**

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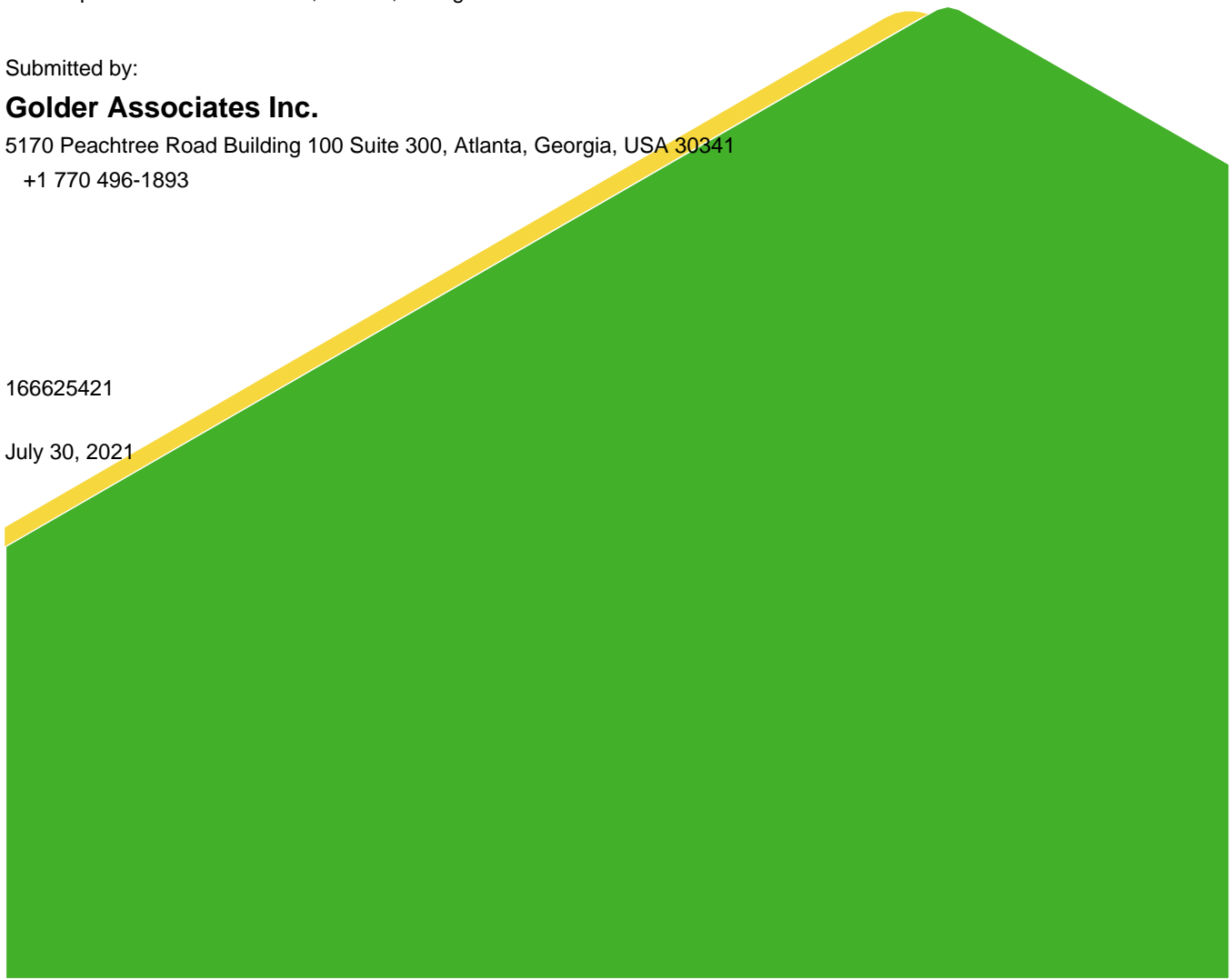
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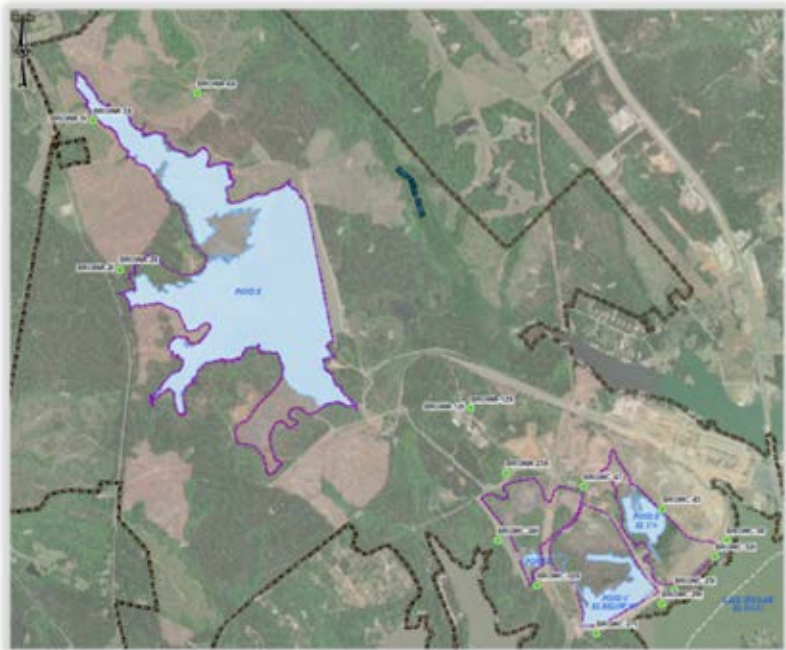


## Summary

This 2021 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant Branch Ash Ponds B, C, and D (AP-BCD), Milledgeville, Putnam County, Georgia (GA) report provides the status of groundwater monitoring and corrective program July 2020 through June 2021. Groundwater monitoring and reporting for AP-BCD is performed by Golder Associates Inc. (Golder) in accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residual (CCR) Rule published in the Code of Federal Regulations Title 40 Part 257 (40 CFR Part 257, Subpart D) dated April 17, 2015 and revised July 2018, 40 CFR § 257.90 through § 257.98. This summary was prepared by Golder on behalf of Georgia Power to meet the requirements listed in Part A, Section 6<sup>1</sup> of the US EPA CCR rule [40 Code of Federal Regulations (CFR) 257 Subpart D]. As required in 40 CFR § 257.90(e), this Annual Report describes the status of the groundwater monitoring program, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and presents projected key activities for the upcoming year for AP-BCD. The other CCR unit (AP-E) on-site at Plant Branch is reported separately.

Plant Branch formerly operated as a coal-fired power plant since the 1960s until its retirement in 2015; Plant Branch is no longer active and is decommissioned. Located approximately 8 miles north of Milledgeville in Putnam County (1100 Milledgeville Road, Milledgeville, GA 31024), the property occupies approximately 3,200 acres and is bounded on the south and east by Lake Sinclair.

Groundwater at the Site is monitored using a monitoring system comprised of upgradient and downgradient wells for each CCR Unit. The AP-BCD network consists of eight (8) upgradient and nine (9) downgradient wells installed to meet federal and state monitoring requirements, as shown above. Routine sampling and reporting for AP-BCD began after the background groundwater conditions were established between 2016 and 2018. Based on groundwater quality, an assessment monitoring program and assessment of corrective measures were established on November 13, 2019 and July 9, 2020, respectively. During the 2021 annual reporting period, the Site remained in assessment monitoring as corrective measures are evaluated.



Plant Branch

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



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

### 2021 Annual Groundwater Monitoring Activities

There is no change to the AP-BCD certified detection network between June 2020 and July 2021. Groundwater monitoring sampling events for AP-BCD were conducted in August 2020 (annual), September 2020 (semi-annual) and March 2021 (semi-annual). Groundwater samples were collected and analyzed for Appendix III<sup>2</sup> and Appendix IV<sup>3</sup> required monitoring parameters from each of the detection and assessment monitoring wells.

Analytical data from the September 2020 and March 2021 monitoring events have been statistically analyzed in accordance with the site's certified statistical analysis method. Statistical analyses indicate statistically significant increases (SSIs) for Appendix III constituents above the statistical limits and statistically significant levels (SSLs) of Appendix IV constituents above the groundwater protection standards as summarized below.

Appendix III Constituent	September 2020
Boron	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I
Calcium	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
Chloride	BRGWC-27I, BRGWC-29I, BRGWC-32S, BRGWC-45, BRGWC-50, BRGWC-52I
Fluoride	BRGWC-50
pH	BRGWC-29I, BRGWC-45, BRGWC-50
Sulfate	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
TDS	BRGWC-27I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I
Appendix IV Constituent	September 2020
Cadmium	BRGWC-50
Cobalt	BRGWC-50

Appendix III Constituent	March 2021
Boron	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I
Calcium	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
Chloride	BRGWC-45, BRGWC-50
Fluoride	BRGWC-50
pH	BRGWC-29I and BRGWC-50
Sulfate	BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
TDS	BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I
Appendix IV Constituent	March 2021
Cadmium	BRGWC-50
Cobalt	BRGWC-50 and PZ-51I

Based on review of the Appendix III and Appendix IV results noted above, the site will remain in Assessment Monitoring. Georgia Power will continue routine groundwater monitoring and evaluation of corrective action alternatives at the Site. Reports will be posted to the website and provided to GA EPD semi-annually.

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<sup>2</sup> Appendix III: boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids

<sup>3</sup> Appendix IV: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, combined radium (226 + 228), selenium, and thallium.

# Table of Contents

<b>1.0</b>	<b>INTRODUCTION</b>	<b>8</b>
1.1	Site Description and Background	8
1.2	Site Geology and Hydrogeologic Setting	8
1.3	Groundwater Monitoring Well Network	9
<b>2.0</b>	<b>GROUNDWATER MONITORING ACTIVITIES</b>	<b>9</b>
2.1	Monitoring Well Installation and Maintenance	9
2.2	Assessment Monitoring	10
2.3	Additional Sampling and Surface Water Sampling	10
<b>3.0</b>	<b>SAMPLE METHODOLOGY AND ANALYSIS</b>	<b>11</b>
3.1	Groundwater Elevation Measurement	11
3.2	Groundwater Gradient and Flow Velocity	11
3.3	Groundwater Sampling	12
3.4	Laboratory Analyses	12
3.5	Quality Assurance and Quality Control	13
<b>4.0</b>	<b>STATISTICAL ANALYSES</b>	<b>13</b>
4.1	Statistical Method	13
4.1.1	Appendix III Assessment Monitoring Statistical Methods	15
4.1.2	Appendix IV Assessment Monitoring Statistical Methods	15
4.2	Statistical Analysis Results	16
4.2.1	September 2020 Appendix III Statistical Results	16
4.2.2	September 2020 Appendix IV Statistical Results	16
4.2.3	March 2021 Appendix III Statistical Results	17
4.2.4	March 2021 Appendix IV Statistical Results	17
4.3	Assessment Monitoring & Delineation Status	17
<b>5.0</b>	<b>MONITORING PROGRAM STATUS</b>	<b>18</b>
<b>6.0</b>	<b>CONCLUSIONS AND FUTURE ACTIONS</b>	<b>18</b>
<b>7.0</b>	<b>REFERENCES</b>	<b>19</b>

## Table of Contents (continued)

### Figures & Tables

Figure 1	Site Location Map
Figure 2	Site Plan and Monitoring Well and Surface Water Location Map
Figure 3	Potentiometric Surface Contour Map – August 17, 2020
Figure 4	Potentiometric Surface Contour Map – September 14, 2020
Figure 5	Potentiometric Surface Contour Map – March 1, 2021
Table 1	Summary of Monitoring Well, Assessment and Piezometer Construction
Table 2	Groundwater Sampling Event Summary – AP-BCD
Table 3	Summary of Groundwater Elevations – AP-BCD and AP-E
Table 4A	Groundwater Velocity Calculations – AP-BCD (August 2020)
Table 4B	Groundwater Velocity Calculations – AP-BCD (September 2020)
Table 4C	Groundwater Velocity Calculations – AP-BCD (March 2021)
Table 5A	Analytical Data Summary – AP-BCD (August 2020)
Table 5B	Analytical Data Summary – AP-BCD (September and October 2020)
Table 5C	Analytical Data Summary - AP-BCD (March and April 2021)
Table 5D	Analytical Data Summary – Surface Water – AP-BCD (October 2020)
Table 5E	Analytical Data Summary – Surface Water – AP-BCD (February 2021)
Table 6	Summary of Background Levels and GWPS – AP-BCD

### Appendices

Appendix A	Analytical Results, Field Data Forms, Field Calibration Forms, Certified Well Survey Report, Well Inspection Forms & Data Validation Summaries
Appendix B	Well Installation Reports
Appendix C	Statistical Analyses
Appendix D	Semi-Annual Remedy Selection and Design Progress Report

## Certification Statement

This 2021 Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company Plant Branch Ash Pond BCD (AP-BCD) has been prepared in compliance with the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4.10(6)(a-c) by a qualified groundwater scientist with Golder Associates Inc.

**Golder Associates Inc.**



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## 1.0 INTRODUCTION

In accordance with the Georgia Environmental Protection Division (GA EPD) Rules of Solid Waste Management 391-3-4-.10(6)(a)-(c), this *2021 Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Branch Ash Ponds, B, C, and D, together referred to as a multi-unit AP-BCD. To specify groundwater monitoring requirements, GA EPD Rule 391-3-4-.10(6)(a) incorporates by reference the United States Environmental Protection Agency (US EPA) Coal Combustion Residuals (CCR) Rule 40 Code of Federal Regulations (CFR) § 257.90 through 257.91 and 257.93 through 257.94. For ease of reference, The US EPA CCR rules are cited within this report. Plant Branch ceased producing electricity prior to April 2015, and therefore, Ash Ponds B, C, and D are not subject to the USEPA CCR Rule. This report documents the activities completed to establish the groundwater monitoring program in accordance with GA EPD Rule 391-3-4-.10(6)(a).

Three monitoring events were conducted during this monitoring period - an initial assessment monitoring event conducted in August 2020, and two semi-annual assessment monitoring events conducted in September 2020 and March 2021. This report documents the activities completed at Branch AP-BCD between July 2020 and June 2021. Activities completed at Branch AP-E are reported under separate cover.

### 1.1 Site Description and Background

Plant Branch is located in Putnam County, GA, approximately 8 miles north of Milledgeville. The property occupies approximately 3,200 acres and is bounded on the south and east by Lake Sinclair, which is an approximate 15,330-acre hydroelectric reservoir that was created in 1953 by the impoundment of the Oconee River. A site location map and a detailed site map is included as Figure 1.

Plant Branch formerly operated as a coal-fired power plant between the 1960's until its retirement in 2015. Plant Branch is no longer active and is decommissioned. During its operation, five ash ponds were used for management of the CCR on the plant property. These ponds are identified as Ponds A, B, C, D, and E. Ash Pond A, the first ash pond constructed at the Site, was taken out of service in the late 1960s and was closed in April 2016 by the removal and relocation of its stored CCR to Ash Pond E. Ponds B, C, D, and E are inactive, and will be closed by removal by relocation of the stored CCR material to a proposed fully lined landfill located on the plant property. This report documents the groundwater monitoring program at the multi-unit AP-BCD.

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

### 1.2 Site Geology and Hydrogeologic Setting

The following section and subsections include a general description of regional geologic and hydrogeologic characteristics of formations that occur beneath the site. Information presented in this section is based on published literature, discussion with local geologic experts, and experience working in this geologic terrain, as described in the November 2020 *Hydrogeologic Assessment Report, Revision 1* (Geosyntec, 2020).

The site is located within the Piedmont Physiographic Province of central Georgia, which is characterized by gently rolling hills and narrow valleys, with locally pronounced linear ridges. Overall, the property slopes gently east and south toward Beaverdam Creek and Lake Sinclair. The metamorphic and igneous rocks that underlie the area have been subjected to physical and chemical weathering which has created a landscape dissected by

creeks and streams forming a dendritic drainage pattern. These rocks are deeply weathered due to the humid climate and bedrock is typically overlain by a variably thick blanket of residual soils and saprolite. 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 feldspathic 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.

Based on our review of available data, micaceous, locally saprolitic soils, consisting primarily of clay, silty clay, silt, and sandy clay occur as a variably thick blanket of residuum overlying bedrock across most of the site. The thickness of the residual soil encountered in the borings is variable, ranging from approximately 11 feet to as much as 74 feet. Saprolitic soils and/or saprolitic rock vary in thickness across the site but are generally encountered at or near ground surface. Saprolitic rock is also considered to be transitionally weathered rock (TWR) or partially weathered rock (PWR), as defined by standard penetration test data, where available. Material overlying the top of rock surface, including residual soils, saprolite, and transitionally weathered rock, is collectively referred to as overburden.

### 1.3 Groundwater Monitoring Well Network

Pursuant to § 257.91 of the CCR rule and 391-3-4-.10(6), a groundwater monitoring system was installed within the uppermost aquifer at AP-BCD. Wells were placed in upgradient and downgradient locations based on groundwater flow direction as determined by the potentiometric surface elevation contour maps.

A network of 12 monitoring wells were installed in 2014 to 2018 for groundwater monitoring in proximity to AP-BCD. In April 2020, the five AP-E upgradient background monitoring wells were added to the AP-BCD groundwater monitoring well network (BRGWA-2S, BRGWA-2I, BRGWA-5S, BRGWA-5I, and BRGWA-6S). This was done to address spatial variability in the upgradient groundwater data set for a robust statistical data evaluation. Table 1, Summary of Monitoring Well, Assessment and Piezometer Construction, includes the pertinent construction details for the AP-BCD monitoring well network at Plant Branch.

Based on the site hydrogeology, the monitoring system is designed to monitor groundwater flow in the overburden, the transition-zone, and the upper bedrock as a single inter-connected aquifer system. Wells suffixed with an “S” are installed in overburden (saprolitic soil), an “I” indicates transitionally weathered rock (transition zone), and “D” indicates bedrock. Groundwater in the overburden, partially weathered rock, fractured bedrock, and the materials comprise a single uppermost aquifer based on site hydrogeologic conditions.

## 2.0 GROUNDWATER MONITORING ACTIVITIES

The following section describes monitoring-related activities performed at the Site during the previous annual monitoring period (July 2020 through June 2021).

Pursuant to § 257.90(e)(3) and 391-3-4-.10(6), Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed for AP-BCD.

### 2.1 Monitoring Well Installation and Maintenance

There was no change to the certified groundwater monitoring system during this reporting period. Monitoring well related activities included visual inspection of well conditions prior to sampling, recording conditions around the well, and performing exterior maintenance to provide safe access for sampling. The well inspection logs are included in Appendix A.

During this reporting period, seven piezometers (PZ-50D, PZ-51D, and PZ-57I through PZ-61I) were installed at the site to characterize and delineate the nature and extent of target constituents showing statistically significant levels (SSLs) in groundwater at the Site. The piezometer installations are documented in reports, *Piezometer Installation Report for Surface Impoundment Ash Pond BCD, Georgia Power Company – Plant Branch, Milledgeville, Georgia*, dated November 20, 2020 (Golder, 2020a), and *Piezometer Installation Report for Surface Impoundment Ash Pond BCD, Georgia Power Company – Plant Branch, Milledgeville, Georgia*, dated June 3, 2021 (Golder, 2021), copies of which is included in Appendix B. The wells were surveyed by Metro Engineering & Surveying Co., Inc. The certified well surveys for this work are included in Appendix A.

## 2.2 Assessment Monitoring

Pursuant to §257.94(e)(3), an assessment monitoring program was initiated for AP-BCD based on statistically significant increases documented in the *2019 Annual Groundwater Monitoring and Corrective Action Report*, (Golder 2019). A notice of assessment monitoring was placed in the operation record on November 13, 2019.

Groundwater sampling events were conducted for AP-BCD during August 2020, September 2020, and March 2021 in accordance with § 257.93 and GA EPD rule 391-3-4-.10(6)(a). Samples were collected from each well in the certified monitoring system for the CCR unit. The location of each of these monitoring wells is shown on Figure 2. The groundwater wells sampled included AP-BCD monitoring wells presented in Table 1 and assessment monitoring wells PZ-51I, PZ-51D, and PZ-61I (sampled in April 2021 after installation in March 2021). Table 2, Groundwater Sampling Event Summary, presents a summary of groundwater sampling events completed for AP-BCD and the status of the monitoring network.

During the initial assessment sampling event in August 2020, groundwater samples were collected and analyzed for Appendix IV to meet the requirement of §257.95(b). During the September 2020 and March 2021 semi-annual sampling events, groundwater samples from each detection monitoring well were collected for analysis of Appendix III, and the Appendix IV constituents detected during the August 2020 event. Results of sampling activities during this monitoring period are presented in Appendix A, Analytical Results, Field Data Forms, Field Calibration Forms, Certified Well Survey Report, Well Inspection Logs, and Data Validation Summaries. A resampling event for PZ-51I was completed during October 2020 to confirm September 2020 laboratory results. PZ-61I was sampled in April 2021 and was again sampled in May 2021 to confirm the April 2021 laboratory results.

## 2.3 Additional Sampling and Surface Water Sampling

Additional sampling was conducted during the reporting period in support of the assessment of corrective measures and in continuing to evaluate the nature and extent of impacts resulting from AP-BCD. This additional sampling is further discussed in Section 4.3.

Due to the presence of surface water features downgradient of BRGWC-50, Georgia Power proactively collected surface water samples from four locations on October 22, 2020 and five locations on February 4, 2021, in Lake Sinclair, as shown on Figure 2. Surface water samples are collected in accordance with Region 4 US EPA *Science and Ecosystem Support Division Operating Procedures for Surface Water Sampling* SESDPROC-201-R4 (December 16, 2016). The laboratory reports associated with the October 22, 2020 and February 4, 2021, sampling events are provided in Appendix A. A copy of the analytical report from the October 22, 2020, surface water sampling event was provided with the ACM Report (Golder 2020b). Georgia Power will continue collecting the surface water samples semiannually.

### 3.0 SAMPLE METHODOLOGY AND ANALYSIS

Sampling events completed during this reporting period for AP-BCD represent both the 2020 annual Appendix IV monitoring event as well as two independent semi-annual assessment monitoring events for AP-BCD at Plant Branch. Groundwater analytical data and chain of custody records are presented in Appendix A. The following sections describe methods used to conduct groundwater monitoring at the site.

#### 3.1 Groundwater Elevation Measurement

Prior to each scheduled sampling events, groundwater elevations were recorded at each monitoring well and piezometer. Groundwater elevations are summarized in Table 3, Summary of Groundwater Elevations. The recorded water level data were used to develop Figure 3, AP-BCD Potentiometric Surface Elevation Contour Map – August 17, 2020, Figure 4, AP-BCD Potentiometric Surface Elevation Contour Map – September 14, 2020, and Figure 5, AP-BCD Potentiometric Surface Elevation Contour Map – March 1, 2021. Review of Figures 3 through 5 shows that the general direction of groundwater flow across AP-BCD is to the south-southeast. This groundwater flow pattern is consistent with previous observations.

#### 3.2 Groundwater Gradient and Flow Velocity

Groundwater flow rates at the site were calculated based on hydraulic gradients, hydraulic conductivity from previous slug test results, and an estimated effective porosity of the screened horizon. Based on slug test data at the site, hydraulic conductivity ranges from 2.7 to 5.5 feet per day, which is used in the flow calculations. The hydraulic gradient was calculated between well pairs shown on Table 4A, Groundwater Flow Velocity Calculations – August 2020, Table 4B, Groundwater Flow Velocity Calculations –September 2020, and Table 4C, Groundwater Flow Velocity Calculations – March 2021. An effective porosity of 0.20 was used based on the default values for effective porosity recommended by US EPA for a silty sand-type soil (US EPA, 1996).

Horizontal flow velocity was calculated using the commonly used derivative of Darcy's Law:

$$V = \frac{K * i}{n_e} \quad \text{Where:}$$

$V =$  Groundwater flow velocity  $\left( \frac{\text{feet}}{\text{day}} \right)$   
 $K =$  Average hydraulic conductivity of the aquifer  $\left( \frac{\text{feet}}{\text{day}} \right)$   
 $i =$  Horizontal hydraulic gradient  $\left( \frac{\text{feet}}{\text{feet}} \right)$   
 $n_e =$  Effective porosity

Using this equation and groundwater elevation data from these sampling events, groundwater flow velocities are calculated for various areas of the site and are tabulated on Tables 4A through 4C.

As presented on Tables 4A through 4C, groundwater flow velocity at the site ranges from approximately 0.19 to 0.90 feet per day (or approximately 70 to 330 feet per year) across AP-BCD. The observed groundwater flow velocities calculated for this monitoring event are also generally consistent with expected velocities in the regolith-upper bedrock aquifers of Georgia Piedmont and confirm the groundwater monitoring system as properly located to monitor the uppermost aquifer for AP-BCD at Plant Branch.

### 3.3 Groundwater Sampling

Groundwater samples were collected in accordance with § 257.93(a), 391-3-4-.10(6) and EPA procedures. Monitoring wells were purged and sampled using low-flow sampling procedures. Dedicated and/or non-dedicated low-flow pneumatic bladder or peristaltic pumps were used to purge and sample the wells. During the purging of each well, field measurements of temperature, specific conductance, dissolved oxygen (DO), pH, and oxidation-reduction potential (ORP) were recorded using a SmarTroll® or AquaTroll® (In-Situ field instruments) along with a separate turbidity meter to verify stabilization.

Groundwater samples were collected when the following general stabilization criteria were met:

- 0.1 standard units for pH
- 5% for specific conductance
- $\pm 10\%$  for DO where  $DO > 0.5$  milligrams per liter (mg/L); if  $DO < 0.5$  mg/L (no stabilization criteria apply)
- Turbidity measurements less than 5 nephelometric turbidity units (NTUs)

Following well stabilization, samples were collected directly into appropriately preserved laboratory supplied sample containers, placed in ice-packed coolers, and submitted to the laboratory following standard chain-of-custody protocol. Field information forms, generated directly from the In-Situ field instruments, and chain-of-custody records are included in Appendix A.

Environmental monitoring field data sheets are included with the analytical reports in Appendix A. Field data and sampling notes for each monitoring well are recorded on the field information forms, which contain a description of the sampling equipment, sampling method, purge rate, field observations, field calibration forms, and depth to water measurements at each monitoring location.

### 3.4 Laboratory Analyses

Groundwater samples were collected during August and September in 2020, March 2021, April 2021, and May 2021. During the August 2020 sampling event, wells were analyzed for Appendix IV monitoring parameters pursuant to 40 CFR § 257.90(e)(3). The September 2020 and March 2021 events represents two semi-annual sampling events for AP-BCD at Plant Branch. The April and May 2021 events represent sampling events from delineation and assessment piezometers installed in March 2021. Because AP-BCD is currently in assessment monitoring, groundwater samples from wells in the assessment monitoring program were analyzed for Appendix III and the detected Appendix IV monitoring parameters per 40 CFR Parts 257 and 261. Tables 5A, 5B and 5C, Analytical Data Summary, present a tabulated summary of the August 2020 through May 2021 sampling results. Table 5C includes results from delineation and assessment piezometers installed in March 2021 and sampled between March 2021 through May 2021 (see Table 2 for sampling months). Surface water results are presented on Tables 5D and 5E. Analytical methods used for groundwater monitoring parameters can be found on the attached analytical data reports in Appendix A.

Laboratory analyses for these assessment monitoring events were performed by Pace Analytical (Pace) in Atlanta, Georgia and Greensburg, Pennsylvania. Pace is accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintains a NELAP certification for all parameters analyzed for this project. NELAP certification for Pace for 2020 and 2021 are provided in Appendix A. Groundwater data and chain of custody records for the monitoring events are presented in Appendix A.



### 3.5 Quality Assurance and Quality Control

During each sampling event, quality assurance/quality (QA/QC) control samples are collected at a rate of one sample per every 10 samples. Equipment blanks (where non-dedicated sampling equipment is used), field blanks, and duplicate samples were also collected during each sampling event. QA/QC sample data was evaluated during data validation and is included in Appendix A.

Groundwater quality data in this report was independently validated in accordance with USEPA guidance (US EPA, 2002) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences, post digestions spikes, laboratory and field duplicate relative percent difference (RPDs), field and equipment blanks, and reporting limits. The data are considered usable for meeting project objectives and the results are considered valid.

A value followed by a "J" flag in tables and laboratory reports indicate that the value is an estimated analyte concentration detected between the method detection limit (MDL) and the laboratory reporting limit (RL). The estimated value is positively identified but is below the lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions. "J" flagged data are used to establish background statistical limits but are not used when performing statistical analyses.

## 4.0 STATISTICAL ANALYSES

Statistical analysis of Appendix III groundwater monitoring data was performed pursuant to § 257.93 and 391-3-4-.10(6) following the established statistical method for AP-BCD. In addition, pursuant to § 257.95(d)(2), Georgia Power established groundwater protection standards (GWPS) for the Appendix IV constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the September 2020 and March 2021 assessment monitoring events. The reports generated from the analyses is provided in Appendix C. The September 2020 and March 2021 data were statistically analyzed by Groundwater Stats Consulting (GSC).

### 4.1 Statistical Method

The selected statistical method for AP-BCD was developed in accordance with § 257.93(f) and 391-3-4-.10(6) using methodology presented in Statistical Analysis of Groundwater Data at Resource Conservation and Recovery Act (RCRA) Facilities, Unified Guidance, (US EPA, 2009). The Sanitas Groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations and guidance as recommended in the US EPA (2009) document.

Plant Branch AP-BCD Statistical Method Summary provides a summary of the statistical methodology used at AP-BCD for the groundwater monitoring conducted in March 2021 and will be used for any routine monitoring in the future.

PLANT BRANCH AP-BCD STATISTICAL METHOD SUMMARY		
Monitoring Well Network	Upgradient Wells	BRGWA-2S, BRGWA-2I, BRGWA-5S, BRGWA-5I, BRGWA-6S, BRGWA-12S, BRGWA-12I, and BRGWA-23S
	Downgradient Wells	BRGWC-25I, BRGWC- 27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
Piezometers	Delineation Wells/Assessment Wells	PZ-51D and PZ-51S, PZ-50D, PZ-51I, and PZ-61I
CCR Monitoring Parameters	Appendix III (Detection Monitoring)	Boron, Calcium, Chloride, Fluoride, pH, Sulfate, Total Dissolved Solids
	Appendix IV (Assessment Monitoring)	Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, Thallium, Combined Radium (226+228)
Statistical Methodology	Data Screening on Proposed Background	Evaluate outliers, trends, and seasonality when sufficient data are available
	Statistical Limits	Interwell statistical limits will be applied on a constituent basis, depending on the appropriateness of the method as determined by the Analysis of Variance.
	Prediction Limits	Parametric when data follow a normal or transformed normal distribution and when less than 50% non-detects, utilizing Kaplan Meier non-detect adjustment when applicable; nonparametric when data sets contain greater than 50% non-detects or when data are not normally or transformed-normally distributed.
	Confidence Intervals	Used in Assessment and Corrective Action monitoring.
	No Statistical Testing	Statistical testing is not required for parameters with 100% non-detects.
	Verification Resample Plan (Optional)	1-of-2 with minimum of 8 samples per well for interwell testing. <ul style="list-style-type: none"> <li>▪ Initial statistical exceedance warrants independent resampling within 90 days.</li> <li>▪ If resample passes, well/parameter is not considered a confirmed statistically significant increase (SSI).</li> <li>▪ If resample exceeds, well/parameter has a confirmed SSI.</li> <li>▪ If no resample is collected, the original result is deemed verified.</li> </ul>

The following guidance is also applicable to the statistical analysis method:

- Statistical analyses are not performed on analytes containing 100% non-detects (US EPA Unified Guidance, 2009, Chapter 6).
- When data contain less than or equal to 15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, a non-detect adjustment such as the Kaplan-Meier or Regression on Order Statistics (ROS) method for adjustment of the mean and standard deviation will be used prior to constructing a parametric prediction limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

#### 4.1.1 Appendix III Assessment Monitoring Statistical Methods

Groundwater quality data were evaluated through use of interwell prediction limits for Appendix III parameters. Using this method, upgradient well data were pooled to establish a background statistical limit. Data from the September 2020, March 2021, and April 2021 assessment monitoring events were compared to the statistical limit to determine whether any concentrations exceed background levels. The selected statistical method uses an optional 1-of-2 verification resample plan. When an initial statistically significant increase (SSI) or questionable result occurs, a second sample may be collected to verify the initial result or determine if the result was an outlier.

If resampling is performed and the result does not confirm the initial finding, the initial exceedance is considered a false positive result and there is no confirmed exceedance. When the resample confirms the initial finding, an SSI is declared. The Sen's Slope/Mann Kendall trend test was used to statistically evaluate concentration levels over time and determine whether concentrations are increasing, decreasing, or stabilizing.

#### 4.1.2 Appendix IV Assessment Monitoring Statistical Methods

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

US EPA revised the Federal CCR Rule on July 30, 2018, specifying GWPS for cobalt, lead, lithium, and molybdenum as described in 40 CFR § 257.95(h)(2).

As described in 40 CFR § 257.95(h)(1-3), the GWPS for cobalt, lead, lithium and molybdenum are:

- Cobalt 0.006 mg/L
- Lead 0.015 mg/L
- Lithium 0.040 mg/L;
- Molybdenum 0.100 mg/L
- Background levels where the background level is higher than the Rule-specified GWPS.

Presently those Rule-specified GWPS have not yet been incorporated in the EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, under GA EPD rules, background concentrations are considered when determining the GWPS for constituents where an MCL has not been established (or where background is higher than the MCL). Under the existing GA EPD rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above State rule requirements, GWPS were established for statistical comparison of Appendix IV constituents. Summary of Background Levels and GWPS (Table 6) summarizes the background limit established at each monitoring well and the GWPS established under State rules.

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV parameters in each downgradient well. Those confidence intervals were compared to the GWPS established for the State rules. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its respective standard. If there is an exceedance of the established standard, a statistically significant level (SSL) exceedance is identified.

A summary table of the statistical results accompanies the prediction limits for Appendix III and confidence intervals for Appendix IV in Appendix C, Statistical Analyses. The background period for statistical analyses included data through March 2021. Tolerance limits for confidence interval calculations are updated to include current data. Due to varying reporting limits in background, the most recent reporting limit is used when data is not reported above detection limits. This results in a more appropriate statistical test.

## 4.2 Statistical Analysis Results

Analytical data from the semi-annual assessment monitoring events in September 2020 and March 2021 at AP-BCD have been statistically analyzed in accordance with the site's certified Statistical Analysis Plan. Verification resampling to confirm initial SSIs was performed; therefore, initial SSIs are considered verified. The statistical results of the September 2020 and March 2021 monitoring events are included in Appendix C, Statistical Analyses.

### 4.2.1 September 2020 Appendix III Statistical Results

Based on the Appendix III statistical results, groundwater conditions have not returned to background and assessment monitoring should continue pursuant to 40 CFR 257.95(f). A detailed list of the noted exceedances is provided in Appendix C.

### 4.2.2 September 2020 Appendix IV Statistical Results

Analytical data from the September 2020 monitoring event at AP-BCD have been statistically analyzed in accordance with the site's certified statistical analysis method. Review of the Sanitas results indicates that using the GWPS established according to GA EPD Rule 391-3-4-.10(6)(a), the following SSLs were identified:

AP-BCD September 2020 Confidence Interval Statistically Significant Level Exceedances	
AP-BCD Monitoring Well	Appendix IV Parameter
BRGWC-50	Cadmium, Cobalt

### 4.2.3 March 2021 Appendix III Statistical Results

Based on the Appendix III statistical results, groundwater conditions have not returned to background and assessment monitoring should continue pursuant to 40 CFR 257.95(f). A detailed list of the noted exceedances is provided in the Summary section and in Appendix C.

### 4.2.4 March 2021 Appendix IV Statistical Results

Analytical data from the March 2021 monitoring event at AP-BCD have been statistically analyzed in accordance with the site's certified statistical analysis method. Review of the Sanitas results indicates that using the GWPS established according to GA EPD Rule 391-3-4-.10(6)(a), the following SSLs were identified:

AP-BCD March 2021 Confidence Interval Statistically Significant Level Exceedances	
AP-BCD Monitoring Well	Appendix IV Parameter
BRGWC-50	Cadmium, Cobalt
PZ-51I	Cobalt

## 4.3 Assessment Monitoring & Delineation Status

Specific details regarding the delineation status at AP-BCD is discussed in the *Semi-Annual Remedy Selection and Design Progress Report* (Appendix D). As part of the nature and extent study, three (3) horizontal delineation piezometers (PZ-51S, PZ-51I, and PZ-61I) and two (2) vertical delineation piezometers (PZ 50D and PZ-51D) were installed at locations downgradient of the monitoring well where Appendix IV SSLs were observed. Four (4) characterization piezometers (PZ-57I, PZ-58I, PZ-59I and PZ-60I) were installed upgradient of BRGWC-50 and PZ-51I. For this reporting period, PZ-50D and PZ-51D were installed in October 2020, and PZ-57I through PZ-61I were installed in March 2021. PZ-59I has not been sampled at this time and is utilized only for groundwater level measurements. Piezometers PZ-50D, PZ-51I, and PZ-61I have been included as assessment wells for AP-BCD and will continue to be monitored in future groundwater monitoring events.

Limited groundwater analytical data are available for assessment monitoring wells. In accordance with Section 21.1.1 of the Unified Guidance (US EPA, 2009), four independent data is the minimum population size recommended to construct confidence intervals required to assess SSLs for Appendix IV constituents. At the time of this report, the data set for assessment piezometers PZ-50D and PZ-61I, and delineation piezometer PZ-51D, installed in 2020 and 2021, are limited to fewer than four independent data points. Statistical analysis will be performed on the data once four data points are available.

Due to the proximity of Lake Sinclair in the downgradient direction of the well showing SSLs of cobalt and cadmium (i.e., BRGWC-50), installation of additional conventional wells to horizontally characterize this area is infeasible. As such, surface water samples were collected from Lake Sinclair downgradient of AP-BCD to supplement horizontal delineation on October 22, 2020, and February 4th, 2021. The results from surface water



samples collected indicate that cadmium and cobalt are not detected in the samples from Lake Sinclair (Table 5D and 5E). Based on data collected to date, there are no impacts to surface water by constituents with SSLs at AP-BCD at Plant Branch. Therefore, delineation of cadmium and cobalt at well BRGWC-50 is complete. A summary of assessment monitoring data is presented in Tables 5A through 5C.

## 5.0 MONITORING PROGRAM STATUS

Following the requirements of 40 CFR § 257.96, Plant Branch AP-BCD has initiated an *Assessment of Corrective Measures (ACM)* (Golder, 2020b). Notification of this action was placed in the CCR operating record on July 9, 2020. Analytical results from assessment wells at AP-BCD are presented in Tables 5A through 5C.

In accordance with 40 CFR § 257.97(a), a remedy selection report will be prepared and submitted concurrent with semi-annual groundwater monitoring reports to document results associated with additional data collection, and present progress toward selection and design of a groundwater remedy. A copy of the report is included as Appendix D, *Supplemental Semi-Annual Remedy Selection and Design Progress Report*, July 2021.

The Semi-Annual Remedy Selection and Design Progress Report that is included as Appendix D is summarized as follows.

- i) The current site conceptual model relevant to the assessment of current measures as initially presented in the ACM report (Golder, 2020b).
- ii) Summary of work completed to date to achieve delineation of constituents exceeding groundwater protection standards and a summary of data collected to date towards remedy selection.
- iii) The status of evaluating applicable corrective measures at the site. The planned activities and anticipated schedule for the following semi-annual reporting period.

Pursuant to § 257.96(b), Georgia Power will continue to monitor the groundwater at AP-BCD in accordance with the assessment monitoring program regulations of § 257.95 while ACM efforts are implemented to evaluate SSL concentrations of cobalt and cadmium in well BGWC-50 and cobalt in PZ-511.

Pursuant to 40 CFR 257.95, the delineation wells will continue to be sampled as part of the ongoing semiannual assessment monitoring program.

## 6.0 CONCLUSIONS AND FUTURE ACTIONS

This *2021 Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Plant Branch AP-BCD* has been prepared to fulfill the requirements of GA EPD Rules of Solid Waste Management 391-3-4-.10(6). The groundwater flow direction and rates interpreted during the August 2020, September 2020, and March 2021 monitoring events are generally consistent with historical evaluations. Review of analytical results and statistical analyses developed for the site indicates confirmed SSIs of Appendix III above background and SSLs of Appendix IV above the established GWPS. In accordance with GA EPD Rule 391-3-4-.10(6) and 40 CFR § 257.96, Georgia Power has initiated an assessment of corrective measures study for the identified SSLs. Georgia Power will continue to monitor the delineation wells and adaptively manage the Site as new data become available.

Based on the findings presented herein, Plant Branch will continue with assessment groundwater monitoring and reporting. The next scheduled sampling event is tentatively scheduled for the third quarter of 2021 and will be a

combined event to meet the requirements of GA EPD Rule 391-3-4-.10(6) and 40 C.F.R. §257.95(b) and (d)(1) and will include sampling and analysis of all Appendix III and IV constituents.

## 7.0 REFERENCES

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

Golder Associates, 2021. Piezometer Installation Report for Surface Impoundment Ash Pond BCD, Georgia Power Plant Branch, Milledgeville, Georgia, June 2021.

Golder Associates, 2020a. Piezometer Installation Report for Surface Impoundment Ash Pond BCD, Georgia Power Plant Branch, Milledgeville, Georgia, November 2020.

Golder Associates, 2020b. Assessment of Corrective Measures Ash Pond BCD, Georgia Power Plant Branch, Milledgeville, Georgia, November 2020.

Golder Associates, 2019. First Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Plant Branch, Milledgeville, Georgia, August 2019.

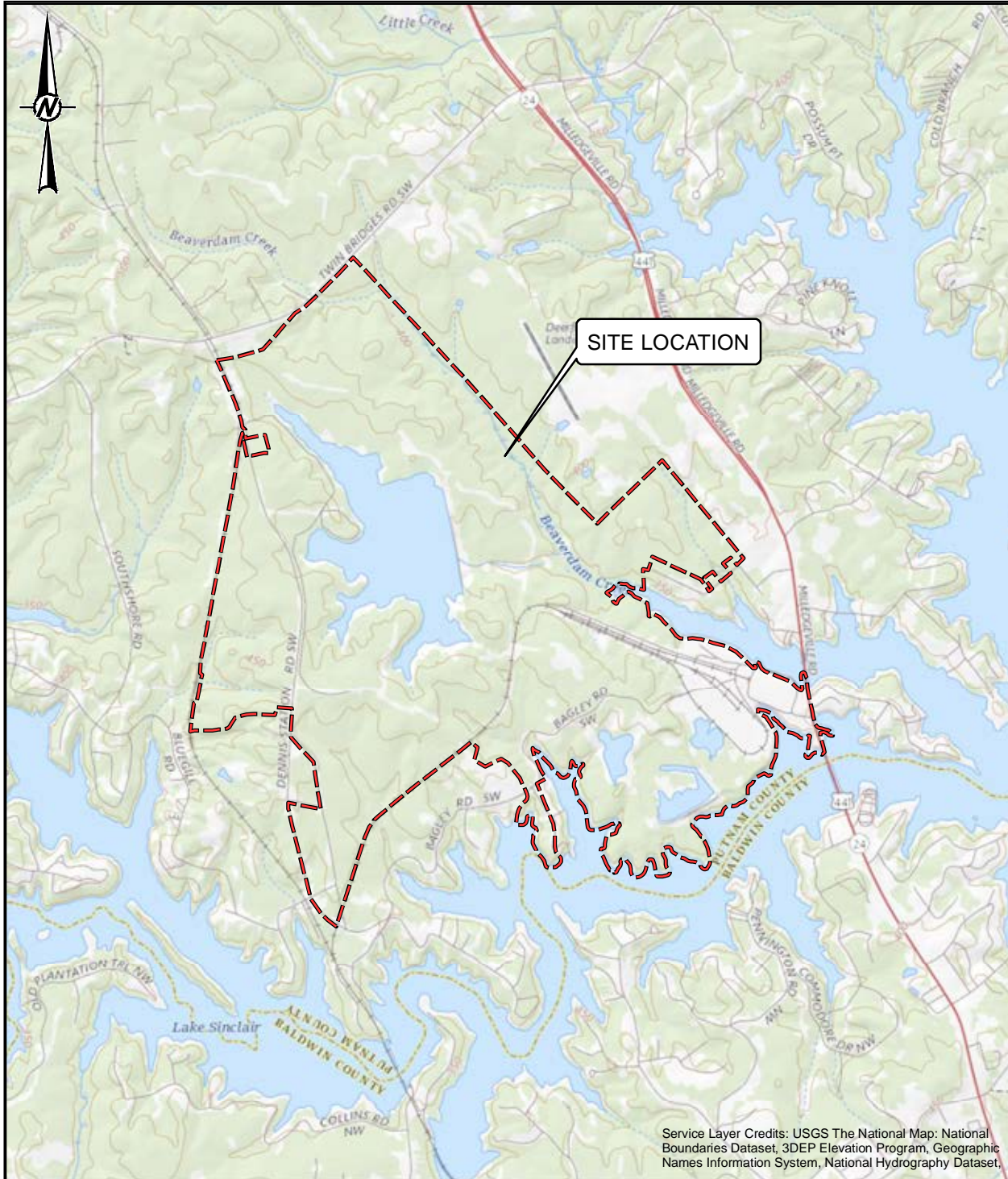
US EPA, November 2002, Data Validation Standard Operating Procedures and Quality Assurance Manual.

US EPA, 2009, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. EPA 530-R-09-007. USEPA. 2015. Federal Register. Volume 80. No. 74 Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA-2009-0640; FRL-9919-44- OSWER]. RIN-2050-AE81.

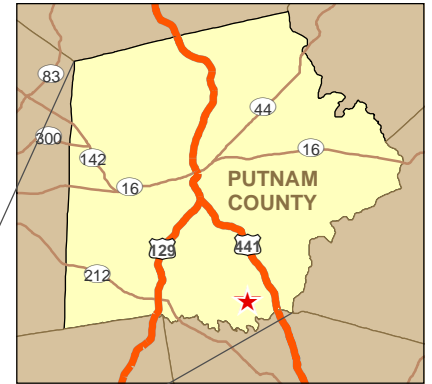
US EPA, 1996. Soil Guidance Manual

US EPA, Science and Ecosystem Support Division *Operating Procedures for Surface Water Sampling* SESDPROC-201-R4, December 16, 2016.

## Figures & Tables



Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset.



CLIENT  
 GEORGIA POWER COMPANY  
 PLANT BRANCH



PROJECT  
 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE  
 ACTION REPORT - AP-BCD

TITLE  
**SITE LOCATION MAP**

CONSULTANT



YYYY-MM-DD	2019-03-15
PREPARED	DJC
DESIGN	DLP
REVIEW	RK
APPROVED	DLP

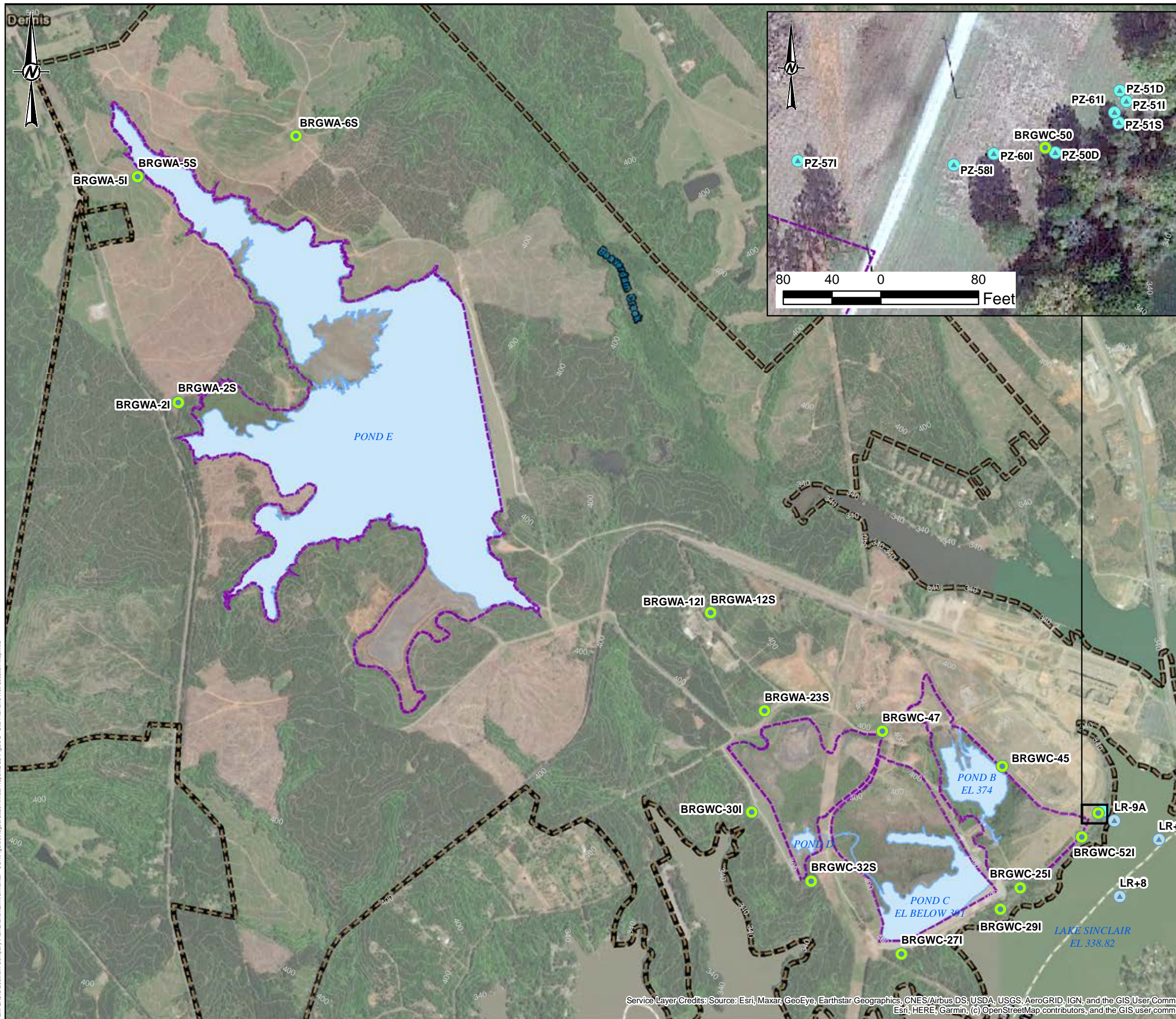
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 166625421

CONTROL  
 1666254A000-GIS.mxd

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FIGURE  
 1





- LEGEND**
- MONITORING WELL
  - ▲ PIEZOMETER
  - ▲ SURFACE WATER SAMPLE
  - PROPERTY BOUNDARY
  - APPROXIMATE ASH POND BOUNDARY
  - APPROXIMATE SURFACE WATER LIMITS

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. ASH POND BOUNDARY AND PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.
  4. BORING/PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING & SURVEYING CO., INC.
  5. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



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**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
**2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - AP-BCD**

TITLE  
**SITE PLAN AND MONITORING WELL AND SURFACE WATER LOCATION MAP**

CONSULTANT	YYYY-MM-DD	2020-05-21
	PREPARED	BAS
	DESIGN	BAS
	REVIEW	RK
	APPROVED	DLP

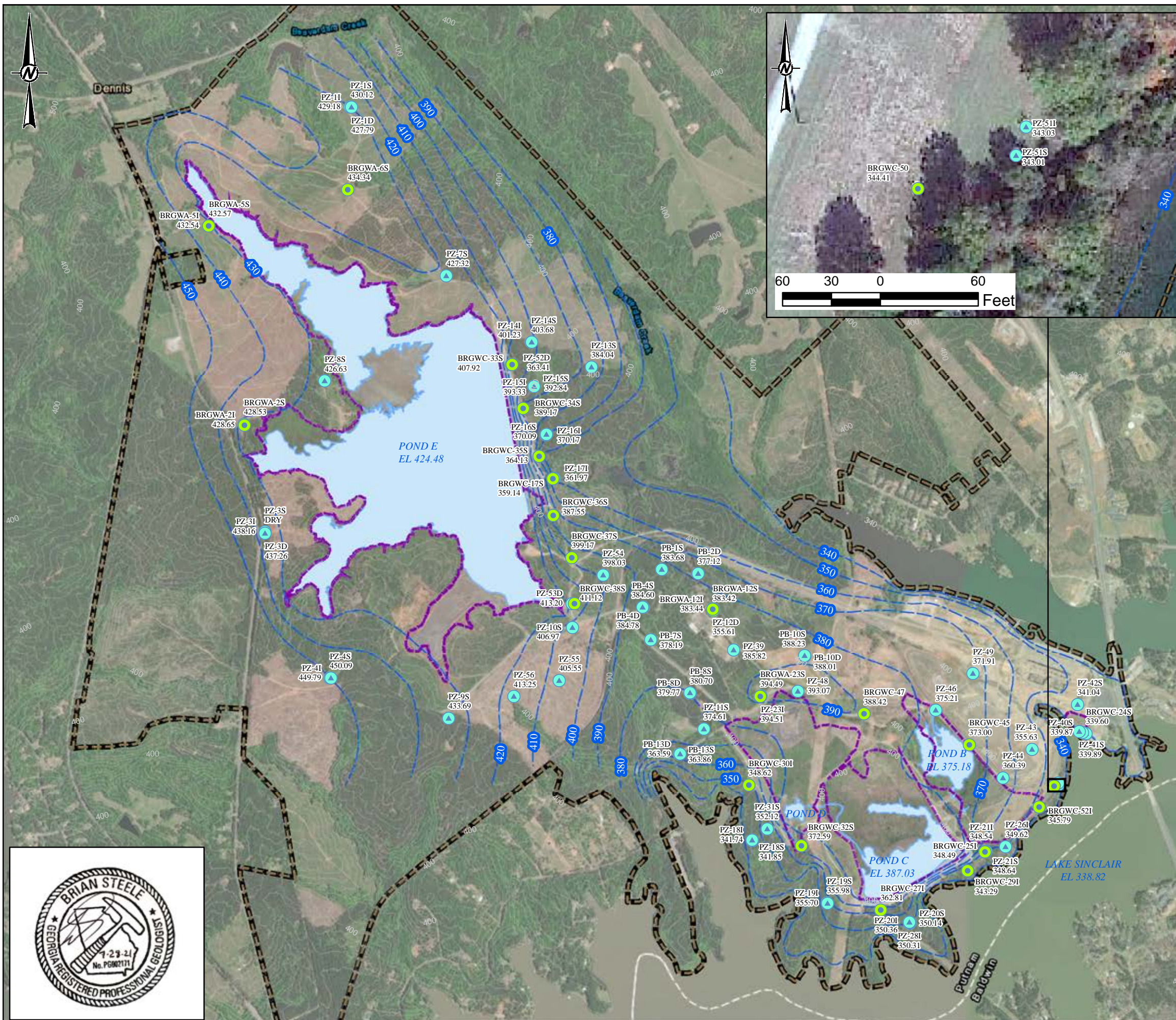
PROJECT No.	CONTROL	Rev.	FIGURE
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Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

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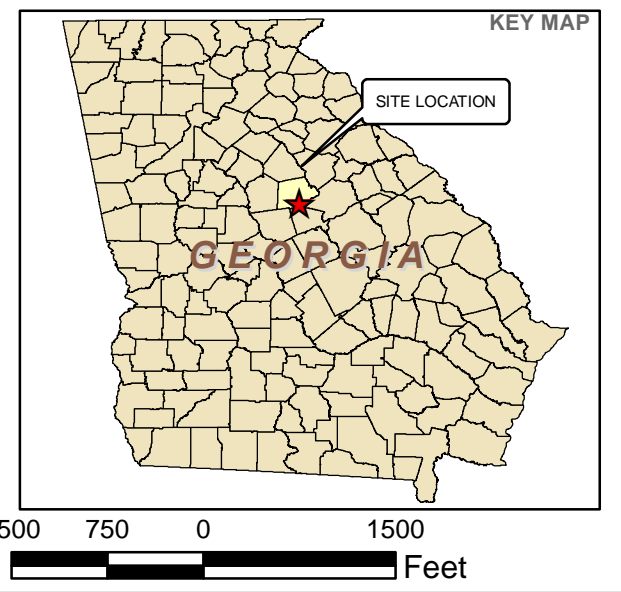




- LEGEND**
- MONITORING WELL
  - ▲ PIEZOMETER
  - PROPERTY BOUNDARY
  - GROUNDWATER ELEVATION CONTOUR (NAVD88)
  - APPROXIMATE ASH POND BOUNDARY
  - APPROXIMATE SURFACE WATER LIMITS

- NOTES**
1. GROUNDWATER SURFACE CONTOUR INTERVAL = 10 FEET
  2. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATA, AND TOPOGRAPHIC CONTOURS. THEREFORE, CONTOURS MAY NOT REFLECT ACTUAL CONDITIONS.
  3. DEEP AND INTERMEDIATE WELL ELEVATIONS WERE NOT USED FOR GROUNDWATER CONTOURING.
  4. NAVD88=NORTH AMERICAN VERTICAL DATUM 88
  5. GROUNDWATER ELEVATIONS AND POND ELEVATIONS RECORDED AUGUST 17, 2020.

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. BORING/PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING & SURVEYING CO., INC.
  4. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



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**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
**2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - AP-BCD**

TITLE  
**POTENTIOMETRIC SURFACE CONTOUR MAP**  
**AUGUST 17, 2020**

CONSULTANT	YYYY-MM-DD	2020-07-24
	PREPARED	DJC
	DESIGN	ED
	REVIEW	RK
	APPROVED	DLP

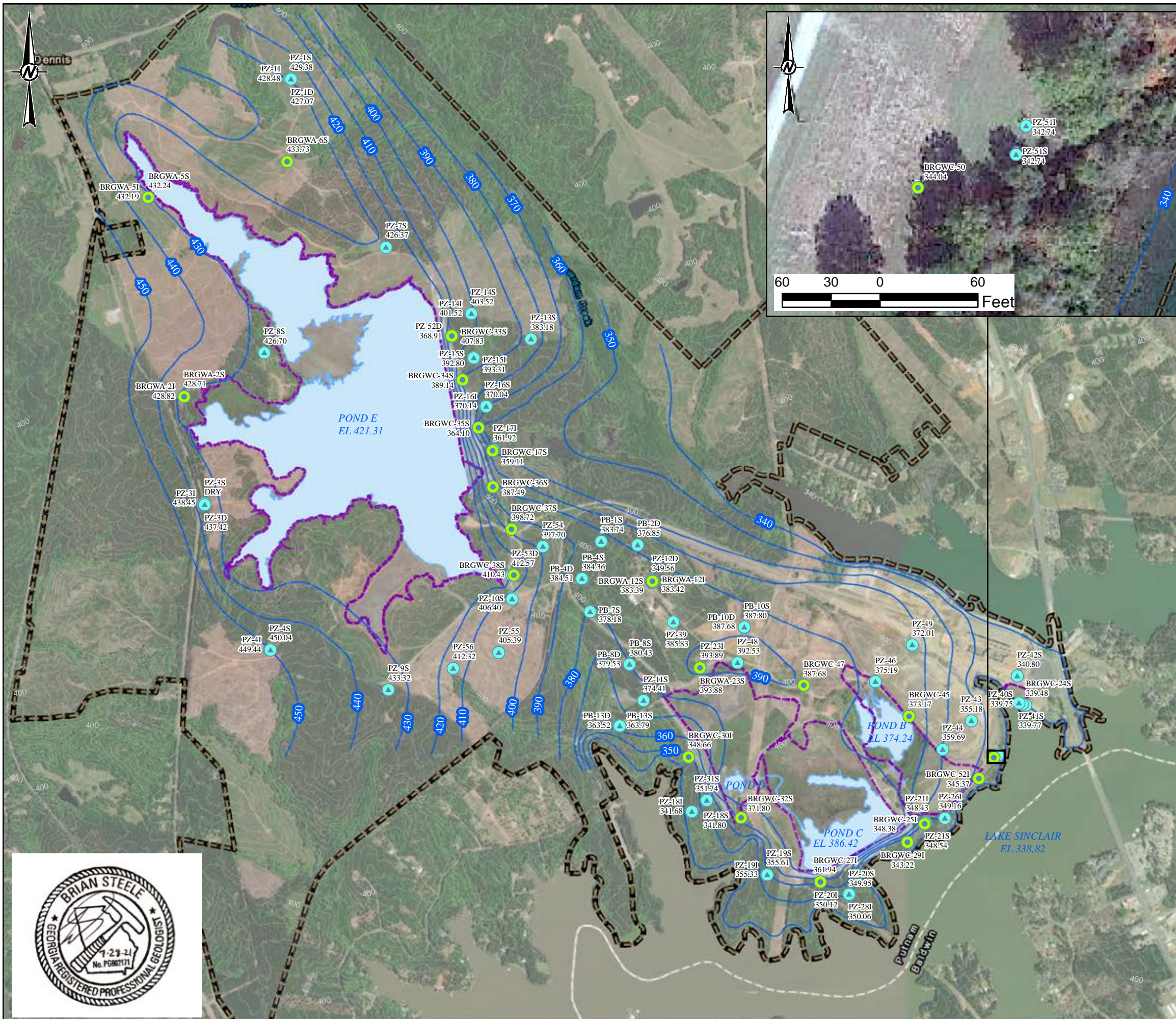
PROJECT No. 166625421 CONTROL 1666254V001-GIS.mxd Rev. 1 FIGURE 3

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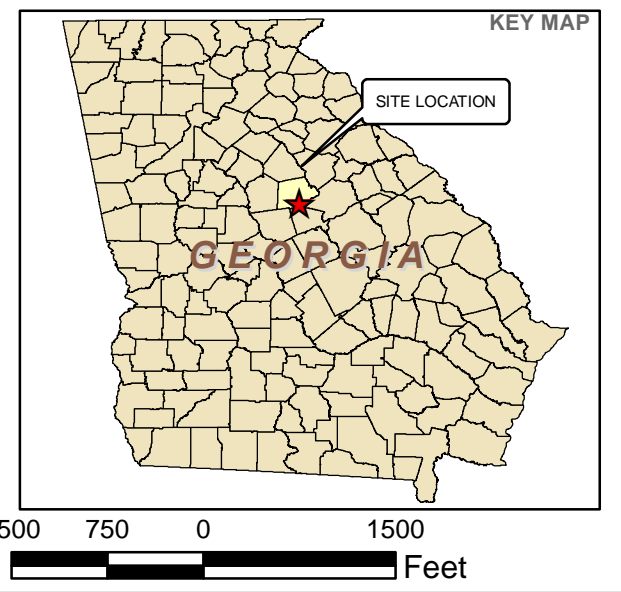




- LEGEND**
- MONITORING WELL
  - ▲ PIEZOMETER
  - GROUNDWATER ELEVATION CONTOUR (NAVD88)
  - PROPERTY BOUNDARY
  - - - - - APPROXIMATE ASH POND BOUNDARY
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  3. DEEP (D) AND INTERMEDIATE (I) WELL ELEVATIONS WERE NOT USED FOR GROUNDWATER CONTOURING.
  4. NAVD88=NORTH AMERICAN VERTICAL DATUM 88
  5. GROUNDWATER ELEVATIONS AND POND ELEVATIONS RECORDED SEPTEMBER 14, 2020.

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
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CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
**2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT - AP-BCD**

TITLE  
**POTENTIOMETRIC SURFACE CONTOUR MAP**  
**SEPTEMBER 14, 2020**

CONSULTANT	YYYY-MM-DD	2020-09-25
	PREPARED	SEB
	DESIGN	ED
	REVIEW	RK
	APPROVED	DLP

PROJECT No. 166625421 CONTROL 1666254V001-GIS.mxd Rev. 1 FIGURE 4



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**TABLE 1**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
<b>AP-BCD ASSESSMENT WELLS</b>												
BRGWA-2S	PZ-2S	Upgradient BCD & E	Saprolite	33.205940	-83.338294	440.4	443.20	44.6	406.20	396.20	10.0	4/2/2014
BRGWA-2I	PZ -2I	Upgradient BCD & E	Amphibolite Gneiss	33.205913	-83.338279	440.5	443.14	64.3	386.60	376.60	10.0	3/14/2014
BRGWA-5S	PZ-5S	Upgradient BCD & E	Saprolite	33.214300	-83.339971	440.8	443.86	40.0	411.20	401.20	10.0	4/3/2014
BRGWA-5I	PZ - 5I	Upgradient BCD & E	Amphibolite Gneiss	33.214317	-83.339996	441.1	443.79	61.2	390.30	380.30	10.0	4/3/2014
BRGWA-6S	PZ-6S	Upgradient BCD & E	Saprolite	33.215780	-83.333008	455.8	458.96	49.7	416.50	406.50	10.0	4/1/2014
BRGWA-12S	PZ-12S	Upgradient BCD	Residuum	33.197941	-83.314864	431.6	434.64	58.3	383.70	373.70	10.0	3/4/2014
BRGWA-12I	PZ -12I	Upgradient BCD	Biotite Gneiss	33.197981	-83.314877	431.5	434.39	77.6	364.30	354.30	10.0	2/20/2014
BRGWA-23S	PZ-23S	Upgradient BCD	Saprolite/TWR	33.194311	-83.312528	425.5	428.24	40.8	394.70	384.70	10.0	7/26/2016
BRGWC-25I	PZ-25I	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.187670	-83.301326	355.0	357.37	20.5	344.50	334.50	10.0	7/25/2016
BRGWC-27I	PZ-27S	Downgradient C	Saprolite	33.185265	-83.306589	364.0	366.86	24.0	350.00	340.00	10.0	7/22/2016
BRGWC-29I	PZ-29I	Downgradient C	TWR	33.186890	-83.302200	350.6	353.23	20.0	340.60	330.60	10.0	7/23/2016
BRGWC-30I	PZ-30I	Downgradient D	Saprolite/TWR/Biotite Gneiss	33.190566	-83.313141	350.0	352.61	20.3	340.00	330.00	10.0	7/18/2016
BRGWC-32S	PZ-32S	Downgradient D	Saprolite	33.187992	-83.310531	403.6	406.39	45.0	368.60	358.60	10.0	7/20/2016
BRGWC-45	PZ-45	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.192199	-83.302065	381.6	384.58	57.0	335.00	325.00	10.0	2/3/2018
BRGWC-47	PZ-47	Downgradient D	TWR	33.193530	-83.307343	408.8	411.20	92.0	327.20	317.20	10.0	1/25/2018
BRGWC-50	PZ-50	Downgradient B	Residuum/Biotite Gneiss	33.190421	-83.297841	378.8	381.35	65.0	324.20	314.20	10.0	1/31/2018
BRGWC-52I	PZ-52	Downgradient B	Biotite Gneiss	33.189551	-83.298594	381.2	383.87	73.9	317.30	307.30	10.0	8/6/2018
PZ-50D	NA	Downgradient	Biotite Gneiss	33.190410	-83.297817	378.3	380.86	106.0	282.30	272.30	10.0	10/8/2020
PZ-51I	NA	Downgradient	Saprolite/TWR/Biotite Gneiss	33.190523	-83.297623	378.0	380.52	65.0	323.10	313.10	10.0	8/1/2018
PZ-61I	NA	Downgradient	Saprolite/TWR/Biotite Gneiss	33.190498	-83.297655	377.7	380.64	76.0	312.00	302.00	10.0	3/30/2021

**TABLE 1**  
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 Georgia Power Company - Plant Branch

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BRGWA-2I	PZ -2I	Upgradient E	Amphibolite Gneiss	33.205913	-83.338279	440.5	443.14	64.3	386.60	376.60	10.0	3/14/2014
BRGWA-5S	PZ-5S	Upgradient E	Saprolite	33.214300	-83.339971	440.8	443.86	40.0	411.20	401.20	10.0	4/3/2014
BRGWA-5I	PZ - 5I	Upgradient E	Amphibolite Gneiss	33.214317	-83.339996	441.1	443.79	61.2	390.30	380.30	10.0	4/3/2014
BRGWA-6S	PZ-6S	Upgradient E	Saprolite	33.215780	-83.333008	455.8	458.96	49.7	416.50	406.50	10.0	4/1/2014
BRGWC-17S	PZ-17S	Downgradient E	Alluvium	33.203532	-83.322836	362.2	365.32	7.1	360.50	355.50	5.0	3/13/2014
BRGWC-33S	PZ-33S	Downgradient E	Saprolite/TWR/Biotite Gneiss	33.208371	-83.324826	414.2	416.68	26.4	398.20	388.20	10.0	7/26/2016
BRGWC-34S	PZ-34S	Downgradient E	Saprolite	33.206518	-83.324300	389.2	391.96	23.0	376.20	366.20	10.0	7/25/2016
BRGWC-35S	PZ-35S	Downgradient E	Saprolite	33.204484	-83.323519	363.7	366.31	27.4	346.70	336.70	10.0	7/23/2016
BRGWC-36S	PZ-36S	Downgradient E	Saprolite	33.201997	-83.322833	383.1	389.84	28.7	364.40	354.40	10.0	7/26/2016
BRGWC-37S	PZ-37S	Downgradient E	Saprolite/TWR	33.200205	-83.321914	444.4	447.05	63.6	390.80	380.80	10.0	7/24/2016
BRGWC-38S	PZ-38S	Downgradient E	Saprolite/TWR	33.198277	-83.321812	429.8	432.24	38.2	402.00	392.00	10.0	7/22/2016
<b>AP-BCD DELINEATION PIEZOMETERS</b>												
PZ-51S	NA	Downgradient B	Residuum	33.190474	-83.297644	377.9	380.27	45.4	337.90	332.90	5.0	8/1/2018
PZ-51D	NA	Downgradient B	Biotite Gneiss	33.190548	-83.297643	378.1	380.75	106.0	282.10	272.10	10.0	10/9/2020
PZ-57I	NA	Downgradient B	Saprolite/TWR	33.190395	-83.298504	379.4	382.50	75.9	313.80	303.80	10.0	3/24/2021
PZ-58I	NA	Downgradient B	Saprolite/TWR	33.190383	-83.298087	379.3	382.27	63.9	325.70	315.70	10.0	3/27/2021
PZ-60I	NA	Downgradient B	Saprolite/TWR	33.190407	-83.297979	379.5	382.61	60.8	329.00	319.00	10.0	3/29/2021
<b>PIEZOMETERS</b>												
PZ-1D	NA	Upgradient	Biotite Gneiss	33.219259	-83.332788	462.9	463.41	160.0	NA	302.90	94.5	4/4/2014
PZ-1I	NA	Upgradient	Biotite Gneiss	33.219250	-83.332855	461.9	464.71	79.5	392.80	382.80	10.0	3/10/2014
PZ-1S	NA	Upgradient	Saprolite	33.219251	-83.332821	462.4	465.07	65.0	407.80	397.80	10.0	3/20/2014
PZ-3D	NA	Upgradient	Biotite Gneiss	33.201356	-83.337283	486.7	487.50	130.0	NA	358.59	82.0	3/27/2014
PZ-3I	NA	Upgradient	Biotite Gneiss	33.201412	-83.337289	486.5	489.49	54.6	442.30	432.30	10.0	3/11/2014
PZ-3S	NA	Upgradient	Saprolite	33.201384	-83.337284	487	490.53	39.9	457.50	447.50	10.0	3/11/2014
PZ-4I	NA	Upgradient	Biotite Gneiss	33.195212	-83.334049	479.9	482.98	46.8	443.50	433.50	10.0	3/11/2014
PZ-4S	NA	Upgradient	Saprolite	33.195216	-83.334088	479.9	482.87	30.0	460.30	450.30	10.0	3/10/2014
PZ-7S	NA	Downgradient	Saprolite	33.212137	-83.328090	449	451.57	44.5	414.90	404.90	10.0	4/1/2014
PZ-8S	NA	Upgradient	Saprolite	33.207731	-83.334235	450.5	453.08	49.5	411.40	401.40	10.0	4/1/2014
PZ-9S	NA	Upgradient	Saprolite	33.193487	-83.328157	466.1	469.28	48.0	428.50	418.50	10.0	3/5/2014
PZ-10S	NA	Downgradient	Saprolite	33.197260	-83.321907	431	433.85	39.0	402.40	392.40	10.0	3/5/2014
PZ-11S	NA	Downgradient	Saprolite	33.192944	-83.315371	390.9	393.99	24.5	376.80	366.80	10.0	2/20/2014
PZ-12D	PZD-12D	Downgradient	Biotite Gneiss	33.198010	-83.314885	431.4	434.09	141.7	350.10	290.10	60.0	4/14/2014
PZ-13S	NA	Downgradient	Saprolite	33.208218	-83.320866	406.5	409.97	34.7	382.20	372.20	10.0	3/19/2014
PZ-14I	NA	Downgradient	Biotite Gneiss	33.209302	-83.323834	419.9	422.71	53.8	376.50	366.50	10.0	3/20/2014

**TABLE 1**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
PZ-14S	NA	Downgradient	Saprolite	33.209303	-83.323855	420.2	423.31	37.6	393.00	383.00	10.0	3/20/2014
PZ-15I	NA	Downgradient	Biotite Gneiss/Amphibolite	33.207440	-83.323742	400.2	403.06	88.7	321.90	311.90	10.0	3/25/2014
PZ-15S	NA	Downgradient	Saprolite	33.207438	-83.323759	400.1	402.90	39.9	370.20	360.20	10.0	3/27/2014
PZ-16I	NA	Downgradient	Amphibolite Gneiss	33.205401	-83.323146	379.5	382.45	38.6	351.30	341.30	10.0	3/14/2014
PZ-16S	NA	Downgradient	Saprolite	33.205393	-83.323166	379.3	382.52	19.1	370.60	360.60	10.0	3/18/2014
PZ-17I	NA	Downgradient	Amphibolite Gneiss	33.203566	-83.322788	362.3	365.33	43.5	329.20	319.20	10.0	3/17/2014
PZ-18I	NA	Downgradient	Biotite Gneiss	33.188252	-83.312988	359.6	362.55	38.4	331.30	321.30	10.0	2/26/2014
PZ-18S	NA	Downgradient	Saprolite	33.188228	-83.312982	359.7	362.82	24.2	345.00	335.00	10.0	3/26/2014
PZ-19I	NA	Downgradient	Biotite Gneiss	33.185563	-83.309241	368.9	371.74	43.7	335.60	325.60	10.0	3/4/2014
PZ-19S	NA	Downgradient	Saprolite	33.185586	-83.309258	368.4	371.42	28.0	350.80	340.80	10.0	3/4/2014
PZ-20I	NA	Downgradient	Biotite Gneiss	33.184705	-83.305130	362.2	365.34	29.5	343.10	333.10	10.0	3/5/2014
PZ-20S	NA	Downgradient	Saprolite	33.184691	-83.305140	362.2	365.41	15.3	357.30	347.30	10.0	3/5/2014
PZ-21I	NA	Downgradient	Biotite Gneiss	33.187691	-83.301283	355.8	358.92	24.4	341.80	331.80	10.0	3/10/2014
PZ-21S	NA	Downgradient	Residuum/Saprolite	33.187694	-83.301305	355.5	358.52	9.8	351.10	346.10	5.0	3/11/2014
PZ-23I	NA	Downgradient	Biotite Gneiss	33.194321	-83.312497	425.1	427.74	66.5	368.60	358.60	10.0	7/29/2016
PZ-24S	BRGWC-24S	Downgradient A	Saprolite	33.192629	-83.296220	351.4	354.10	42.0	319.90	309.90	10.0	7/27/2016
PZ-26I	NA	Downgradient	Biotite Gneiss	33.187898	-83.300306	368	370.63	30.5	347.50	337.50	10.0	7/26/2016
PZ-28I	NA	Downgradient	TWR/Biotite Gneiss	33.184732	-83.305158	362.5	364.81	24.0	348.50	338.50	10.0	7/24/2016
PZ-31S	NA	Downgradient	TWR	33.188716	-83.312244	374.3	376.77	39.5	344.80	334.80	10.0	7/26/2016
PZ-39	NA	Downgradient	Saprolite	33.196254	-83.313842	432	434.78	44.7	397.30	387.30	10.0	7/30/2016
PZ-40S	NA	Downgradient A	Residuum	33.192669	-83.296398	353.2	355.96	40.2	324.40	314.40	10.0	2/14/2017
PZ-41S	NA	Downgradient A	Saprolite	33.192716	-83.296555	354.3	357.17	44.2	320.50	310.50	10.0	2/14/2017
PZ-42S	NA	Downgradient A	Residuum	33.193854	-83.296624	359	361.66	32.2	337.20	327.20	10.0	2/9/2017
PZ-43	NA	Downgradient A	Residuum/Biotite Gneiss	33.191985	-83.298942	381.0	383.71	40.4	351.00	341.00	10.0	2/7/2018
PZ-44	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.190799	-83.300405	380.5	383.04	57.0	333.90	323.90	10.0	2/2/2018
PZ-46	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.193658	-83.303739	382.1	384.64	45.6	346.50	336.50	10.0	2/5/2018
PZ-48	NA	Downgradient D	Saprolite/TWR/Amphibolite	33.194504	-83.310642	418.3	420.90	67.0	361.70	351.70	10.0	1/24/2018
PZ-49	NA	Downgradient B	Residuum/Biotite Gneiss	33.195198	-83.301871	382.2	384.99	17.0	375.60	365.60	10.0	1/30/2018
PZ-50D	NA	Downgradient B	Biotite Gneiss	33.190410	-83.297817	378.3	380.86	106.0	282.30	272.30	10.0	10/8/2020
PZ-51S	NA	Downgradient B	Residuum	33.190474	-83.297644	377.9	380.27	45.4	337.90	332.90	5.0	8/1/2018
PZ-51I	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.190523	-83.297623	378	380.52	65.0	323.10	313.10	10.0	8/1/2018

**TABLE 1**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
PZ-51D	NA	Downgradient B	Biotite Gneiss	33.190548	-83.297643	378.1	380.75	106.0	282.10	272.10	10.0	10/9/2020
PZ-52D	NA	Downgradient E	Biotite Gneiss	33.208362	-83.324870	414.3	417.03	59.5	364.80	354.80	10.0	5/14/2020
PZ-53D	NA	Downgradient E	Saprolite/TWR/Biotite Gneiss	33.198283	-83.321917	431.6	434.68	139.4	302.20	292.20	10.0	5/17/2020
PZ-54	NA	Downgradient E	Saprolite/TWR	33.199468	-83.320356	440.8	443.86	52.0	398.80	388.80	10.0	5/15/2020
PZ-55	NA	Downgradient E	Saprolite/TWR/Biotite Gneiss	33.195029	-83.322604	450.2	453.07	49.3	410.90	400.90	10.0	5/19/2020
PZ-56	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.194377	-83.324890	416.2	418.84	29.3	396.90	386.90	10.0	5/20/2020
PZ-57I	NA	Downgradient B	Saprolite/TWR	33.190395	-83.298504	379.4	382.50	75.9	313.80	303.80	10.0	3/24/2021
PZ-58I	NA	Downgradient B	Saprolite/TWR	33.190383	-83.298087	379.3	382.27	63.9	325.70	315.70	10.0	3/27/2021
PZ-59I	NA	Downgradient B	Saprolite/TWR	33.190591	-83.297981	379.9	383.49	65.9	324.30	314.30	10.0	3/31/2021
PZ-60I	NA	Downgradient B	Saprolite/TWR	33.190407	-83.297979	379.5	382.61	60.8	329.00	319.00	10.0	3/29/2021
PZ-61I	NA	Downgradient B	Saprolite/TWR	33.190498	-83.297655	377.7	380.64	76.0	312.00	302.00	10.0	3/30/2021
PB-1S	NA	Downgradient	Saprolite/PWR	33.199673	-83.317420	400.4	403.16	38.0	372.40	362.40	10.0	1/22/2019
PB-2D	NA	Downgradient	Gneiss	33.199504	-83.315596	414.9	416.71	57.0	367.90	357.90	10.0	12/4/2018
PB-4S	NA	Downgradient	Saprolite/PWR	33.198098	-83.318372	409.3	411.15	48.0	371.30	361.30	10.0	1/16/2019
PB-4D	NA	Downgradient	Gneiss	33.198110	-83.318400	409.0	412.12	114.5	304.50	294.50	10.0	1/16/2019
PB-7S	NA	Downgradient	Saprolite/PWR	33.196710	-83.318003	399.7	402.88	33.0	376.70	366.70	10.0	1/14/2019
PB-8S	NA	Downgradient	Saprolite/PWR	33.194463	-83.316044	398.6	401.82	35.0	373.60	363.60	10.0	1/8/2018
PB-8D	NA	Downgradient	Gneiss	33.194480	-83.316062	398.2	401.74	106.0	304.20	294.20	10.0	1/8/2018
PB-10S	NA	Downgradient	Saprolite	33.195992	-83.310279	397.6	400.91	33.0	374.60	364.60	10.0	1/16/2019
PB-10D	NA	Downgradient	Gneiss	33.196004	-83.310294	397.5	400.31	85.0	322.50	312.50	10.0	1/16/2019
PB-13S	NA	Downgradient	Saprolite	33.191900	-83.316612	370.8	373.31	50.0	330.80	320.80	10.0	12/10/2018
PB-13D	NA	Downgradient	Gneiss	33.191900	-83.316570	371.1	373.77	97.0	284.10	274.10	10.0	12/10/2018

**Notes:**

1. feet NAVD88 = feet North American Vertical Datum 1988 feet NAD83 = North American Datum 1983
2. feet bgs = feet below ground surface
3. TWR = Transitionally Weathered Rock
4. NA = Not applicable
5. Piezometers may be used to collect waters levels. They are not considered compliance monitoring locations



**TABLE 2**  
**GROUNDWATER SAMPLING EVENT SUMMARY - AP-BCD**  
 Georgia Power Company - Plant Branch

Well ID	Hydraulic Location	Summary of Sampling Events						Status of Monitoring Well
		August 2020	September 2020	October 2020	March 2021	April 2021	May 2021	
Purpose of Sampling Event		Annual Appendix IV Scan	Compliance / Assessment	Compliance / Assessment	Compliance / Assessment	Compliance / Assessment	Compliance / Assessment	
<b>AP-BCD</b>								
BRGWA-2S	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-2I	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-5S	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-5I	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-6S	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-12S	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-12I	Upgradient	X	X	-	X	-	-	Assessment
BRGWA-23S	Upgradient	X	X	-	X	-	-	Assessment
BRGWC-25I	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-27I	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-29I	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-30I	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-32S	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-45	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-47	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-50	Downgradient	X	X	-	X	-	-	Assessment
BRGWC-52I	Downgradient	X	X	-	X	-	-	Assessment
PZ-50D*	Downgradient	not installed	-	X	X	-	-	Assessment
PZ-51S	Downgradient	X	X	-	X	-	-	Delineation
PZ-51I*	Downgradient	X	X	X	X	-	-	Assessment
PZ-51D	Downgradient	not installed	-	X	X	-	-	Delineation
PZ-57I	Downgradient	not installed	not installed	not installed	not installed	X	-	Delineation
PZ-58I	Downgradient	not installed	not installed	not installed	not installed	X	-	Delineation
PZ-60I	Downgradient	not installed	not installed	not installed	not installed	X	-	Delineation
PZ-61I*	Downgradient	not installed	not installed	not installed	not installed	X	X	Assessment

**Notes:**

"-" = Not Sampled

\* = AP-BCD Assessment Well

**TABLE 3**  
**SUMMARY OF GROUNDWATER ELEVATIONS - AP-BCD and AP-E**  
 Georgia Power Company- Plant Branch

Well-ID	Top of Casing Elevation (feet NAVD88) <sup>[2]</sup>	GROUNDWATER ELEVATIONS (FEET NAVD88)		
		8/17/2020	9/14/2020	3/1/2021
<b>POND BCD</b>				
BRGWA-12S	434.64	383.42	383.39	383.16
BRGWA-12I	434.39	383.44	383.92	383.12
BRGWA-23S	428.24	394.49	393.88	391.95
BRGWC-25I	357.37	348.49	348.38	350.05
BRGWC-27I	366.86	362.81	361.94	361.71
BRGWC-29I	353.23	343.29	343.22	343.89
BRGWC-30I	352.61	348.62	348.66	348.73
BRGWC-32S	406.39	372.59	371.80	370.87
BRGWC-45	384.58	373.00	373.17	374.73
BRGWC-47	411.20	388.42	387.68	388.52
BRGWC-50	381.35	344.41	344.04	343.92
BRGWC-52I	383.87	345.79	345.37	345.36

**TABLE 3**  
**SUMMARY OF GROUNDWATER ELEVATIONS - AP-BCD and AP-E**  
 Georgia Power Company- Plant Branch

Well-ID	Top of Casing Elevation (feet NAVD88) <sup>[2]</sup>	GROUNDWATER ELEVATIONS (FEET NAVD88)		
		8/17/2020	9/14/2020	3/1/2021
<b>POND E</b>				
BRGWA-2S	443.20	428.53	428.71	432.16
BRGWA-2I	443.14	428.65	428.82	432.24
BRGWA-5S	443.86	432.57	432.24	433.01
BRGWA-5I	443.79	432.54	432.19	432.98
BRGWA-6S	458.96	434.34	433.73	435.83
BRGWC-17S	365.32	359.14	359.11	359.36
BRGWC-33S	416.68	407.92	407.83	408.39
BRGWC-34S	391.96	389.17	389.14	389.48
BRGWC-35S	366.31	364.13	364.10	364.39
BRGWC-36S	389.84	387.55	387.49	387.13
BRGWC-37S	447.05	399.17	398.72	396.67
BRGWC-38S	432.24	411.12	410.43	412.84

**TABLE 3**  
**SUMMARY OF GROUNDWATER ELEVATIONS - AP-BCD and AP-E**  
 Georgia Power Company- Plant Branch

Well-ID	Top of Casing Elevation (feet NAVD88) <sup>[2]</sup>	GROUNDWATER ELEVATIONS (FEET NAVD88)		
		8/17/2020	9/14/2020	3/1/2021
<b>PIEZOMETERS</b>				
PZ-1S	465.07	430.12	429.38	428.32
PZ-1I	464.71	429.18	428.48	427.05
PZ-1D	463.41	427.79	427.07	426.41
PZ-3S	490.53	DRY	DRY	DRY
PZ-3I	489.49	438.16	438.45	438.28
PZ-3D	487.50	437.26	437.42	437.97
PZ-4S	482.87	450.09	450.04	449.79
PZ-4I	482.98	449.79	449.44	448.70
PZ-7S	451.57	427.32	426.37	426.77
PZ-8S	453.08	426.63	426.70	429.58
PZ-9S	469.28	433.69	433.32	432.52
PZ-10S	433.85	406.97	406.40	408.35
PZ-11S	393.99	374.61	374.41	377.82
PZ-12D	434.09	355.61	349.56	355.60
PZ-13S	409.97	384.04	383.18	385.33
PZ-14S	423.31	403.68	403.52	405.17
PZ-14I	422.71	401.23	401.52	403.03
PZ-15S	402.90	392.84	392.80	393.37
PZ-15I	403.06	393.33	393.31	393.86
PZ-16S	382.52	370.09	370.04	371.77
PZ-16I	382.45	370.17	370.14	371.87
PZ-17I	365.33	361.97	361.92	362.94
PZ-18S	362.82	341.85	341.80	343.16
PZ-18I	362.55	341.74	341.68	343.03
PZ-19S	371.42	355.98	355.61	358.64
PZ-19I	371.74	355.70	355.33	358.38
PZ-20S	365.41	350.14	349.95	352.29
PZ-20I	365.34	350.36	350.12	352.46
PZ-21S	358.52	348.64	348.54	350.34

**TABLE 3**  
**SUMMARY OF GROUNDWATER ELEVATIONS - AP-BCD and AP-E**  
 Georgia Power Company- Plant Branch

Well-ID	Top of Casing Elevation (feet NAVD88) <sup>[2]</sup>	GROUNDWATER ELEVATIONS (FEET NAVD88)		
		8/17/2020	9/14/2020	3/1/2021
<b>PIEZOMETERS</b>				
PZ-21I	358.92	348.54	348.43	350.20
PZ-23I	427.74	394.51	393.89	391.75
BRGWC-24S	354.10	339.60	339.48	340.61
PZ-26I	370.63	349.62	349.16	349.72
PZ-28I	364.81	350.31	350.06	352.34
PZ-31S	376.77	352.12	351.74	352.62
PZ-39	434.78	385.82	385.83	385.83
PZ-40S	355.96	339.87	339.75	340.67
PZ-41S	357.17	339.89	339.77	340.61
PZ-42S	361.66	341.04	340.80	341.17
PZ-43	383.71	355.63	355.18	354.47
PZ-44	383.04	360.39	359.69	359.66
PZ-46	384.64	375.21	375.19	376.13
PZ-48	420.90	393.07	392.53	392.45
PZ-49	384.99	371.91	372.01	376.69
PZ-50D	380.86	NA	NA	343.43
PZ-51S	380.27	343.01	342.74	342.29
PZ-51I	380.52	343.03	342.74	342.71
PZ-51D	380.75	NA	NA	343.13
PZ-52D	417.03	363.41	368.91	397.51
PZ-53D	434.68	413.20	412.57	414.64
PZ-54	443.86	398.03	397.70	397.44
PZ-55	453.07	405.55	405.39	404.48
PZ-56	418.84	413.25	412.32	413.94
PZ-57I	382.50	NI	NI	346.02
PZ-58I	382.27	NI	NI	346.07
PZ-59I	383.49	NI	NI	345.93
PZ-60I	382.61	NI	NI	345.09
PZ-61I	380.64	NI	NI	339.27

**TABLE 3**  
**SUMMARY OF GROUNDWATER ELEVATIONS - AP-BCD and AP-E**  
 Georgia Power Company- Plant Branch

Well-ID	Top of Casing Elevation (feet NAVD88) <sup>[2]</sup>	GROUNDWATER ELEVATIONS (FEET NAVD88)		
		8/17/2020	9/14/2020	3/1/2021
<b>Temporary Landfill Piezometers</b>				
PB-1S	403.16	383.68	383.74	389.02
PB-2D	416.71	377.12	376.85	377.49
PB-4S	411.15	384.60	384.36	388.04
PB-4D	412.12	384.78	384.51	389.04
PB-7S	402.88	378.19	378.18	382.19
PB-8S	401.82	380.70	380.43	382.37
PB-8D	401.74	379.77	379.53	382.51
PB-10S	400.91	388.23	387.80	389.32
PB-10D	400.31	388.01	387.68	388.09
PB-13S	373.31	363.86	363.79	365.15
PB-13D	373.77	363.59	363.52	366.33

**Notes:**

1. Feet NAVD88 = feet North American Vertical Datum 1988
2. Updated survey data for all wells provided by Metro Engineering in July 2020.
3. NA - Not available
4. NI - Not installed
5. PZ-57I, PZ-58I, PZ-59I, PZ-60I, and PZ-61I groundwater elevations collected between April 5 and April 7, 2021.

**TABLE 4A**  
**GROUNDWATER VELOCITY CALCULATIONS - AP-BCD (August 2020)**  
 Georgia Power Company - Plant Branch

Flow Paths	Groundwater Elevation (feet NAVD88) <sup>7</sup>	$\Delta H$ (feet) <sup>1</sup>	$\Delta L$ (feet) <sup>2</sup>	Hydraulic Gradient ( $\Delta H/\Delta L$ ) <sup>3</sup>	Average Hydraulic Conductivity, K (feet per day) <sup>5</sup>	Assumed Effective Porosity ( $n_e$ ) <sup>6</sup>	Average Linear Groundwater Velocity	
							(feet per day) <sup>4</sup>	(feet per year) <sup>4</sup>
<b>AP-BCD August 17, 2020</b>								
BRGWA-23S / BRGWC-30I	394.49	45.87	1374.0	0.033	2.73 to 5.47	0.2	0.45 to 0.90	164.4 to 329.4
	348.62							
BRGWC-47 / BRGWC-50	388.42	44.01	3130.0	0.014	2.73 to 5.47	0.2	0.19 to 0.38	69.8 to 139.8
	344.41							

**Notes:**

1.  $\Delta H$  = Change in groundwater elevation.
2.  $\Delta L$  = Distance along flow path.
3.  $I = \Delta H / \Delta L$ .
4. Velocity =  $(I * K)/n_e$ .
5. Hydraulic conductivity range based on historical aquifer performance tests (revised 4/2019).
6. Effective porosity based on default values for effective porosity recommended by USEPA for a silty sand-type soil (USEPA, 1996).
7. NAVD88 = North American Vertical Datum 1988.



**TABLE 4B**  
**GROUNDWATER VELOCITY CALCULATIONS - AP-BCD (September 2020)**  
 Georgia Power Company - Plant Branch

Flow Paths	Groundwater Elevation (feet NAVD88) <sup>7</sup>	$\Delta H$ (feet) <sup>1</sup>	$\Delta L$ (feet) <sup>2</sup>	Hydraulic Gradient ( $\Delta H/\Delta L$ ) <sup>3</sup>	Average Hydraulic Conductivity, K (feet per day) <sup>5</sup>	Assumed Effective Porosity ( $n_e$ ) <sup>6</sup>	Average Linear Groundwater Velocity	
							(feet per day) <sup>4</sup>	(feet per year) <sup>4</sup>
<b>AP-BCD September 14, 2020</b>								
BRGWA-23S / BRGWC-30I	393.88	45.22	1375.0	0.033	2.73 to 5.47	0.2	0.45 to 0.90	164.4 to 329.4
	348.66							
BRGWC-47 / BRGWC-50	387.68	43.64	3120.0	0.014	2.73 to 5.47	0.2	0.19 to 0.38	69.8 to 139.8
	344.04							

**Notes:**

1.  $\Delta H$  = Change in groundwater elevation.
2.  $\Delta L$  = Distance along flow path.
3.  $I = \Delta H / \Delta L$ .
4. Velocity =  $(I * K)/n_e$ .
5. Hydraulic conductivity range based on historical aquifer performance tests (revised 4/2019).
6. Effective porosity based on default values for effective porosity recommended by USEPA for a silty sand-type soil (USEPA, 1996).
7. NAVD88 = North American Vertical Datum 1988.

**TABLE 4C**  
**GROUNDWATER VELOCITY CALCULATIONS - AP-BCD (March 2021)**  
 Georgia Power Company - Plant Branch

Flow Paths	Groundwater Elevation (feet NAVD88) <sup>7</sup>	$\Delta H$ (feet) <sup>1</sup>	$\Delta L$ (feet) <sup>2</sup>	Hydraulic Gradient ( $\Delta H/\Delta L$ ) <sup>3</sup>	Average Hydraulic Conductivity, K (feet per day) <sup>5</sup>	Assumed Effective Porosity ( $n_e$ ) <sup>6</sup>	Average Linear Groundwater Velocity	
							(feet per day) <sup>4</sup>	(feet per year) <sup>4</sup>
<b>AP-BCD March 1, 2021</b>								
BRGWA-23S / BRGWC-30I	391.95	43.22	1375.0	0.031	2.73 to 5.47	0.2	0.42 to 0.85	154.4 to 309.5
	348.73							
BRGWC-47 / BRGWC-50	388.52	44.60	3120.0	0.014	2.73 to 5.47	0.2	0.19 to 0.38	69.8 to 139.8
	343.92							

**Notes:**

1.  $\Delta H$  = Change in groundwater elevation.
2.  $\Delta L$  = Distance along flow path.
3.  $I = \Delta H / \Delta L$ .
4. Velocity =  $(I * K)/n_e$ .
5. Hydraulic conductivity range based on historical aquifer performance tests (revised 4/2019).
6. Effective porosity based on default values for effective porosity recommended by USEPA for a silty sand-type soil (USEPA, 1996).
7. NAVD88 = North American Vertical Datum 1988.

**TABLE 5A**  
**ANALYTICAL DATA SUMMARY - AP-BCD (August 2020)**  
 Georgia Power Company - Plant Branch

Analyte	Units	GROUNDWATER MONITORING WELLS																		
		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	PZ-51I	PZ-51S	BRGWC-52I
		8/18/2020	8/18/2020	8/18/2020	8/18/2020	8/18/2020	8/18/2020	8/18/2020	8/18/2020	8/19/2020	8/19/2020	8/19/2020	8/19/2020	8/19/2020	8/20/2020	8/20/2020	8/20/2020	8/20/2020	8/20/2020	8/20/2020
<b>Appendix III</b>																				
BORON, TOTAL	mg/L	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
CALCIUM, TOTAL	mg/L	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
CHLORIDE, TOTAL	mg/L	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.052 J	< 0.050	0.17	0.19	0.12	0.14	< 0.050	< 0.050	< 0.050	0.39	< 0.050	0.056 J	0.23
pH	S.U.	6.06	6.59	6.41	6.29	6.33	5.75	6.25	5.56	6.32	5.81	4.67	6.36	5.97	5.86	5.75	5.26	5.57	6.15	6.85
SULFATE, TOTAL	mg/L	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL DISSOLVED SOLIDS	mg/L	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
<b>Appendix IV</b>																				
ANTIMONY, TOTAL	mg/L	0.00042 J	0.00054 J	0.0016 J	< 0.00028	< 0.00028	< 0.00028	0.0067	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	0.0031	< 0.00028	< 0.00028	0.0017 J	< 0.00028	< 0.00028
ARSENIC, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.00089 J	< 0.00078	< 0.00078	< 0.00078	0.0031 J
BARIUM, TOTAL	mg/L	0.010	0.010 J	0.040	0.022	0.014	0.058	0.053	0.067	0.027	0.016	0.019	0.026	0.025	0.083	0.035	0.019	0.013	0.030	0.017
BERYLLIUM, TOTAL	mg/L	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.000099 J	0.00074 J	< 0.000046	< 0.000046	0.000046 J	0.000047 J	0.0044	0.000077 J	< 0.000046	< 0.000046
CADMIUM, TOTAL	mg/L	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	0.00014 J	< 0.00012	0.0079	0.0019 J	< 0.00012	< 0.00012
CHROMIUM, TOTAL	mg/L	0.0085 J	0.00096 J	0.0050 J	0.0069 J	0.015	0.0029 J	0.0023 J	0.0017 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.0021 J	0.0010 J	0.00064 J	0.00065 J	< 0.00055	0.00063 J	< 0.00055
COBALT, TOTAL	mg/L	0.0014 J	< 0.00038	< 0.00038	0.00048 J	0.00061 J	< 0.00038	< 0.00038	0.00067 J	0.0039 J	0.0078	0.0065	0.00080 J	< 0.00038	0.022	0.00043 J	1.4	0.020	0.0039 J	< 0.00038
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.052 J	< 0.050	0.17	0.19	0.12	0.14	< 0.050	< 0.050	< 0.050	0.39	< 0.050	0.056 J	0.23
LEAD, TOTAL	mg/L	< 0.000036	< 0.000036	0.00010 J	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	0.00025 J	< 0.000036	< 0.000036	0.00021 J	0.000048 J	0.000067 J	< 0.000036	< 0.000036	< 0.000036
LITHIUM, TOTAL	mg/L	< 0.00081	0.054	< 0.00081	0.00095 J	0.0026 J	< 0.00081	0.0039 J	0.0099 J	< 0.00081	0.0014 J	0.0029 J	0.018 J	0.0020 J	0.0034 J	0.044	0.040	0.019 J	< 0.00081	0.0022 J
MERCURY, TOTAL	mg/L	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	0.000083 J	< 0.000078	0.000098 J	0.000082 J	0.000082 J	< 0.000078	< 0.000078	< 0.000078	0.000099 J	< 0.000078	< 0.000078
MOLYBDENUM, TOTAL	mg/L	< 0.00069	0.0011 J	< 0.00069	0.0015 J	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.00081 J	< 0.00069	< 0.00069	0.00078 J	< 0.00069	0.00076 J	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.0012 J
RADIUM (226 + 228)	pCi/L	1.22 U	0.0861 U	0.581 U	0.530 U	0.453 U	0.969 U	0.988 U	0.784 U	0.467 U	0.684 U	0.876 U	1.00 U	0.482 U	0.501 U	1.64	2.78	0.937 U	1.19	2.97
SELENIUM, TOTAL	mg/L	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0033 J	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.099	< 0.0016	0.0016 J	0.0037 J	< 0.0016	< 0.0016	< 0.0016
THALLIUM, TOTAL	mg/L	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	0.00016 J	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014

**Notes:**

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
6. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
7. NM indicates the substance was not analyzed or required for this event.

**TABLE 5B**  
**ANALYTICAL DATA SUMMARY - AP-BCD (September and October 2020)**  
 Georgia Power Company - Plant Branch

Analyte	Units	Well ID																					
		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	PZ-50D	PZ-51S	PZ-51I	PZ-51I	PZ-51D	BRGWC-52I
		9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/16/2020	9/15/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/16/2020	9/17/2020	10/27/2020	9/17/2020	9/17/2020	10/27/2020
<b>Appendix III</b>																							
BORON, TOTAL	mg/L	< 0.0052	< 0.0052	< 0.0052	< 0.0052	< 0.0052	< 0.0052	0.0071 J	0.033 J	1.2	1.2	1.1	1.7	1.4	0.028 J	0.47	0.36	0.15	0.0063 J	0.43	0.37	0.029 J	1.9
CALCIUM, TOTAL	mg/L	3.9	14.1	16.8	12.7	3.7	5.7	14.5	10.7	40.1	62.5	55.1	106	43.1	39.7	309	206	159	7.7	168	183	132	35.4
CHLORIDE, TOTAL	mg/L	1.7	1.9	3.7	3.7	2.3	3.5	2.4	3.1	4.9	5.4	5.5	4.4	5.6	54.9	4.1	20.1	5.6	4.6	10.5	11.0	6.3	6.3
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	0.051 J	< 0.050	< 0.050	< 0.050	0.062 J	< 0.050	0.15	0.15	0.057 J	0.13	< 0.050	0.052 J	< 0.050	0.46	0.28	0.062 J	< 0.050	< 0.050	0.21	0.074 J
pH	S.U.	6.01	6.64	6.25	6.27	6.43	6	6.01	5.72	6	5.81	4.53	6.29	5.79	5.27	5.76	4.41	6.47	5.77	4.93	5.49	6.79	6.12
SULFATE, TOTAL	mg/L	< 0.50	5.9	< 0.50	1.7	< 0.50	< 0.50	1.7	41.5	126	190	241	334	255	103	1360	1330	492	0.53 J	1030	893	357	165
TOTAL DISSOLVED SOLIDS	mg/L	69	116	116	100	79	60	95	109	272	301	281	634	428	275	2090	1910	914	101	1600	1200	680	329
<b>Appendix IV</b>																							
ANTIMONY, TOTAL	mg/L	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	0.010	0.00033 J	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	0.0012 J	0.00035 J	0.00041 J	NM	0.00043 J	< 0.00028	NM	NM	< 0.00028
ARSENIC, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	NM	< 0.00078	< 0.00078	NM	NM	< 0.00078
BARIUM, TOTAL	mg/L	0.0094 J	0.0083 J	0.038	0.022	0.013	0.058	0.059	0.086	0.024	0.016	0.017	0.022	0.024	0.085	0.028	0.020	NM	0.033	0.015	NM	NM	0.020
BERYLLIUM, TOTAL	mg/L	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.00011 J	0.00071 J	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.0065	NM	< 0.000046	0.000096 J	NM	NM	< 0.000046
CADMIUM, TOTAL	mg/L	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	0.021	< 0.00012	< 0.00012	0.033	0.0051	< 0.00012	< 0.00012
CHROMIUM, TOTAL	mg/L	0.0082 J	< 0.00055	0.0048 J	0.0069 J	0.014	0.0025 J	0.00096 J	0.0019 J	< 0.00055	< 0.00055	< 0.00055	0.014	0.0025 J	0.0014 J	< 0.00055	0.00098 J	NM	< 0.00055	0.00098 J	NM	NM	< 0.00055
COBALT, TOTAL	mg/L	0.0010 J	< 0.00038	< 0.00038	0.00050 J	< 0.00038	< 0.00038	< 0.00038	0.00076 J	0.0035 J	0.008	0.0064	0.00080 J	< 0.00038	0.0049 J	0.00053 J	1.4	0.0037 J	0.0062	0.022	< 0.020	0.00041 J	0.00046 J
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	0.051 J	< 0.050	< 0.050	< 0.050	0.062 J	< 0.050	0.15	0.15	0.057 J	0.13	< 0.050	0.052 J	< 0.050	0.46	0.28	0.062 J	< 0.050	< 0.050	0.21	0.074 J
LEAD, TOTAL	mg/L	< 0.000036	< 0.000036	0.000043 J	0.0013 J	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	0.00029 J	0.00011 J	< 0.000036	0.000053 J	0.000066 J	0.00015 J	NM	< 0.000036	0.00036 J	NM	NM	< 0.000036
LITHIUM, TOTAL	mg/L	< 0.00081	0.033	< 0.00081	0.0010 J	0.0027 J	< 0.00081	0.0037 J	0.011 J	< 0.00081	0.0014 J	0.0030 J	0.016 J	0.0022 J	0.0036 J	0.039	0.052	NM	< 0.00081	0.021 J	NM	NM	0.0058 J
MERCURY, TOTAL	mg/L	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	NM	< 0.000078	< 0.000078	NM	NM	< 0.000078
MOLYBDENUM, TOTAL	mg/L	< 0.00069	0.00070 J	< 0.00069	0.0015 J	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.0008 J	< 0.00069	< 0.00069	0.0022 J	< 0.00069	< 0.00069	< 0.00069	< 0.00069	NM	< 0.00069	< 0.00069	NM	NM	0.00070 J
RADIUM (226 + 228)	pCi/L	0.579 U	0.0583 U	0.55 U	0.215 U	0.474 U	0.359 U	0.762 U	1.04 U	0.205 U	0.175 U	1.23 U	0.430 U	0.195 U	0.254 U	0.510 U	0.717 U	NM	0.952 U	1.76	NM	NM	2.04
SELENIUM, TOTAL	mg/L	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0028 J	< 0.0016	0.0042 J	< 0.0016	< 0.0016	0.12	< 0.0016	0.0020 J	< 0.0016	NM	< 0.0016	< 0.0016	NM	NM	< 0.0016
THALLIUM, TOTAL	mg/L	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	0.00016 J	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	NM	< 0.00014	< 0.00014	NM	NM	< 0.00014

- Notes:**
1. mg/L - milligrams per Liter
  2. pCi/L - picocuries per Liter
  3. S.U. - Standard Units
  4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
  5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
  6. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
  7. NM indicates the substance was not analyzed or required for this event.

**TABLE 5C**  
**ANALYTICAL DATA SUMMARY - AP-BCD (March and April 2021)**  
 Georgia Power Company - Plant Branch

Analyte	Units	Well ID											
		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
		3/2/2021	3/1/2021	3/2/2021	3/2/2021	3/1/2021	3/2/2021	3/2/2021	3/2/2021	3/2/2021	3/2/2021	3/3/2021	3/3/2021
<b>Appendix III</b>													
BORON, TOTAL	mg/L	< 0.0052	< 0.0052	0.0071 J	0.0053 J	< 0.0052	< 0.0052	0.0057 J	0.042	1.1	0.91	1.0	1.4
CALCIUM, TOTAL	mg/L	4.0	15.4	16.8	13.2	4.2	5.4	11.7	11.6	44.1	58.2	73.3	122
CHLORIDE, TOTAL	mg/L	1.7	1.8	3.7	3.8	2.1	3.7	2.6	3.5	4.5	4.5	5.6	4.0
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.061 J	< 0.050	0.15	0.24	0.13	0.13
pH	S.U.	6.20	6.66	6.42	6.47	6.70	5.92	6.11	5.75	6.10	5.90	4.46	6.29
SULFATE, TOTAL	mg/L	< 0.50	4.7	< 0.50	2.2	0.74 J	0.51 J	1.7	54.0	139	172	341	371
TOTAL DISSOLVED SOLIDS	mg/L	43.0	98.0	96.0	80.0	39.0	43.0	93.0	105	280	288	515	690
<b>Appendix IV</b>													
ANTIMONY, TOTAL	mg/L	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	0.0095	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028
ARSENIC, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.0015 J	< 0.00078
BARIUM, TOTAL	mg/L	0.0094	0.0074	0.037	0.023	0.016	0.063	0.053	0.097	0.026	0.016	0.021	0.028
BERYLLIUM, TOTAL	mg/L	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.000071 J	0.00094	< 0.000046
CADMIUM, TOTAL	mg/L	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012
CHROMIUM, TOTAL	mg/L	0.0074	< 0.00055	0.0044 J	0.0064	0.011	0.0021 J	0.0020 J	0.0020 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055
COBALT, TOTAL	mg/L	0.0010 J	< 0.00038	< 0.00038	0.00053 J	< 0.00038	< 0.00038	< 0.00038	< 0.00038	0.0030 J	0.0062	0.0095	0.0015 J
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.061 J	< 0.050	0.15	0.24	0.13	0.13
LEAD, TOTAL	mg/L	< 0.000036	< 0.000036	< 0.000036	0.000037 J	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	0.00033 J	< 0.000036
LITHIUM, TOTAL	mg/L	< 0.00081	0.027 J	< 0.00081	0.00081 J	0.0036 J	< 0.00081	0.0045 J	0.0093 J	< 0.00081	0.0012 J	0.0032 J	0.014 J
MERCURY, TOTAL	mg/L	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078
MOLYBDENUM, TOTAL	mg/L	< 0.00069	< 0.00069	< 0.00069	0.0015 J	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.0010 J	< 0.00069	< 0.00069	< 0.00069
RADIUM (226 + 228)	pCi/L	0.342 U	0.127 U	0.362 U	0.409 U	0.215 U	0.925	0.901	1.12	0.161 U	0.829 U	1.31 U	0.415 U
SELENIUM, TOTAL	mg/L	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0060	0.0021 J	0.0031 J	0.0042 J	< 0.0016
THALLIUM, TOTAL	mg/L	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	0.00018 J	< 0.00014

**Notes:**

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
6. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed as less than the MDC and considered an undetected result (U qualified). The MDC varies depending upon the sample amount and elapsed time of the measurement.
7. NM indicates the substance was not analyzed or required for this event.

**TABLE 5C**  
**ANALYTICAL DATA SUMMARY - AP-BCD (March and April 2021)**  
 Georgia Power Company - Plant Branch

Analyte	Units	Well ID													
		BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	PZ-50D	PZ-51D	PZ-51I	PZ-51S	BRGWC-52I	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-61I
		3/4/2021	3/2/2021	3/2/2021	3/4/2021	3/5/2021	3/3/2021	3/4/2021	3/3/2021	3/4/2021	4/12/2021	4/12/2021	4/12/2021	4/12/2021	5/19/2021
<b>Appendix III</b>															
BORON, TOTAL	mg/L	1.1	0.044	0.58	0.31	0.20	0.028 J	0.36	0.0096 J	1.4	0.49	0.33	0.25	0.26	0.31
CALCIUM, TOTAL	mg/L	35.7	33.9	353	214	207	119	182	7.9	47.5	52	94.6	262	228	NM
CHLORIDE, TOTAL	mg/L	4.6	25.8	4.8	18.9	8.0	18.9	12.2	4.5	5.6	7.2	11	29.6	21.9	NM
FLUORIDE, TOTAL	mg/L	< 0.050	0.067 J	< 0.050	0.60	0.16	0.28	0.061 J	0.083 J	0.28	0.085 J	0.56	1.3	0.055 J	NM
pH	S.U.	5.98	6.17	5.59	4.34	7.06	7.10	4.57	5.41	5.87	5.35	5.15	5.05	5.4	5.36
SULFATE, TOTAL	mg/L	185	98.3	1360	1250	698	360	909	0.66 J	114	272	559	1740	1550	NM
TOTAL DISSOLVED SOLIDS	mg/L	350	264	1680	1520	1210	598	830	76.0	383	500	890	2550	2110	NM
<b>Appendix IV</b>															
ANTIMONY, TOTAL	mg/L	< 0.00028	0.0014 J	< 0.00028	0.00092 J	0.00056 J	0.0013 J	0.00079 J	0.0018 J	0.00091 J	NM	NM	NM	NM	NM
ARSENIC, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.00087 J	0.0014 J	< 0.00078	< 0.00078	0.0030 J	NM	NM	NM	NM	NM
BARIUM, TOTAL	mg/L	0.024	0.061	0.036	0.025	0.043	0.080	0.016	0.037	0.019	NM	NM	NM	NM	NM
BERYLLIUM, TOTAL	mg/L	< 0.000046	< 0.000046	< 0.000046	0.0059	< 0.000046	< 0.000046	0.000097 J	< 0.000046	< 0.000046	NM	NM	NM	NM	NM
CADMIUM, TOTAL	mg/L	< 0.00012	0.00020 J	< 0.00012	0.019	< 0.00012	0.017	< 0.00012	< 0.00012	< 0.00012	< 0.00012	0.0024	0.017	< 0.00012	NM
CHROMIUM, TOTAL	mg/L	0.0020 J	< 0.00055	< 0.00055	0.0010 J	< 0.00055	< 0.00055	0.00080 J	< 0.00055	< 0.00055	NM	NM	NM	NM	NM
COBALT, TOTAL	mg/L	< 0.00038	0.0057	0.00050 J	1.4	0.0038 J	0.00040 J	0.019	0.0050	< 0.00038	0.037	0.33	3.2	0.42	0.44
FLUORIDE, TOTAL	mg/L	< 0.050	0.067 J	< 0.050	0.60	0.16	0.28	0.061 J	0.083 J	0.28	NM	NM	NM	NM	NM
LEAD, TOTAL	mg/L	< 0.000036	< 0.000036	< 0.000036	0.00016 J	0.000056 J	0.00013 J	0.00017 J	< 0.000036	0.000042 J	NM	NM	NM	NM	NM
LITHIUM, TOTAL	mg/L	0.0020 J	0.0043 J	0.044	0.050	0.019 J	0.0093 J	0.026 J	< 0.00081	0.0030 J	NM	NM	NM	NM	NM
MERCURY, TOTAL	mg/L	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	NM	NM	NM	NM	NM
MOLYBDENUM, TOTAL	mg/L	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.0017 J	0.0068 J	< 0.00069	< 0.00069	0.0010 J	NM	NM	NM	NM	NM
RADIUM (226 + 228)	pCi/L	0.320 U	0.107 U	0.571 U	1.22	2.11	2.54	0.966 U	0.599 U	2.04	NM	NM	NM	NM	NM
SELENIUM, TOTAL	mg/L	0.14	< 0.0016	0.0028 J	0.0039 J	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	NM	NM	NM	NM	NM
THALLIUM, TOTAL	mg/L	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	NM	NM	NM	NM	NM

**Notes:**

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
6. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed as less than the MDC and considered an undetected result (U qualified). The MDC varies depending upon the sample amount and elapsed time of the measurement.
7. NM indicates the substance was not analyzed or required for this event.

**TABLE 5D**  
**ANALYTICAL DATA SUMMARY**  
**SURFACE WATER - AP-BCD (October 2020)**  
 Georgia Power Company - Plant Branch

Analyte	Units	SURFACE WATER SAMPLE LOCATION			
		LR-1	LR+8	LR+9	LR+10
		10/22/2020	10/22/2020	10/22/2020	10/22/2020
<b>Appendix III</b>					
Boron, Total	mg/L	<0.040	<0.040	<0.040	<0.040
Calcium, Total	mg/L	3.7	4.2	4.3	4.5
Chloride, Total	mg/L	3.3	3.7	3.8	4.0
Fluoride, Total	mg/L	<0.10	<0.10	<0.10	<0.10
Sulfate, Total	mg/L	2.1	2.5	2.6	2.6
pH	S.U.	7.1	7.2	7.2	7.1
Total Dissolved Solids	mg/L	59	60	57	59
<b>Appendix IV</b>					
Cadmium, Total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050
<b>Other</b>					
Sodium , Total	mg/L	4.4	4.9	4.9	5.1
Magnesium, Total	mg/L	2.0	2.1	2.1	2.1
Potassium, Total	mg/L	2.7	2.8	2.9	2.8
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	mg/L	24.2	25.6	25.8	26.5
Alkalinity, Total (CaCO <sub>3</sub> )	mg/L	24.2	25.6	25.8	26.5

**Notes:**

mg/L = milligrams per Liter; S.U. = Standard Units

< = substance was not detected above the analytical reporting limit (RL). The value displayed is the RL.



**TABLE 5E**  
**ANALYTICAL DATA SUMMARY**  
**SURFACE WATER - AP-BCD (February 2021)**  
 Georgia Power Company - Plant Branch

Analyte	Units	SURFACE WATER SAMPLE LOCATION				
		LR-1	LR+8	LR+9	LR-9A	LR-10
		2/4/2021	2/4/2021	2/4/2021	2/4/2021	2/4/2021
<b>Appendix III</b>						
Boron, Total	mg/L	<0.040	<0.040	<0.040	<0.040	<0.040
Calcium, Total	mg/L	4.8	4.7	4.6	4.8	4.6
Chloride, Total	mg/L	3.7	3.8	3.8	3.7	4.3
Fluoride, Total	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Sulfate, Total	mg/L	2.8	3.2	3.2	3.4	3.3
pH	S.U.	7.24	7.21	7.32	7.24	7.34
Total Dissolved Solids	mg/L	70.0	52.0	76.0	59.0	49.0
<b>Appendix IV</b>						
Cadmium, Total	mg/L	<0.00012	<0.00012	<0.00012	<0.00012	<0.00012
Cobalt, Total	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
<b>Cations/Anions</b>						
Sodium , Total	mg/L	4.5	4.4	4.4	4.4	4.7
Magnesium, Total	mg/L	2.2	2.1	2.1	2.2	2.0
Potassium, Total	mg/L	2.3	2.5	2.5	2.5	2.6
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	mg/L	25.8	24.3	24.2	24.9	24.6
Alkalinity, Total (CaCO <sub>3</sub> )	mg/L	25.8	24.3	24.2	24.9	24.6
<b>Field Parameters</b>						
Temperature	F	48.7	49.0	48.9	48.2	49.6
ORP	mV	167.3	163.6	163.7	166.1	164.3
Dissolved Oxygen	mg/L	11.00	10.72	10.92	10.53	11.30
Turbidity	NTU	23.4	27.3	27.7	32.0	18.8
Specific Conductance	mS/cm	0.072	0.071	0.072	0.071	0.074

**Notes:**

mg/L = milligrams per Liter; S.U. = Standard Units; F = Fahrenheit; mV = Millivolts; NTU = Nephelometric turbidity unit

mS/cm = Millisiemens per centimeter

< = substance was not detected above the analytical reporting limit (RL). The value displayed is the RL.

**TABLE 6**  
**SUMMARY OF BACKGROUND LEVELS AND GWPS - AP-BCD**  
 Georgia Power Company - Plant Branch

Analyte	Units	Maximum Contaminant Level (MCL)	Site Specific Background September 2020 <sup>[1]</sup>	Site Specific Background March 2021 <sup>[1]</sup>	State GWPS <sup>[2]</sup>
Antimony	mg/L	0.006	0.012	0.012	0.012
Arsenic	mg/L	0.01	0.005	0.005	0.01
Barium	mg/L	2	0.13	0.13	2
Beryllium	mg/L	0.004	0.003	0.0005	0.004
Cadmium	mg/L	0.005	0.0025	0.0005	0.005
Chromium	mg/L	0.1	0.016	0.016	0.1
Cobalt	mg/L	NA	0.0135	0.0135	0.0135
Fluoride	mg/L	4	0.42	0.42	4
Lead	mg/L	NA	0.005	0.0013	0.0013
Lithium <sup>[3]</sup>	mg/L	NA	0.089	0.089	0.089
Mercury	mg/L	0.002	0.0005	0.00021	0.002
Molybdenum	mg/L	NA	0.01	0.01	0.01
Radium (226 + 228)	pCi/L	5	1.672	1.65	5
Selenium	mg/L	0.05	0.01	0.006	0.05
Thallium	mg/L	0.002	0.001	0.001	0.002

Notes:

mg/L = milligrams per liter; pCi/L = picocuries per liter; NA = Not Available

[1] The background limits are used when determining the groundwater protection standard (GWPS) under 40 CFR § 257.95(h) and 391-3-4-.10(6)(a).

[2] Under existing EPD rules, the GWPS is: (i) the MCL, (ii) where the MCL is not established, the background concentration, or (iii) background levels for constituents where the background level is higher than the MCL.

[3] The background tolerance limit (TL) used to evaluate GWPS for lithium is equal to the most recent laboratory specified reporting limit (RL). Per the SAP, and in accordance with the Unified Guidance, a non-parametric limit approach was used since the data set contains greater than 50% non-detect results for this analyte. Under this approach, the TL equals the highest value reported, for which is the laboratory RL. However, the highest laboratory RL used was 0.05 mg/L. As a result, we have modified the GWPS to be equal to the most recently used RL (0.03 mg/L).

**APPENDIX A**

**ANALYTICAL RESULTS, FIELD  
DATA FORMS, CERTIFIED WELL SURVEY  
REPORT, WELL INSPECTION LOGS &  
DATA VALIDATION SUMMARIES**

**APPENDIX A**

# **ANALYTICAL RESULTS**

September 11, 2020

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

RE: Project: BRANCH BCD/E BACKGROUND WELLS  
Pace Project No.: 92491389

Dear Joju Abraham:

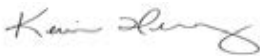
Enclosed are the analytical results for sample(s) received by the laboratory on August 19, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND WELLS  
Pace Project No.: 92491389

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 191  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

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

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

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

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### **Pace Analytical Services Peachtree Corners**

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

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92491389001	BRGWA-5I	Water	08/18/20 09:40	08/19/20 10:10
92491389002	BRGWA-5S	Water	08/18/20 10:15	08/19/20 10:10
92491389003	BRGWA-2I	Water	08/18/20 10:45	08/19/20 10:10
92491389004	BRGWA-2S	Water	08/18/20 11:38	08/19/20 10:10
92491389005	BRGWA-6S	Water	08/18/20 12:48	08/19/20 10:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491389001	BRGWA-5I	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491389002	BRGWA-5S	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491389003	BRGWA-2I	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491389004	BRGWA-2S	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491389005	BRGWA-6S	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

PASI-PA = Pace Analytical Services - Greensburg

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491389001</b>	<b>BRGWA-5I</b>					
	pH	6.29	Std. Units		09/09/20 17:00	
EPA 6020B	Barium	0.022	mg/L	0.010	08/21/20 17:42	
EPA 6020B	Chromium	0.0069J	mg/L	0.010	08/21/20 17:42	
EPA 6020B	Cobalt	0.00048J	mg/L	0.0050	08/21/20 17:42	
EPA 6020B	Lithium	0.00095J	mg/L	0.030	08/21/20 17:42	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	08/21/20 17:42	
EPA 9315	Radium-226	0.0774 ± 0.196 (0.479)	pCi/L		09/02/20 07:40	
EPA 9320	Radium-228	C:76% T:NA 0.453 ± 0.459 (0.950)	pCi/L		09/09/20 12:05	
		C:53% T:92%				
Total Radium Calculation	Total Radium	0.530 ± 0.655 (1.43)	pCi/L		09/10/20 13:23	
<b>92491389002</b>	<b>BRGWA-5S</b>					
	pH	6.41	Std. Units		09/09/20 17:00	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	08/21/20 18:05	
EPA 6020B	Barium	0.040	mg/L	0.010	08/21/20 18:05	
EPA 6020B	Chromium	0.0050J	mg/L	0.010	08/21/20 18:05	
EPA 6020B	Lead	0.00010J	mg/L	0.0050	08/21/20 18:05	
EPA 9315	Radium-226	0.241 ± 0.241 (0.446)	pCi/L		09/02/20 07:41	
EPA 9320	Radium-228	C:86% T:NA 0.340 ± 0.449 (0.959)	pCi/L		09/09/20 12:05	
		C:59% T:93%				
Total Radium Calculation	Total Radium	0.581 ± 0.690 (1.41)	pCi/L		09/10/20 13:23	
<b>92491389003</b>	<b>BRGWA-2I</b>					
	pH	6.59	Std. Units		09/09/20 17:00	
EPA 6020B	Antimony	0.00054J	mg/L	0.0030	08/21/20 18:11	
EPA 6020B	Barium	0.010J	mg/L	0.010	08/21/20 18:11	
EPA 6020B	Chromium	0.00096J	mg/L	0.010	08/21/20 18:11	
EPA 6020B	Lithium	0.054	mg/L	0.030	08/21/20 18:11	
EPA 6020B	Molybdenum	0.0011J	mg/L	0.010	08/21/20 18:11	
EPA 9315	Radium-226	0.0861 ± 0.243 (0.593)	pCi/L		09/02/20 07:41	
		C:77% T:NA				

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491389003</b>	<b>BRGWA-2I</b>					
EPA 9320	Radium-228	-0.176 ± 0.358 (0.872) C:61% T:91%	pCi/L		09/09/20 12:05	
Total Radium Calculation	Total Radium	0.0861 ± 0.601 (1.47)	pCi/L		09/10/20 13:23	
<b>92491389004</b>	<b>BRGWA-2S</b>					
	pH	6.06	Std. Units		09/09/20 17:00	
EPA 6020B	Antimony	0.00042J	mg/L	0.0030	08/21/20 18:17	
EPA 6020B	Barium	0.010	mg/L	0.010	08/21/20 18:17	
EPA 6020B	Chromium	0.0085J	mg/L	0.010	08/21/20 18:17	
EPA 6020B	Cobalt	0.0014J	mg/L	0.0050	08/21/20 18:17	
EPA 9315	Radium-226	0.189 ± 0.267 (0.570) C:70% T:NA	pCi/L		09/02/20 07:41	
EPA 9320	Radium-228	1.03 ± 0.516 (0.891) C:61% T:81%	pCi/L		09/09/20 12:05	
Total Radium Calculation	Total Radium	1.22 ± 0.783 (1.46)	pCi/L		09/10/20 13:23	
<b>92491389005</b>	<b>BRGWA-6S</b>					
	pH	6.33	Std. Units		09/09/20 17:00	
EPA 6020B	Barium	0.014	mg/L	0.010	08/21/20 18:22	
EPA 6020B	Chromium	0.015	mg/L	0.010	08/21/20 18:22	
EPA 6020B	Cobalt	0.00061J	mg/L	0.0050	08/21/20 18:22	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	08/21/20 18:22	
EPA 9315	Radium-226	-0.0918 ± 0.174 (0.573) C:79% T:NA	pCi/L		09/02/20 08:46	
EPA 9320	Radium-228	0.453 ± 0.384 (0.763) C:66% T:81%	pCi/L		09/09/20 12:05	
Total Radium Calculation	Total Radium	0.453 ± 0.558 (1.34)	pCi/L		09/10/20 13:23	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Sample: BRGWA-5I		Lab ID: 92491389001		Collected: 08/18/20 09:40		Received: 08/19/20 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.29	Std. Units			1		09/09/20 17:00		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 17:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 17:42	7440-38-2	
Barium	0.022	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 17:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 17:42	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 17:42	7440-43-9	
Chromium	0.0069J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 17:42	7440-47-3	
Cobalt	0.00048J	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 17:42	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 17:42	7439-92-1	
Lithium	0.00095J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 17:42	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 17:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 17:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 17:42	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 12:37	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 17:51	16984-48-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND WELLS  
 Pace Project No.: 92491389

Sample: BRGWA-5S		Lab ID: 92491389002		Collected: 08/18/20 10:15		Received: 08/19/20 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.41	Std. Units			1		09/09/20 17:00		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0016J	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:05	7440-38-2	
Barium	0.040	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:05	7440-43-9	
Chromium	0.0050J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:05	7440-48-4	
Lead	0.00010J	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:05	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:05	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 12:47	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 19:52	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND WELLS  
Pace Project No.: 92491389

Sample: BRGWA-2I		Lab ID: 92491389003		Collected: 08/18/20 10:45		Received: 08/19/20 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.59	Std. Units			1		09/09/20 17:00		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00054J	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:11	7440-38-2	
Barium	0.010J	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:11	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:11	7440-43-9	
Chromium	0.00096J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:11	7439-92-1	
Lithium	0.054	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:11	7439-93-2	
Molybdenum	0.0011J	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:11	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 12:49	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 20:06	16984-48-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND WELLS  
Pace Project No.: 92491389

Sample: BRGWA-2S		Lab ID: 92491389004		Collected: 08/18/20 11:38		Received: 08/19/20 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.06	Std. Units			1		09/09/20 17:00		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00042J	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:17	7440-38-2	
Barium	0.010	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:17	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:17	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:17	7440-43-9	
Chromium	0.0085J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:17	7440-47-3	
Cobalt	0.0014J	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:17	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:17	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:17	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 12:51	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 20:19	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Sample: BRGWA-6S		Lab ID: 92491389005		Collected: 08/18/20 12:48		Received: 08/19/20 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.33	Std. Units			1		09/09/20 17:00		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:22	7440-38-2	
Barium	0.014	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:22	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:22	7440-43-9	
Chromium	0.015	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:22	7440-47-3	
Cobalt	0.00061J	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:22	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:22	7439-92-1	
Lithium	0.0026J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:22	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 12:58	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 20:33	16984-48-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

QC Batch: 561324 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

METHOD BLANK: 2977587 Matrix: Water

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/21/20 17:31	
Arsenic	mg/L	ND	0.0050	0.00078	08/21/20 17:31	
Barium	mg/L	ND	0.010	0.00071	08/21/20 17:31	
Beryllium	mg/L	ND	0.0030	0.000046	08/21/20 17:31	
Cadmium	mg/L	ND	0.0025	0.00012	08/21/20 17:31	
Chromium	mg/L	ND	0.010	0.00055	08/21/20 17:31	
Cobalt	mg/L	ND	0.0050	0.00038	08/21/20 17:31	
Lead	mg/L	ND	0.0050	0.000036	08/21/20 17:31	
Lithium	mg/L	ND	0.030	0.00081	08/21/20 17:31	
Molybdenum	mg/L	ND	0.010	0.00069	08/21/20 17:31	
Selenium	mg/L	ND	0.010	0.0016	08/21/20 17:31	
Thallium	mg/L	ND	0.0010	0.00014	08/21/20 17:31	

LABORATORY CONTROL SAMPLE: 2977588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.096	96	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977589 2977590

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491389001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	106	105	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	2	20	
Barium	mg/L	0.022	0.1	0.1	0.13	0.12	108	96	75-125	9	20	
Beryllium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	

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**QUALITY CONTROL DATA**

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Parameter	Units	2977589		2977590		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	100	75-125	3	20		
Chromium	mg/L	0.0069J	0.1	0.1	0.11	0.11	102	101	75-125	1	20		
Cobalt	mg/L	0.00048J	0.1	0.1	0.10	0.099	99	99	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20		
Lithium	mg/L	0.00095J	0.1	0.1	0.098	0.098	97	97	75-125	0	20		
Molybdenum	mg/L	0.0015J	0.1	0.1	0.10	0.10	99	101	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.091	94	90	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

QC Batch:	561377	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

METHOD BLANK: 2977870 Matrix: Water  
Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	08/21/20 12:32	

LABORATORY CONTROL SAMPLE: 2977871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977872 2977873

Parameter	Units	2977872		2977873		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0026	104	106	75-125	2	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

QC Batch:	561236	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

METHOD BLANK: 2977010

Matrix: Water

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/20/20 16:29	

LABORATORY CONTROL SAMPLE: 2977011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977012 2977013

Parameter	Units	92490037006 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Fluoride	mg/L	0.055J	2.5	2.5	2.7	2.4	107	94	90-110	12	10	R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977014 2977015

Parameter	Units	92491455002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Fluoride	mg/L	ND	2.5	2.5	2.4	2.3	95	92	90-110	4	10	

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### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-5I</b> <b>Lab ID: 92491389001</b> Collected: 08/18/20 09:40      Received: 08/19/20 10:10      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0774 ± 0.196 (0.479)</b> C:76% T:NA	pCi/L	09/02/20 07:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.453 ± 0.459 (0.950)</b> C:53% T:92%	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.530 ± 0.655 (1.43)</b>	pCi/L	09/10/20 13:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Sample: **BRGWA-5S** Lab ID: **92491389002** Collected: 08/18/20 10:15 Received: 08/19/20 10:10 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.241 ± 0.241 (0.446)</b> <b>C:86% T:NA</b>	pCi/L	09/02/20 07:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.340 ± 0.449 (0.959)</b> <b>C:59% T:93%</b>	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.581 ± 0.690 (1.41)</b>	pCi/L	09/10/20 13:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-2I</b> <b>Lab ID: 92491389003</b> Collected: 08/18/20 10:45      Received: 08/19/20 10:10      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0861 ± 0.243 (0.593)</b> <b>C:77% T:NA</b>	pCi/L	09/02/20 07:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.176 ± 0.358 (0.872)</b> <b>C:61% T:91%</b>	pCi/L	09/09/20 12:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.0861 ± 0.601 (1.47)</b>	pCi/L	09/10/20 13:23	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-2S</b> <b>Lab ID: 92491389004</b> Collected: 08/18/20 11:38      Received: 08/19/20 10:10      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.189 ± 0.267 (0.570)</b> <b>C:70% T:NA</b>	pCi/L	09/02/20 07:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.03 ± 0.516 (0.891)</b> <b>C:61% T:81%</b>	pCi/L	09/09/20 12:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.22 ± 0.783 (1.46)</b>	pCi/L	09/10/20 13:23	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-6S</b> <b>Lab ID: 92491389005</b> Collected: 08/18/20 12:48      Received: 08/19/20 10:10      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>-0.0918 ± 0.174 (0.573)</b> <b>C:79% T:NA</b>	pCi/L	09/02/20 08:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.453 ± 0.384 (0.763)</b> <b>C:66% T:81%</b>	pCi/L	09/09/20 12:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.453 ± 0.558 (1.34)</b>	pCi/L	09/10/20 13:23	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

QC Batch:	411373	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

METHOD BLANK: 1989993 Matrix: Water

Associated Lab Samples: 92491389001, 92491389002, 92491389003, 92491389004, 92491389005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0671 ± 0.195 (0.481) C:88% T:NA	pCi/L	09/02/20 07:31	

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND WELLS

Pace Project No.: 92491389

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD/E BACKGROUND WELLS  
Pace Project No.: 92491389

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491389001	BRGWA-5I				
92491389002	BRGWA-5S				
92491389003	BRGWA-2I				
92491389004	BRGWA-2S				
92491389005	BRGWA-6S				
92491389001	BRGWA-5I	EPA 3005A	561324	EPA 6020B	561396
92491389002	BRGWA-5S	EPA 3005A	561324	EPA 6020B	561396
92491389003	BRGWA-2I	EPA 3005A	561324	EPA 6020B	561396
92491389004	BRGWA-2S	EPA 3005A	561324	EPA 6020B	561396
92491389005	BRGWA-6S	EPA 3005A	561324	EPA 6020B	561396
92491389001	BRGWA-5I	EPA 7470A	561377	EPA 7470A	561555
92491389002	BRGWA-5S	EPA 7470A	561377	EPA 7470A	561555
92491389003	BRGWA-2I	EPA 7470A	561377	EPA 7470A	561555
92491389004	BRGWA-2S	EPA 7470A	561377	EPA 7470A	561555
92491389005	BRGWA-6S	EPA 7470A	561377	EPA 7470A	561555
92491389001	BRGWA-5I	EPA 9315	411373		
92491389002	BRGWA-5S	EPA 9315	411373		
92491389003	BRGWA-2I	EPA 9315	411373		
92491389004	BRGWA-2S	EPA 9315	411373		
92491389005	BRGWA-6S	EPA 9315	411373		
92491389001	BRGWA-5I	EPA 9320	411435		
92491389002	BRGWA-5S	EPA 9320	411435		
92491389003	BRGWA-2I	EPA 9320	411435		
92491389004	BRGWA-2S	EPA 9320	411435		
92491389005	BRGWA-6S	EPA 9320	411435		
92491389001	BRGWA-5I	Total Radium Calculation	413341		
92491389002	BRGWA-5S	Total Radium Calculation	413341		
92491389003	BRGWA-2I	Total Radium Calculation	413341		
92491389004	BRGWA-2S	Total Radium Calculation	413341		
92491389005	BRGWA-6S	Total Radium Calculation	413341		
92491389001	BRGWA-5I	EPA 300.0 Rev 2.1 1993	561236		
92491389002	BRGWA-5S	EPA 300.0 Rev 2.1 1993	561236		
92491389003	BRGWA-2I	EPA 300.0 Rev 2.1 1993	561236		
92491389004	BRGWA-2S	EPA 300.0 Rev 2.1 1993	561236		
92491389005	BRGWA-6S	EPA 300.0 Rev 2.1 1993	561236		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92491389**



92491389

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Proj. Name: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 233    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 218    Biological Tissue is Frozen: Yes No  
Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/14/2006

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed    Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

WO#: 92491389

PM: KLH1 Due Date: 09/02/20  
CLIENT: GR-GA Power

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.  
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*Bottom half of box is to list number of bottle

Project #

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3H-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GX (3 vials per kit)-vph/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG9U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

pH Adjustment Log for Preserved Samples

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

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



# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTJL Log-in Number Here

## ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 Project Name: Branch BCOE Background Well  
 Project # CCR  
 Collected By (print): Travis Mart nez, Andrea McClure  
 Collected By (signature): *[Signature]*  
 Turnaround Date Required  
 Rush:  Same Day  Next Day  2 Day  3 Day  4 Day  5 Day  
 Expedite Charges Apply

Container Preservative Type \*\*  
 1 1 1  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp. Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWA-5I	GW	G	8-18-2020	0940			6.29	4
BRGWA-5S	GW	G	8-18-2020	1015			6.41	4
BRGWA-2I	GW	G	8-18-2020	1045			6.59	4
BRGWA-2S	GW	G	8-18-2020	1138			6.06	4
BRGWA-6S	GW	G	8-18-2020	1248			6.33	4

Metals App IV - see comments	Fluoride	Radium 226,228	Mercury
X	X	X	X
X	X	X	X
X	X	X	X
X	X	X	X

Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VDA - Headspace Acceptable Y N NA  
 USDA Regulated Soils Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 Cl Strips:  
 Sample pH Acceptable Y N NA  
 pH Strips:  
 Sulfide Present Y N NA  
 Lead Acetate Strips:

LAB USE ONLY:  
Lab Sample # / Comments:  
*42491389*

(App IV Metals) Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, Li, Mo, Se, Tl  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received Y N NA  
 Therm ID: *532*  
 Cooler 1 Temp Upon Receipt *[Signature]*  
 Cooler 1 Therm Corr. Factor *[Signature]*  
 Cooler 1 Corrected Temp *[Signature]*  
 Comments:

Relinquished by/Company: (Signature) *[Signature]* Golder  
 Date/Time: 8-19-2020/0815  
 Relinquished by/Company: (Signature)  
 Date/Time:  
 Relinquished by/Company: (Signature)  
 Date/Time:

Received by/Company: (Signature) *[Signature]*  
 Date/Time: 8/19/2020/1010  
 Received by/Company: (Signature)  
 Date/Time:  
 Received by/Company: (Signature)  
 Date/Time:

MTJL LAB USE ONLY  
 Table #:  
 Actnum:  
 Template:  
 Preflog:  
 PM:  
 PB:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s):  
 YES / NO  
 Page: 1 of 1



September 15, 2020

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

RE: Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 19, 2020 and August 21, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta

Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

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### Pace Analytical Services Pennsylvania

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

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

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### Pace Analytical Services Charlotte

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

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

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### Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

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

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### Pace Analytical Services Peachtree Corners

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

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92491393001	BRGWA-12I	Water	08/18/20 13:05	08/19/20 10:10
92491393002	BRGWA-12S	Water	08/18/20 16:25	08/19/20 10:10
92491393003	BRGWA-23S	Water	08/18/20 15:28	08/19/20 10:10
92491393004	BRGWC-25I	Water	08/19/20 09:50	08/20/20 10:03
92491393005	BRGWC-29I	Water	08/19/20 10:50	08/20/20 10:03
92491393006	BRGWC-27I	Water	08/19/20 12:05	08/20/20 10:03
92491393007	BRGWC-32S	Water	08/19/20 13:20	08/20/20 10:03
92491393008	BRGWC-30I	Water	08/19/20 15:05	08/20/20 10:03
92491393009	BRGWC-45	Water	08/20/20 12:12	08/21/20 11:08
92491393010	BRGWC-47	Water	08/20/20 14:00	08/21/20 11:08
92491393011	BRGWC-50	Water	08/20/20 09:32	08/21/20 11:08
92491393012	BRGWC-52I	Water	08/20/20 09:45	08/21/20 11:08
92491393013	DUP-2	Water	08/20/20 00:00	08/21/20 11:08
92491393014	FB-2	Water	08/20/20 09:20	08/21/20 11:08
92491393015	EB-1	Water	08/20/20 12:45	08/21/20 11:08

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491393001	BRGWA-12I	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393002	BRGWA-12S	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393003	BRGWA-23S	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393004	BRGWC-25I	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393005	BRGWC-29I	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393006	BRGWC-27I	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393007	BRGWC-32S	EPA 6020B	CW1	12	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491393008	BRGWC-30I	EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92491393009	BRGWC-45	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
92491393010	BRGWC-47	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
92491393011	BRGWC-50	EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92491393012	BRGWC-52I	EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
		EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
92491393013	DUP-2	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393013	DUP-2	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393014	FB-2	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A
92491393015	EB-1	EPA 6020B	CW1	12	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0 Rev 2.1 1993	CDC	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491393001</b>	<b>BRGWA-12I</b>					
	pH	6.25	Std. Units		09/09/20 17:01	
EPA 6020B	Antimony	0.0067	mg/L	0.0030	08/21/20 18:40	
EPA 6020B	Barium	0.053	mg/L	0.010	08/21/20 18:40	
EPA 6020B	Chromium	0.0023J	mg/L	0.010	08/21/20 18:40	
EPA 6020B	Lithium	0.0039J	mg/L	0.030	08/21/20 18:40	
EPA 9315	Radium-226	0.240 ± 0.122 (0.185)	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	C:91% T:NA 0.748 ± 0.489 (0.931)	pCi/L		09/09/20 14:47	
Total Radium Calculation	Total Radium	C:70% T:80% 0.988 ± 0.611 (1.12)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.10	08/20/20 20:46	
<b>92491393002</b>	<b>BRGWA-12S</b>					
	pH	5.75	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.058	mg/L	0.010	08/21/20 18:45	
EPA 6020B	Chromium	0.0029J	mg/L	0.010	08/21/20 18:45	
EPA 9315	Radium-226	0.157 ± 0.111 (0.189)	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	C:90% T:NA 0.812 ± 0.497 (0.953)	pCi/L		09/09/20 11:25	
Total Radium Calculation	Total Radium	C:70% T:90% 0.969 ± 0.608 (1.14)	pCi/L		09/10/20 15:16	
<b>92491393003</b>	<b>BRGWA-23S</b>					
	pH	5.56	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.067	mg/L	0.010	08/21/20 18:51	
EPA 6020B	Chromium	0.0017J	mg/L	0.010	08/21/20 18:51	
EPA 6020B	Cobalt	0.00067J	mg/L	0.0050	08/21/20 18:51	
EPA 6020B	Lithium	0.0099J	mg/L	0.030	08/21/20 18:51	
EPA 6020B	Selenium	0.0033J	mg/L	0.010	08/21/20 18:51	
EPA 9315	Radium-226	0.197 ± 0.113 (0.177)	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	C:84% T:NA 0.587 ± 0.442 (0.866)	pCi/L		09/09/20 11:25	
		C:72% T:79%				

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92491393003</b>	<b>BRGWA-23S</b>					
Total Radium Calculation	Total Radium	0.784 ± 0.555 (1.04)	pCi/L		09/10/20 15:16	
<b>92491393004</b>	<b>BRGWC-25I</b>					
	pH	6.32	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.027	mg/L	0.010	08/25/20 17:36	
EPA 6020B	Cobalt	0.0039J	mg/L	0.0050	08/25/20 17:36	
EPA 6020B	Molybdenum	0.00081J	mg/L	0.010	08/25/20 17:36	
EPA 7470A	Mercury	0.000083J	mg/L	0.00020	08/25/20 10:10	
EPA 9315	Radium-226	0.288 ± 0.130 (0.188)	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	C:86% T:NA 0.179 ± 0.343 (0.752) C:72% T:90%	pCi/L		09/09/20 11:25	
Total Radium Calculation	Total Radium	0.467 ± 0.473 (0.940)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	08/21/20 17:55	M1
<b>92491393005</b>	<b>BRGWC-29I</b>					
	pH	4.67	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.019	mg/L	0.010	08/25/20 17:42	
EPA 6020B	Beryllium	0.00074J	mg/L	0.0030	08/25/20 17:42	
EPA 6020B	Cobalt	0.0065	mg/L	0.0050	08/25/20 17:42	
EPA 6020B	Lead	0.00025J	mg/L	0.0050	08/26/20 17:54	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	08/25/20 17:42	
EPA 6020B	Thallium	0.00016J	mg/L	0.0010	08/26/20 17:54	
EPA 7470A	Mercury	0.000098J	mg/L	0.00020	08/25/20 10:13	
EPA 9315	Radium-226	0.299 ± 0.162 (0.267)	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	C:91% T:NA 0.577 ± 0.428 (0.848) C:77% T:82%	pCi/L		09/09/20 11:25	
Total Radium Calculation	Total Radium	0.876 ± 0.590 (1.12)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/21/20 18:35	
<b>92491393006</b>	<b>BRGWC-27I</b>					
	pH	5.81	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.016	mg/L	0.010	08/25/20 17:48	
EPA 6020B	Beryllium	0.000099J	mg/L	0.0030	08/25/20 17:48	
EPA 6020B	Cobalt	0.0078	mg/L	0.0050	08/25/20 17:48	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	08/25/20 17:48	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491393006</b>	<b>BRGWC-271</b>					
EPA 9315	Radium-226	0.260 ± 0.132 (0.203) C:91% T:NA	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	0.424 ± 0.358 (0.718) C:74% T:87%	pCi/L		09/09/20 11:26	
Total Radium Calculation	Total Radium	0.684 ± 0.490 (0.921)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	08/21/20 18:48	
<b>92491393007</b>	<b>BRGWC-32S</b>					
	pH	5.97	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.025	mg/L	0.010	08/25/20 17:53	
EPA 6020B	Chromium	0.0021J	mg/L	0.010	08/25/20 17:53	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	08/25/20 17:53	
EPA 6020B	Selenium	0.099	mg/L	0.010	08/25/20 17:53	
EPA 7470A	Mercury	0.000082J	mg/L	0.00020	08/25/20 10:18	
EPA 9315	Radium-226	0.0531 ± 0.0881 (0.172) C:92% T:NA	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	0.429 ± 0.407 (0.839) C:75% T:82%	pCi/L		09/09/20 11:26	
Total Radium Calculation	Total Radium	0.482 ± 0.495 (1.01)	pCi/L		09/10/20 15:16	
<b>92491393008</b>	<b>BRGWC-30I</b>					
	pH	6.36	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.026	mg/L	0.010	08/25/20 17:59	
EPA 6020B	Cobalt	0.00080J	mg/L	0.0050	08/25/20 17:59	
EPA 6020B	Lithium	0.018J	mg/L	0.030	08/25/20 17:59	
EPA 6020B	Molybdenum	0.00078J	mg/L	0.010	08/25/20 17:59	
EPA 7470A	Mercury	0.000082J	mg/L	0.00020	08/25/20 10:25	
EPA 9315	Radium-226	0.299 ± 0.125 (0.167) C:88% T:NA	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	0.703 ± 0.450 (0.863) C:72% T:86%	pCi/L		09/09/20 11:26	
Total Radium Calculation	Total Radium	1.00 ± 0.575 (1.03)	pCi/L		09/11/20 08:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	08/21/20 19:15	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92491393009</b>	<b>BRGWC-45</b>					
	pH	5.86	Std. Units		09/09/20 17:01	
EPA 6020B	Antimony	0.0031	mg/L	0.0030	08/27/20 16:48	
EPA 6020B	Barium	0.083	mg/L	0.010	08/27/20 16:48	
EPA 6020B	Beryllium	0.000046J	mg/L	0.0030	08/27/20 16:48	
EPA 6020B	Cadmium	0.00014J	mg/L	0.0025	08/27/20 16:48	
EPA 6020B	Chromium	0.0010J	mg/L	0.010	08/27/20 16:48	
EPA 6020B	Cobalt	0.022	mg/L	0.0050	08/27/20 16:48	
EPA 6020B	Lead	0.00021J	mg/L	0.0050	08/27/20 16:48	
EPA 6020B	Lithium	0.0034J	mg/L	0.030	08/27/20 16:48	
EPA 6020B	Molybdenum	0.00076J	mg/L	0.010	08/27/20 16:48	
EPA 9315	Radium-226	0.194 ± 0.154 (0.275)	pCi/L		09/03/20 18:45	
		C:88% T:NA				
EPA 9320	Radium-228	0.307 ± 0.468 (1.01)	pCi/L		09/09/20 15:08	
		C:62% T:74%				
Total Radium Calculation	Total Radium	0.501 ± 0.622 (1.29)	pCi/L		09/10/20 15:16	
<b>92491393010</b>	<b>BRGWC-47</b>					
	pH	5.75	Std. Units		09/09/20 17:01	
EPA 6020B	Arsenic	0.00089J	mg/L	0.0050	08/27/20 16:53	
EPA 6020B	Barium	0.035	mg/L	0.010	08/27/20 16:53	
EPA 6020B	Beryllium	0.000047J	mg/L	0.0030	08/27/20 16:53	
EPA 6020B	Chromium	0.00064J	mg/L	0.010	08/27/20 16:53	
EPA 6020B	Cobalt	0.00043J	mg/L	0.0050	08/27/20 16:53	
EPA 6020B	Lead	0.000048J	mg/L	0.0050	08/27/20 16:53	
EPA 6020B	Lithium	0.044	mg/L	0.030	08/27/20 16:53	
EPA 6020B	Selenium	0.0016J	mg/L	0.010	08/27/20 16:53	
EPA 9315	Radium-226	0.500 ± 0.164 (0.181)	pCi/L		09/03/20 18:45	
		C:86% T:NA				
EPA 9320	Radium-228	1.14 ± 0.652 (1.17)	pCi/L		09/09/20 15:08	
		C:53% T:73%				
Total Radium Calculation	Total Radium	1.64 ± 0.816 (1.35)	pCi/L		09/10/20 15:16	
<b>92491393011</b>	<b>BRGWC-50</b>					
	pH	5.26	Std. Units		09/09/20 17:01	
EPA 6020B	Barium	0.019	mg/L	0.010	08/27/20 16:59	
EPA 6020B	Beryllium	0.0044	mg/L	0.0030	08/27/20 16:59	
EPA 6020B	Cadmium	0.0079	mg/L	0.0025	08/27/20 16:59	
EPA 6020B	Chromium	0.00065J	mg/L	0.010	08/27/20 16:59	

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491393011</b>	<b>BRGWC-50</b>					
EPA 6020B	Cobalt	1.4	mg/L	0.025	08/28/20 15:08	
EPA 6020B	Lead	0.000067J	mg/L	0.0050	08/27/20 16:59	
EPA 6020B	Lithium	0.040	mg/L	0.030	08/27/20 16:59	
EPA 6020B	Selenium	0.0037J	mg/L	0.010	08/27/20 16:59	
EPA 9315	Radium-226	0.735 ± 0.193 (0.151)	pCi/L		09/03/20 18:18	
EPA 9320	Radium-228	C:89% T:NA 2.04 ± 0.699 (0.948)	pCi/L		09/09/20 15:08	
Total Radium Calculation	Total Radium	C:71% T:67% 2.78 ± 0.892 (1.10)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.39	mg/L	0.10	08/25/20 18:20	
<b>92491393012</b>	<b>BRGWC-52I</b>					
	pH	6.85	Std. Units		09/09/20 17:01	
EPA 6020B	Arsenic	0.0031J	mg/L	0.0050	08/27/20 17:05	
EPA 6020B	Barium	0.017	mg/L	0.010	08/27/20 17:05	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	08/27/20 17:05	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	08/27/20 17:05	
EPA 9315	Radium-226	0.684 ± 0.388 (0.589)	pCi/L		09/04/20 07:17	
EPA 9320	Radium-228	C:84% T:NA 2.29 ± 0.728 (0.901)	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	C:70% T:69% 2.97 ± 1.12 (1.49)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.23	mg/L	0.10	08/25/20 19:05	
<b>92491393013</b>	<b>DUP-2</b>					
EPA 6020B	Barium	0.019	mg/L	0.010	08/27/20 17:10	
EPA 6020B	Beryllium	0.0046	mg/L	0.0030	08/27/20 17:10	
EPA 6020B	Cadmium	0.0077	mg/L	0.0025	08/27/20 17:10	
EPA 6020B	Chromium	0.00065J	mg/L	0.010	08/27/20 17:10	
EPA 6020B	Cobalt	1.4	mg/L	0.025	08/28/20 15:13	
EPA 6020B	Lead	0.000050J	mg/L	0.0050	08/27/20 17:10	
EPA 6020B	Lithium	0.041	mg/L	0.030	08/27/20 17:10	
EPA 6020B	Selenium	0.0038J	mg/L	0.010	08/27/20 17:10	
EPA 9315	Radium-226	0.602 ± 0.324 (0.420)	pCi/L		09/04/20 07:18	
		C:87% T:NA				

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491393013</b>	<b>DUP-2</b>					
EPA 9320	Radium-228	2.11 ± 0.682 (0.878) C:71% T:75%	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	2.71 ± 1.01 (1.30)	pCi/L		09/10/20 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.38	mg/L	0.10	08/25/20 19:20	
<b>92491393014</b>	<b>FB-2</b>					
EPA 9315	Radium-226	0.0152 ± 0.200 (0.536) C:84% T:NA	pCi/L		09/04/20 07:18	
EPA 9320	Radium-228	0.713 ± 0.432 (0.796) C:69% T:83%	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	0.728 ± 0.632 (1.33)	pCi/L		09/10/20 15:16	
<b>92491393015</b>	<b>EB-1</b>					
EPA 7470A	Mercury	0.000082J	mg/L	0.00020	08/25/20 09:25	
EPA 9315	Radium-226	0.115 ± 0.167 (0.346) C:89% T:NA	pCi/L		09/04/20 07:51	
EPA 9320	Radium-228	0.206 ± 0.334 (0.724) C:69% T:84%	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	0.321 ± 0.501 (1.07)	pCi/L		09/10/20 15:16	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

**Sample: BRGWA-12I**      **Lab ID: 92491393001**      Collected: 08/18/20 13:05      Received: 08/19/20 10:10      Matrix: Water

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

Analytical Method:  
Pace Analytical Services - Charlotte

pH	6.25	Std. Units			1		09/09/20 17:01		
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**6020 MET ICPMS**

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

Antimony	0.0067	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:40	7440-38-2	
Barium	0.053	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:40	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:40	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:40	7440-43-9	
Chromium	0.0023J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:40	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:40	7439-92-1	
Lithium	0.0039J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:40	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:40	7440-28-0	

**7470 Mercury**

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

Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:01	7439-97-6	
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**300.0 IC Anions 28 Days**

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

Fluoride	0.052J	mg/L	0.10	0.050	1		08/20/20 20:46	16984-48-8	
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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: BRGWA-12S		Lab ID: 92491393002		Collected: 08/18/20 16:25	Received: 08/19/20 10:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.75	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:45	7440-38-2	
Barium	0.058	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:45	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:45	7440-43-9	
Chromium	0.0029J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:45	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:45	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:03	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 20:59	16984-48-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: BRGWA-23S		Lab ID: 92491393003		Collected: 08/18/20 15:28		Received: 08/19/20 10:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.56	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/20/20 14:56	08/21/20 18:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/20/20 14:56	08/21/20 18:51	7440-38-2	
Barium	0.067	mg/L	0.010	0.00071	1	08/20/20 14:56	08/21/20 18:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/20/20 14:56	08/21/20 18:51	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/20/20 14:56	08/21/20 18:51	7440-43-9	
Chromium	0.0017J	mg/L	0.010	0.00055	1	08/20/20 14:56	08/21/20 18:51	7440-47-3	
Cobalt	0.00067J	mg/L	0.0050	0.00038	1	08/20/20 14:56	08/21/20 18:51	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/20/20 14:56	08/21/20 18:51	7439-92-1	
Lithium	0.0099J	mg/L	0.030	0.00081	1	08/20/20 14:56	08/21/20 18:51	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/20/20 14:56	08/21/20 18:51	7439-98-7	
Selenium	0.0033J	mg/L	0.010	0.0016	1	08/20/20 14:56	08/21/20 18:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/20/20 14:56	08/21/20 18:51	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/21/20 08:05	08/21/20 13:06	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/20/20 21:13	16984-48-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

**Sample: BRGWC-25I**      **Lab ID: 92491393004**      Collected: 08/19/20 09:50      Received: 08/20/20 10:03      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.32	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 17:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 17:36	7440-38-2	
Barium	0.027	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 17:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 17:36	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 17:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 17:36	7440-47-3	
Cobalt	0.0039J	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 17:36	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 17:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 17:36	7439-93-2	
Molybdenum	0.00081J	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 17:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 17:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 17:49	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A      Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.000083J	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:10	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.17	mg/L	0.10	0.050	1		08/21/20 17:55	16984-48-8	M1

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: BRGWC-29I		Lab ID: 92491393005		Collected: 08/19/20 10:50		Received: 08/20/20 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.67	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 17:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 17:42	7440-38-2	
Barium	0.019	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 17:42	7440-39-3	
Beryllium	0.00074J	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 17:42	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 17:42	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 17:42	7440-47-3	
Cobalt	0.0065	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 17:42	7440-48-4	
Lead	0.00025J	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 17:54	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 17:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 17:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 17:42	7782-49-2	
Thallium	0.00016J	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 17:54	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.000098J	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:13	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.12	mg/L	0.10	0.050	1		08/21/20 18:35	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: BRGWC-271		Lab ID: 92491393006		Collected: 08/19/20 12:05	Received: 08/20/20 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.81	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 17:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 17:48	7440-38-2	
Barium	0.016	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 17:48	7440-39-3	
Beryllium	0.000099J	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 17:48	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 17:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 17:48	7440-47-3	
Cobalt	0.0078	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 17:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 18:00	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 17:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 17:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 17:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 18:00	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:15	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.19	mg/L	0.10	0.050	1		08/21/20 18:48	16984-48-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: BRGWC-32S		Lab ID: 92491393007		Collected: 08/19/20 13:20		Received: 08/20/20 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.97	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 17:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 17:53	7440-38-2	
Barium	0.025	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 17:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 17:53	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 17:53	7440-43-9	
Chromium	0.0021J	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 17:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 17:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 18:06	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 17:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 17:53	7439-98-7	
Selenium	0.099	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 17:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 18:06	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.000082J	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:18	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/21/20 19:02	16984-48-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: BRGWC-30I		Lab ID: 92491393008		Collected: 08/19/20 15:05		Received: 08/20/20 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.36	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:05	08/25/20 17:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:05	08/25/20 17:59	7440-38-2	
Barium	0.026	mg/L	0.010	0.00071	1	08/24/20 15:05	08/25/20 17:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:05	08/25/20 17:59	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:05	08/25/20 17:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:05	08/25/20 17:59	7440-47-3	
Cobalt	0.00080J	mg/L	0.0050	0.00038	1	08/24/20 15:05	08/25/20 17:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:05	08/26/20 18:12	7439-92-1	
Lithium	0.018J	mg/L	0.030	0.00081	1	08/24/20 15:05	08/25/20 17:59	7439-93-2	
Molybdenum	0.00078J	mg/L	0.010	0.00069	1	08/24/20 15:05	08/25/20 17:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:05	08/25/20 17:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:05	08/26/20 18:12	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.000082J	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:25	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.14	mg/L	0.10	0.050	1		08/21/20 19:15	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: BRGWC-45		Lab ID: 92491393009		Collected: 08/20/20 12:12		Received: 08/21/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.86	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0031	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:48	7440-38-2	
Barium	0.083	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:48	7440-39-3	
Beryllium	0.000046J	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:48	7440-41-7	
Cadmium	0.00014J	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:48	7440-43-9	
Chromium	0.0010J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:48	7440-47-3	
Cobalt	0.022	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 16:48	7440-48-4	
Lead	0.00021J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:48	7439-92-1	
Lithium	0.0034J	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:48	7439-93-2	
Molybdenum	0.00076J	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:48	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:48	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:27	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/25/20 17:21	16984-48-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: BRGWC-47		Lab ID: 92491393010		Collected: 08/20/20 14:00		Received: 08/21/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.75	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:53	7440-36-0	
Arsenic	0.00089J	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:53	7440-38-2	
Barium	0.035	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:53	7440-39-3	
Beryllium	0.000047J	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:53	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:53	7440-43-9	
Chromium	0.00064J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:53	7440-47-3	
Cobalt	0.00043J	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 16:53	7440-48-4	
Lead	0.000048J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:53	7439-92-1	
Lithium	0.044	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:53	7439-98-7	
Selenium	0.0016J	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:53	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:29	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/25/20 18:05	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: BRGWC-50		Lab ID: 92491393011		Collected: 08/20/20 09:32		Received: 08/21/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.26	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 16:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 16:59	7440-38-2	
Barium	0.019	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 16:59	7440-39-3	
Beryllium	0.0044	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 16:59	7440-41-7	
Cadmium	0.0079	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 16:59	7440-43-9	
Chromium	0.00065J	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 16:59	7440-47-3	
Cobalt	1.4	mg/L	0.025	0.0019	5	08/24/20 15:10	08/28/20 15:08	7440-48-4	
Lead	0.00067J	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 16:59	7439-92-1	
Lithium	0.040	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 16:59	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 16:59	7439-98-7	
Selenium	0.0037J	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 16:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 16:59	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:32	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.39	mg/L	0.10	0.050	1		08/25/20 18:20	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: BRGWC-52I		Lab ID: 92491393012		Collected: 08/20/20 09:45		Received: 08/21/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.85	Std. Units			1		09/09/20 17:01		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 17:05	7440-36-0	
Arsenic	0.0031J	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 17:05	7440-38-2	
Barium	0.017	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 17:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 17:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 17:05	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 17:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 17:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 17:05	7439-92-1	
Lithium	0.0022J	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 17:05	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 17:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 17:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 17:05	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:34	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.23	mg/L	0.10	0.050	1		08/25/20 19:05	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Sample: DUP-2		Lab ID: 92491393013		Collected: 08/20/20 00:00	Received: 08/21/20 11:08	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 17:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 17:10	7440-38-2	
Barium	<b>0.019</b>	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 17:10	7440-39-3	
Beryllium	<b>0.0046</b>	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 17:10	7440-41-7	
Cadmium	<b>0.0077</b>	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 17:10	7440-43-9	
Chromium	<b>0.00065J</b>	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 17:10	7440-47-3	
Cobalt	<b>1.4</b>	mg/L	0.025	0.0019	5	08/24/20 15:10	08/28/20 15:13	7440-48-4	
Lead	<b>0.000050J</b>	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 17:10	7439-92-1	
Lithium	<b>0.041</b>	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 17:10	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 17:10	7439-98-7	
Selenium	<b>0.0038J</b>	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 17:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 17:10	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:37	7439-97-6	
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	<b>0.38</b>	mg/L	0.10	0.050	1		08/25/20 19:20	16984-48-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: <b>FB-2</b>		Lab ID: <b>92491393014</b>		Collected: 08/20/20 09:20	Received: 08/21/20 11:08	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 17:38	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 17:38	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 17:38	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 17:38	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 17:38	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 17:38	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 17:38	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 17:38	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 17:38	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 17:38	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 17:38	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 17:38	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 10:39	7439-97-6		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		08/25/20 19:35	16984-48-8		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: EB-1		Lab ID: 92491393015		Collected: 08/20/20 12:45	Received: 08/21/20 11:08	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	08/24/20 15:10	08/27/20 17:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/24/20 15:10	08/27/20 17:43	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	08/24/20 15:10	08/27/20 17:43	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/24/20 15:10	08/27/20 17:43	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/24/20 15:10	08/27/20 17:43	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/24/20 15:10	08/27/20 17:43	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/24/20 15:10	08/27/20 17:43	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/24/20 15:10	08/27/20 17:43	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/24/20 15:10	08/27/20 17:43	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/24/20 15:10	08/27/20 17:43	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/24/20 15:10	08/27/20 17:43	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/24/20 15:10	08/27/20 17:43	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	<b>0.000082J</b>	mg/L	0.00020	0.000078	1	08/24/20 11:30	08/25/20 09:25	7439-97-6		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		08/25/20 19:50	16984-48-8		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

QC Batch: 561324 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92491393001, 92491393002, 92491393003

METHOD BLANK: 2977587 Matrix: Water  
Associated Lab Samples: 92491393001, 92491393002, 92491393003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/21/20 17:31	
Arsenic	mg/L	ND	0.0050	0.00078	08/21/20 17:31	
Barium	mg/L	ND	0.010	0.00071	08/21/20 17:31	
Beryllium	mg/L	ND	0.0030	0.000046	08/21/20 17:31	
Cadmium	mg/L	ND	0.0025	0.00012	08/21/20 17:31	
Chromium	mg/L	ND	0.010	0.00055	08/21/20 17:31	
Cobalt	mg/L	ND	0.0050	0.00038	08/21/20 17:31	
Lead	mg/L	ND	0.0050	0.000036	08/21/20 17:31	
Lithium	mg/L	ND	0.030	0.00081	08/21/20 17:31	
Molybdenum	mg/L	ND	0.010	0.00069	08/21/20 17:31	
Selenium	mg/L	ND	0.010	0.0016	08/21/20 17:31	
Thallium	mg/L	ND	0.0010	0.00014	08/21/20 17:31	

LABORATORY CONTROL SAMPLE: 2977588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.096	96	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977589 2977590

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491389001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	106	105	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	2	20	
Barium	mg/L	0.022	0.1	0.1	0.13	0.12	108	96	75-125	9	20	
Beryllium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameter	Units	2977589		2977590		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	100	75-125	3	20		
Chromium	mg/L	0.0069J	0.1	0.1	0.11	0.11	102	101	75-125	1	20		
Cobalt	mg/L	0.00048J	0.1	0.1	0.10	0.099	99	99	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20		
Lithium	mg/L	0.00095J	0.1	0.1	0.098	0.098	97	97	75-125	0	20		
Molybdenum	mg/L	0.0015J	0.1	0.1	0.10	0.10	99	101	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.091	94	90	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

QC Batch: 561963 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

METHOD BLANK: 2980652 Matrix: Water  
Associated Lab Samples: 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/25/20 16:08	
Arsenic	mg/L	ND	0.0050	0.00078	08/25/20 16:08	
Barium	mg/L	ND	0.010	0.00071	08/25/20 16:08	
Beryllium	mg/L	ND	0.0030	0.000046	08/25/20 16:08	
Cadmium	mg/L	ND	0.0025	0.00012	08/25/20 16:08	
Chromium	mg/L	ND	0.010	0.00055	08/25/20 16:08	
Cobalt	mg/L	ND	0.0050	0.00038	08/25/20 16:08	
Lead	mg/L	ND	0.0050	0.000036	08/26/20 16:20	
Lithium	mg/L	ND	0.030	0.00081	08/25/20 16:08	
Molybdenum	mg/L	ND	0.010	0.00069	08/25/20 16:08	
Selenium	mg/L	ND	0.010	0.0016	08/25/20 16:08	
Thallium	mg/L	ND	0.0010	0.00014	08/26/20 16:20	

LABORATORY CONTROL SAMPLE: 2980653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980654 2980655

Parameter	Units	2980654		2980655		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	0.00064J	0.1	0.1	0.10	0.10	101	99	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	
Barium	mg/L	0.12	0.1	0.1	0.24	0.23	115	114	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	0	20	

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**QUALITY CONTROL DATA**

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameter	Units	2980654		2980655		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Cadmium	mg/L	0.00058J	0.1	0.1	0.096	0.096	95	95	75-125	0	20		
Chromium	mg/L	0.0015J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	0.00040J	0.1	0.1	0.10	0.10	99	99	75-125	0	20		
Lead	mg/L	0.00035J	0.1	0.1	0.094	0.093	94	93	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.096	0.098	96	97	75-125	1	20		
Molybdenum	mg/L	0.00077J	0.1	0.1	0.10	0.10	102	99	75-125	2	20		
Selenium	mg/L	0.0028J	0.1	0.1	0.10	0.10	99	99	75-125	0	20		
Thallium	mg/L	0.00021J	0.1	0.1	0.094	0.093	94	93	75-125	1	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

QC Batch: 561964 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015

METHOD BLANK: 2980659 Matrix: Water  
Associated Lab Samples: 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/27/20 15:08	
Arsenic	mg/L	ND	0.0050	0.00078	08/27/20 15:08	
Barium	mg/L	ND	0.010	0.00071	08/27/20 15:08	
Beryllium	mg/L	ND	0.0030	0.000046	08/27/20 15:08	
Cadmium	mg/L	ND	0.0025	0.00012	08/27/20 15:08	
Chromium	mg/L	ND	0.010	0.00055	08/27/20 15:08	
Cobalt	mg/L	ND	0.0050	0.00038	08/27/20 15:08	
Lead	mg/L	ND	0.0050	0.000036	08/27/20 15:08	
Lithium	mg/L	ND	0.030	0.00081	08/27/20 15:08	
Molybdenum	mg/L	ND	0.010	0.00069	08/27/20 15:08	
Selenium	mg/L	ND	0.010	0.0016	08/27/20 15:08	
Thallium	mg/L	ND	0.0010	0.00014	08/27/20 15:08	

LABORATORY CONTROL SAMPLE: 2980660

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980661 2980662

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491663009 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Barium	mg/L	0.047	0.1	0.1	0.14	0.14	98	97	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameter	Units	2980661		2980662		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491663009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20		
Chromium	mg/L	0.012	0.1	0.1	0.12	0.11	106	102	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Lithium	mg/L	0.0010J	0.1	0.1	0.10	0.099	98	98	75-125	0	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	103	100	75-125	2	20		
Selenium	mg/L	0.0030J	0.1	0.1	0.10	0.10	99	102	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

QC Batch: 561377	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491393001, 92491393002, 92491393003

METHOD BLANK: 2977870 Matrix: Water

Associated Lab Samples: 92491393001, 92491393002, 92491393003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	08/21/20 12:32	

LABORATORY CONTROL SAMPLE: 2977871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977872 2977873

Parameter	Units	2977872		2977873		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0026	104	106	75-125	2	20

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

QC Batch: 561894      Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A      Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92491393015

METHOD BLANK: 2980088      Matrix: Water  
Associated Lab Samples: 92491393015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	08/25/20 08:19	

LABORATORY CONTROL SAMPLE: 2980089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980090      2980091

Parameter	Units	2980090		2980091		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0023	0.0026	90	102	75-125	12	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

QC Batch:	561900	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491393004, 92491393005, 92491393006, 92491393007, 92491393008, 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014

METHOD BLANK: 2980098 Matrix: Water

Associated Lab Samples: 92491393004, 92491393005, 92491393006, 92491393007, 92491393008, 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	08/25/20 09:32	

LABORATORY CONTROL SAMPLE: 2980099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2980100 2980101

Parameter	Units	2980100		2980101		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491663001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0024	90	94	75-125	3	20

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

QC Batch: 561236 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92491393001, 92491393002, 92491393003

METHOD BLANK: 2977010 Matrix: Water  
Associated Lab Samples: 92491393001, 92491393002, 92491393003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/20/20 16:29	

LABORATORY CONTROL SAMPLE: 2977011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977012 2977013

Parameter	Units	2977012		2977013		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.055J	2.5	2.5	2.7	2.4	107	94	90-110	12	10 R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2977014 2977015

Parameter	Units	2977014		2977015		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	ND	2.5	2.5	2.4	2.3	95	92	90-110	4	10

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

QC Batch: 561506 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

METHOD BLANK: 2978310 Matrix: Water  
Associated Lab Samples: 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/21/20 17:28	

LABORATORY CONTROL SAMPLE: 2978311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2978312 2978313

Parameter	Units	2978312		2978313		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491393004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	0.17	2.5	2.5	3.0	3.0	112	112	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2978314 2978315

Parameter	Units	2978314		2978315		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491663005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	0.060J	2.5	2.5	2.7	2.7	105	106	90-110	1	10

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

QC Batch:	562094	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015

METHOD BLANK: 2981303 Matrix: Water

Associated Lab Samples: 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/25/20 12:53	

LABORATORY CONTROL SAMPLE: 2981304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981305 2981306

Parameter	Units	92492088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981307 2981308

Parameter	Units	92491393009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	103	103	90-110	0	10	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: **BRGWA-12I** Lab ID: **92491393001** Collected: 08/18/20 13:05 Received: 08/19/20 10:10 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.240 ± 0.122 (0.185)</b> <b>C:91% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.748 ± 0.489 (0.931)</b> <b>C:70% T:80%</b>	pCi/L	09/09/20 14:47	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.988 ± 0.611 (1.12)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-12S</b> <b>Lab ID: 92491393002</b> Collected: 08/18/20 16:25      Received: 08/19/20 10:10      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.157 ± 0.111 (0.189)</b> <b>C:90% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.812 ± 0.497 (0.953)</b> <b>C:70% T:90%</b>	pCi/L	09/09/20 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.969 ± 0.608 (1.14)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

**Sample: BRGWA-23S**      **Lab ID: 92491393003**      Collected: 08/18/20 15:28      Received: 08/19/20 10:10      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.197 ± 0.113 (0.177)</b> <b>C:84% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.587 ± 0.442 (0.866)</b> <b>C:72% T:79%</b>	pCi/L	09/09/20 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.784 ± 0.555 (1.04)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-25I</b> <b>Lab ID: 92491393004</b> Collected: 08/19/20 09:50      Received: 08/20/20 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.288 ± 0.130 (0.188)</b> <b>C:86% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.179 ± 0.343 (0.752)</b> <b>C:72% T:90%</b>	pCi/L	09/09/20 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.467 ± 0.473 (0.940)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-29I</b> <b>Lab ID: 92491393005</b> Collected: 08/19/20 10:50      Received: 08/20/20 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.299 ± 0.162 (0.267)</b> <b>C:91% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.577 ± 0.428 (0.848)</b> <b>C:77% T:82%</b>	pCi/L	09/09/20 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.876 ± 0.590 (1.12)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-271</b> <b>Lab ID: 92491393006</b> Collected: 08/19/20 12:05      Received: 08/20/20 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.260 ± 0.132 (0.203)</b> <b>C:91% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.424 ± 0.358 (0.718)</b> <b>C:74% T:87%</b>	pCi/L	09/09/20 11:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.684 ± 0.490 (0.921)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-32S</b> <b>Lab ID: 92491393007</b> Collected: 08/19/20 13:20      Received: 08/20/20 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0531 ± 0.0881 (0.172)</b> <b>C:92% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.429 ± 0.407 (0.839)</b> <b>C:75% T:82%</b>	pCi/L	09/09/20 11:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.482 ± 0.495 (1.01)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: **BRGWC-30I** Lab ID: **92491393008** Collected: 08/19/20 15:05 Received: 08/20/20 10:03 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.299 ± 0.125 (0.167)</b> <b>C:88% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.703 ± 0.450 (0.863)</b> <b>C:72% T:86%</b>	pCi/L	09/09/20 11:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.00 ± 0.575 (1.03)</b>	pCi/L	09/11/20 08:26	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-45</b> <b>Lab ID: 92491393009</b> Collected: 08/20/20 12:12      Received: 08/21/20 11:08      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.194 ± 0.154 (0.275)</b> <b>C:88% T:NA</b>	pCi/L	09/03/20 18:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.307 ± 0.468 (1.01)</b> <b>C:62% T:74%</b>	pCi/L	09/09/20 15:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.501 ± 0.622 (1.29)</b>	pCi/L	09/10/20 15:16	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

**Sample: BRGWC-47**      **Lab ID: 92491393010**      Collected: 08/20/20 14:00      Received: 08/21/20 11:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.500 ± 0.164 (0.181)</b> <b>C:86% T:NA</b>	pCi/L	09/03/20 18:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.14 ± 0.652 (1.17)</b> <b>C:53% T:73%</b>	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.64 ± 0.816 (1.35)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: **BRGWC-50** Lab ID: **92491393011** Collected: 08/20/20 09:32 Received: 08/21/20 11:08 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.735 ± 0.193 (0.151)</b> <b>C:89% T:NA</b>	pCi/L	09/03/20 18:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.04 ± 0.699 (0.948)</b> <b>C:71% T:67%</b>	pCi/L	09/09/20 15:08	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.78 ± 0.892 (1.10)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: **BRGWC-52I** Lab ID: **92491393012** Collected: 08/20/20 09:45 Received: 08/21/20 11:08 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.684 ± 0.388 (0.589)</b> <b>C:84% T:NA</b>	pCi/L	09/04/20 07:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.29 ± 0.728 (0.901)</b> <b>C:70% T:69%</b>	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.97 ± 1.12 (1.49)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: **DUP-2** Lab ID: **92491393013** Collected: 08/20/20 00:00 Received: 08/21/20 11:08 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.602 ± 0.324 (0.420)</b> <b>C:87% T:NA</b>	pCi/L	09/04/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.11 ± 0.682 (0.878)</b> <b>C:71% T:75%</b>	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.71 ± 1.01 (1.30)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

**Sample: FB-2**      **Lab ID: 92491393014**      Collected: 08/20/20 09:20      Received: 08/21/20 11:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0152 ± 0.200 (0.536)</b> <b>C:84% T:NA</b>	pCi/L	09/04/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.713 ± 0.432 (0.796)</b> <b>C:69% T:83%</b>	pCi/L	09/09/20 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.728 ± 0.632 (1.33)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Sample: **EB-1** Lab ID: **92491393015** Collected: 08/20/20 12:45 Received: 08/21/20 11:08 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.115 ± 0.167 (0.346)</b> <b>C:89% T:NA</b>	pCi/L	09/04/20 07:51	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.206 ± 0.334 (0.724)</b> <b>C:69% T:84%</b>	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.321 ± 0.501 (1.07)</b>	pCi/L	09/10/20 15:16	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

QC Batch: 411440

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491393002, 92491393003, 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

METHOD BLANK: 1990348

Matrix: Water

Associated Lab Samples: 92491393002, 92491393003, 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.805 ± 0.381 (0.635) C:74% T:86%	pCi/L	09/09/20 11:25	

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: BRANCH BCD NETWORK  
 Pace Project No.: 92491393

QC Batch:	411439	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg
Associated Lab Samples:	92491393001, 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015		

METHOD BLANK:	1990347	Matrix:	Water
Associated Lab Samples:	92491393001, 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.274 ± 0.326 (0.685) C:63% T:88%	pCi/L	09/09/20 12:01	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

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QC Batch:	412359	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92491393001, 92491393002, 92491393003, 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

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METHOD BLANK: 1994519 Matrix: Water

Associated Lab Samples: 92491393001, 92491393002, 92491393003, 92491393004, 92491393005, 92491393006, 92491393007, 92491393008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0753 ± 0.0856 (0.159) C:96% T:NA	pCi/L	09/08/20 17:44	

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: BRANCH BCD NETWORK  
 Pace Project No.: 92491393

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QC Batch:	411375	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015

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METHOD BLANK: 1989998 Matrix: Water

Associated Lab Samples: 92491393009, 92491393010, 92491393011, 92491393012, 92491393013, 92491393014, 92491393015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.135 ± 0.115 (0.203) C:91% T:NA	pCi/L	09/03/20 16:47	

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## QUALIFIERS

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491393001	BRGWA-12I				
92491393002	BRGWA-12S				
92491393003	BRGWA-23S				
92491393004	BRGWC-25I				
92491393005	BRGWC-29I				
92491393006	BRGWC-27I				
92491393007	BRGWC-32S				
92491393008	BRGWC-30I				
92491393009	BRGWC-45				
92491393010	BRGWC-47				
92491393011	BRGWC-50				
92491393012	BRGWC-52I				
92491393001	BRGWA-12I	EPA 3005A	561324	EPA 6020B	561396
92491393002	BRGWA-12S	EPA 3005A	561324	EPA 6020B	561396
92491393003	BRGWA-23S	EPA 3005A	561324	EPA 6020B	561396
92491393004	BRGWC-25I	EPA 3005A	561963	EPA 6020B	562039
92491393005	BRGWC-29I	EPA 3005A	561963	EPA 6020B	562039
92491393006	BRGWC-27I	EPA 3005A	561963	EPA 6020B	562039
92491393007	BRGWC-32S	EPA 3005A	561963	EPA 6020B	562039
92491393008	BRGWC-30I	EPA 3005A	561963	EPA 6020B	562039
92491393009	BRGWC-45	EPA 3005A	561964	EPA 6020B	562041
92491393010	BRGWC-47	EPA 3005A	561964	EPA 6020B	562041
92491393011	BRGWC-50	EPA 3005A	561964	EPA 6020B	562041
92491393012	BRGWC-52I	EPA 3005A	561964	EPA 6020B	562041
92491393013	DUP-2	EPA 3005A	561964	EPA 6020B	562041
92491393014	FB-2	EPA 3005A	561964	EPA 6020B	562041
92491393015	EB-1	EPA 3005A	561964	EPA 6020B	562041
92491393001	BRGWA-12I	EPA 7470A	561377	EPA 7470A	561555
92491393002	BRGWA-12S	EPA 7470A	561377	EPA 7470A	561555
92491393003	BRGWA-23S	EPA 7470A	561377	EPA 7470A	561555
92491393004	BRGWC-25I	EPA 7470A	561900	EPA 7470A	562049
92491393005	BRGWC-29I	EPA 7470A	561900	EPA 7470A	562049
92491393006	BRGWC-27I	EPA 7470A	561900	EPA 7470A	562049
92491393007	BRGWC-32S	EPA 7470A	561900	EPA 7470A	562049
92491393008	BRGWC-30I	EPA 7470A	561900	EPA 7470A	562049
92491393009	BRGWC-45	EPA 7470A	561900	EPA 7470A	562049
92491393010	BRGWC-47	EPA 7470A	561900	EPA 7470A	562049
92491393011	BRGWC-50	EPA 7470A	561900	EPA 7470A	562049
92491393012	BRGWC-52I	EPA 7470A	561900	EPA 7470A	562049
92491393013	DUP-2	EPA 7470A	561900	EPA 7470A	562049
92491393014	FB-2	EPA 7470A	561900	EPA 7470A	562049
92491393015	EB-1	EPA 7470A	561894	EPA 7470A	562048
92491393001	BRGWA-12I	EPA 9315	412359		
92491393002	BRGWA-12S	EPA 9315	412359		
92491393003	BRGWA-23S	EPA 9315	412359		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK

Pace Project No.: 92491393

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491393004	BRGWC-25I	EPA 9315	412359		
92491393005	BRGWC-29I	EPA 9315	412359		
92491393006	BRGWC-27I	EPA 9315	412359		
92491393007	BRGWC-32S	EPA 9315	412359		
92491393008	BRGWC-30I	EPA 9315	412359		
92491393009	BRGWC-45	EPA 9315	411375		
92491393010	BRGWC-47	EPA 9315	411375		
92491393011	BRGWC-50	EPA 9315	411375		
92491393012	BRGWC-52I	EPA 9315	411375		
92491393013	DUP-2	EPA 9315	411375		
92491393014	FB-2	EPA 9315	411375		
92491393015	EB-1	EPA 9315	411375		
92491393001	BRGWA-12I	EPA 9320	411439		
92491393002	BRGWA-12S	EPA 9320	411440		
92491393003	BRGWA-23S	EPA 9320	411440		
92491393004	BRGWC-25I	EPA 9320	411440		
92491393005	BRGWC-29I	EPA 9320	411440		
92491393006	BRGWC-27I	EPA 9320	411440		
92491393007	BRGWC-32S	EPA 9320	411440		
92491393008	BRGWC-30I	EPA 9320	411440		
92491393009	BRGWC-45	EPA 9320	411439		
92491393010	BRGWC-47	EPA 9320	411439		
92491393011	BRGWC-50	EPA 9320	411439		
92491393012	BRGWC-52I	EPA 9320	411439		
92491393013	DUP-2	EPA 9320	411439		
92491393014	FB-2	EPA 9320	411439		
92491393015	EB-1	EPA 9320	411439		
92491393001	BRGWA-12I	Total Radium Calculation	413385		
92491393002	BRGWA-12S	Total Radium Calculation	413385		
92491393003	BRGWA-23S	Total Radium Calculation	413385		
92491393004	BRGWC-25I	Total Radium Calculation	413385		
92491393005	BRGWC-29I	Total Radium Calculation	413385		
92491393006	BRGWC-27I	Total Radium Calculation	413385		
92491393007	BRGWC-32S	Total Radium Calculation	413385		
92491393008	BRGWC-30I	Total Radium Calculation	413442		
92491393009	BRGWC-45	Total Radium Calculation	413385		
92491393010	BRGWC-47	Total Radium Calculation	413385		
92491393011	BRGWC-50	Total Radium Calculation	413385		
92491393012	BRGWC-52I	Total Radium Calculation	413385		
92491393013	DUP-2	Total Radium Calculation	413385		
92491393014	FB-2	Total Radium Calculation	413385		
92491393015	EB-1	Total Radium Calculation	413385		
92491393001	BRGWA-12I	EPA 300.0 Rev 2.1 1993	561236		
92491393002	BRGWA-12S	EPA 300.0 Rev 2.1 1993	561236		
92491393003	BRGWA-23S	EPA 300.0 Rev 2.1 1993	561236		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK  
Pace Project No.: 92491393

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491393004	BRGWC-25I	EPA 300.0 Rev 2.1 1993	561506		
92491393005	BRGWC-29I	EPA 300.0 Rev 2.1 1993	561506		
92491393006	BRGWC-27I	EPA 300.0 Rev 2.1 1993	561506		
92491393007	BRGWC-32S	EPA 300.0 Rev 2.1 1993	561506		
92491393008	BRGWC-30I	EPA 300.0 Rev 2.1 1993	561506		
92491393009	BRGWC-45	EPA 300.0 Rev 2.1 1993	562094		
92491393010	BRGWC-47	EPA 300.0 Rev 2.1 1993	562094		
92491393011	BRGWC-50	EPA 300.0 Rev 2.1 1993	562094		
92491393012	BRGWC-52I	EPA 300.0 Rev 2.1 1993	562094		
92491393013	DUP-2	EPA 300.0 Rev 2.1 1993	562094		
92491393014	FB-2	EPA 300.0 Rev 2.1 1993	562094		
92491393015	EB-1	EPA 300.0 Rev 2.1 1993	562094		

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Sample Condition Upon Receipt

W0#: 92491393

Client Name: GA Power



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: \_\_\_\_\_

Proj. Due Date: \_\_\_\_\_  
Proj. Name: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used 233 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 3.6°C Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 5/19/20 COH

Temp should be above freezing to 6°C Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

Project #

**WO# : 92491393**

PM: KLH1

Due Date: 09/02/20

CLIENT: GA-GA Power

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

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

• Bottom half of box is to list number of bottle

Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#	Matrix	Item#
	BP4U-125 mL Plastic Unpreserved (N/A) (C-)		BP9U-250 mL Plastic Unpreserved (N/A)		BP2U-500 mL Plastic Unpreserved (N/A)		BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)		BP3M-250 mL plastic HNO3 (pH < 2)		BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)		BP4C-125 mL Plastic NaOH (pH > 12) (C-)
	WGJU-Wide-mouthed Glass Jar Unpreserved		AG1U-1 liter Amber Unpreserved (N/A) (C-)		AG1H-1 liter Amber HCl (pH < 2)		AG3U-250 mL Amber Unpreserved (N/A) (C-)		AG1S-1 liter Amber H2SO4 (pH < 2)		AG3S-250 mL Amber H2SO4 (pH < 2)		AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)		DG9H-40 mL VOA HCl (N/A)
															VG9T-40 mL VOA Na2S2O3 (N/A)
															VG9U-40 mL VOA Unp (N/A)
															DG9P-40 mL VOA H3PO4 (N/A)
															VOAK (6 vials per kit)-5035 kit (N/A)
															V/GK (3 vials per kit)-VPH/Gas kit (N/A)
															SP5T-125 mL Sterile Plastic (N/A - lab)
															SP2T-250 mL Sterile Plastic (N/A - lab)
															BP5A-250 mL Plastic (NH2)2SO4 (9.3-9.7)
															AG2U-100 mL Amber Unpreserved vials (N/A)
															VSGU-20 mL Sterilization vials (N/A)

**pH Adjustment Log for Preserved Samples**

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

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



# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road, Atlanta, GA 30339  
 Report To: Joju Abraham  
 Email: scsinvoices@southernco.com

Copy To: Golder  
 Site Collection Info/Address: Plant Branch

State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: (404) 506-7239  
 Email: jabraham@southernco.com

Project Name: Plant Branch BCD Network  
 Project # CCR  
 Pace Profile#

Collected By (print): Travis Martinez, Andrea McCure  
 Purchase Order #  
 Quote #  
 Pace Project Manager: kevin.herring@paceabs.com

Collected By (signature): *[Signature]*  
 Turnaround Date Required:  
 Immediately Packed on ice: [X] Yes [ ] No  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (W), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWA-12I	GW	G	8-18-2020	1305			6.25	4
BRGWA-12S	GW	G	8-18-2020	1625			5.75	4
BRGWA-23S	GW	G	8-18-2020	1528			5.56	4

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here

## ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type \*\*  
 1 1 1

Lab Project Manager:

\*\* Preservative types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Soils Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 O Strips:  
 Sample pH Acceptable Y N NA  
 pH Strips  
 Sulfide Present Y N NA  
 Lead Acetate Strips:

Metals App IV - see comments

	Fluoride	Radium 226.228	Mercury
X	X	X	X
X	X	X	X
X	X	X	X

LAB USE ONLY  
 Lab Sample # / Comments: 92491393

(App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, Li, Mo, Se, Tl

Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: 233  
 Cooler 1 Temp Upon Receipt: 46  
 Cooler 1 Therm Corr. Factor: 0.0C  
 Cooler 1 Corrected Temp: 46  
 Comments:

Relinquished by/Company: (Signature) *[Signature]* / Golder  
 Date/Time: 8-19-2020 / 0815

Received by/Company: (Signature) *[Signature]*  
 Date/Time: 08/19/20 1010

Relinquished by/Company: (Signature)  
 Date/Time:

Received by/Company: (Signature)  
 Date/Time:

Relinquished by/Company: (Signature)  
 Date/Time:

Received by/Company: (Signature)  
 Date/Time:

MTJL LAB USE ONLY  
 Table #:  
 Account:  
 Template:  
 Prelcgin:  
 PM:  
 PB:

Trip Blank Received: Y N NA  
 HCL MeOH TSP Other

Non Conformance(s): YES / NO  
 Page: 1 of 1





# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals		Billing Information:	
Address: 2480 Maner Road Atlanta, GA 30339			
Report To: Jojo Abraham		Email To: scsinvoices@southernco.com	
Copy To: Golder		Site Collection Info/Address: Plant Branch	
phone: (404) 506-7239		State: Georgia City: Milledgeville Time Zone Collected:	
Email: jabraham@southernco.com		PT    MT    CT  X ET	
Phone: (404) 506-7239		Project Name: Plant Branch BCD Network	
Email: jabraham@southernco.com		Project # CCR	
Collected By (print): Travis Martinez, Andrea McClure		Purchase Order #	
Collected By (signature): <i>[Signature]</i>		Quote #	
Turnaround Date Required:		Pace Project Manager:	
Rush:     Same Day     Next Day		kevin.herring@pacelabs.com	
2 Day     3 Day     4 Day     5 Day		Immediately Packed on Ice:	
(Expedite Charges Apply)		[X] Yes     No	
		Field Filtered (if applicable):	
		Yes     No	
		Analysis: _____	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BR6WC-25I	GW	6	8-19-2020	0950			6.32	4
BR6WC-29I	GW	6	8-19-2020	1050			4.67	4
BR6WC-27I	GW	6	8-19-2020	1205			5.81	4
BR6WC-32S	GW	6	8-19-2020	1320			5.97	4
BR6WC-30I	GW	6	8-19-2020	1505			6.36	4

LAB USE ONLY - AMF: \_\_\_\_\_ Label Name or List Pace Workorder Number or  
**WO#: 92491393**

ALL S: PM: KLH1 Due Date: 09/02/20  
 CLIENT: GA-GA Power

Container Prese: 1 1

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses				Lab Profile/Line:
Metals App IV - see comments	Fluoride	Radium 226.228	Mercury	Lab Sample Receipt Checklist:
				Custody Seals Present/Intact Y N NA
				Custody Signatures Present Y N NA
				Collector Signature Present Y N NA
				Bottles Intact Y N NA
Correct Bottles Y N NA				
Sufficient Volume Y N NA				
Samples Received on Ice Y N NA				
VOA - Headspace Acceptable Y N NA				
USDA Regulated Soils Y N NA				
Samples in Holding Time Y N NA				
Residual Chlorine Present Y N NA				
CI Strips:				
Sample pH Acceptable Y N NA				
pH Strips:				
Sulfide Present Y N NA				
Lead Acetate Strips:				

LAB USE ONLY:  
 Lab Sample # / Comments: 92491393

[App IV Metals]: Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, Li, Mo, Se, Tl	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: TH2030 Cooler 1 Temp Upon Receipt: 5°C Cooler 1 Therm Corr. Factor: DoC Cooler 1 Corrected Temp: 15°C
Relinquished by/Company: (Signature) <i>[Signature]</i>	Packing Material Used:	Lab Tracking #:	Comments:
Date/Time: 8-20-2020/0815	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	
Relinquished by/Company: (Signature)	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 8/20/20 1003	MTEL LAB USE ONLY
Relinquished by/Company: (Signature)	Received by/Company: (Signature)	Date/Time:	Table #:
			Acctnum:
			Template:
			Prelogin:
			PM:
			PB:
			Trip Blank Received: Y N NA HCL MeOH TSP Other
			Non Conformance(s): YES / NO
			Page: 1 of: 1



# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTJL Log-In Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals  
Address: 2480 Maner Road  
Atlanta, GA 30339  
Report To: Joju Abraham  
Copy To: Golder  
Phone: (404) 506-7239  
Email: jabraham@southernco.com

Billing Information:  
Email To: scsvoices@southernco.com  
Site Collection Info/Address: Plant Branch  
State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Project Name: Plant Branch BCD Network  
Project # CCR  
Pace Profile#  
Pace Project Manager: kevin.herring@pacelabs.com  
Purchase Order #  
Quote #  
Turnaround Date Required  
Immediately Packed on Ice: [X] Yes [ ] No  
Field Filtered (if applicable): [ ] Yes [ ] No  
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)  
Analysis: \_\_\_\_\_

Container Preservative Type \*\*  
1 1 1  
Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWC-45	GW	G	8-20-2020	1212			5.86	4
BRGWC-47	GW	G	8-20-2020	1400			5.75	4
BRGWC-50	GW	G	8-20-2020	0932			5.26	4
BRGWC-52I	GW	G	8-20-2020	0945			6.85	6
DUP-2	GW	G	8-20-2020	-			-	5
FB-2	WT	G	8-20-2020	0920			-	4
FB-1	WT	G	8-20-2020	1245			-	4

Metals App IV - see comments	Fluoride	Radium 226,228	Mercury	Lab Profile/Line:	
				Lab Sample Receipt Checklist:	Lab Sample # / Comments:
					92491303
					009
					010
					011
					Rad-3 (+2 Radium) 012
					013
					014
					015

[App IV Metals] Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, U, Mo, Se, Tl  
Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via:  
FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID: 233  
Cooler 1 Temp Upon Receipt: 20°C  
Cooler 1 Therm Corr. Factor: 0.0°C  
Cooler 1 Corrected Temp: 20°C  
Comments:

Relinquished by/Company (Signature): *A. McElvree/Golder*  
Date/Time: 9/21/20 1108  
Received by/Company (Signature): *R. W. McCoy/Pace*  
Date/Time: 9/21/20 1108

MTJL LAB USE ONLY  
Table #:  
Acctnum:  
Template:  
Prelogin:  
PM:  
PS:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): YES / NO  
Page: 1 of 1



## Quality Control Sample Performance Assessment

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Test: Ra-228  
Analyst: LAL  
Date: 9/3/2020  
Worklist: 55809  
Matrix: DW

Method Blank Assessment	
MB Sample ID	199998
MB Concentration	0.136
MB Counting Uncertainty	0.113
MB MDC	0.203
MB Numerical Performance Indicator	2.34
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCS (Y or N)†	
	LCS55839	LCS55839
Count Date	9-4-2020	
Spike I.D.	19-039	
Decay Corrected Spike Concentration (pCi/mL)	24.045	
Volume Used (mL)	0.10	
Aliquot Volume (L, g, F)	0.502	
Target Conc. (pCi/L, g, F)	4.735	
Uncertainty (Calculated)	0.057	
Result (pCi/L, g, F)	4.055	
LSC/LSD Counting Uncertainty (pCi/L, g, F)	0.782	
Numerical Performance Indicator	-1.72	
Percent Recovery	85.64%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

Duplicate Sample Assessment		
Sample I.D.	9249199012	Enter Duplicate sample I.D.s if other than LCS/LSD in the space below
Duplicate Sample I.D.	9249199012 DUP	
Sample Result (pCi/L, g, F)	0.284	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.375	
Sample Duplicate Result (pCi/L, g, F)	0.377	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.254	
Are sample and/or duplicate results below RL?	See Below #	
Duplicate Numerical Performance Indicator	1.237	
Duplicate RPD	67.84%	
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Fail	
% RPD Limit	25%	

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

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

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

Comments:

~~Batch must be re-prepared due to unacceptable precision.~~ N/A

LAL 9/4/2020

LAL 9/4/2020

LAL 9/4/2020





## Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 9/3/2020  
Worklist: 55839  
Matrix: DWY

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment		
MB Sample ID	198296	
MB Concentration	0.135	
MB Counting Uncertainty	0.113	
MB MDC	0.205	
MB Numerical Performance Indicator	2.34	
MB Status vs Numerical Indicator	N/A	
MB Status vs MDC	Pass	

Laboratory Control Sample Assessment	LCS# (Y or N)?	N
	LCS#55839	LCS#55839
Count Date	9/4/2020	
Spae. D.	15-032	
Decay Corrected Spike Concentration (pCi/mL)	24.045	
Volume Used (mL)	0.10	
Aliquot Volume (L, g, F)	0.502	
Target Conc. (pCi/L, g, F)	4.765	
Uncertainty (Calculated)	0.057	
Result (pCi/L, g, F)	4.590	
LCS/LCSD Counting Uncertainty (pCi/L, g, F)	0.782	
Numerical Performance Indicator	-1.72	
Percent Recovery	85.64%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

Duplicate Sample Assessment		
Sample ID:	9249165308	Enter Duplicate sample IDs if other than LCS/LCSD in the space below
Duplicate Sample ID:	9249165308DUP	
Sample Result (pCi/L, g, F)	3.467	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.143	
Sample Duplicate Result (pCi/L, g, F)	0.359	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.236	
Are sample and/or duplicate results below RL?	See Below #	
Duplicate Numerical Performance Indicator	0.728	
Duplicate RPD	28.34%	9249165308
Duplicate Status vs Numerical Indicator	N/A	9249165308DUP
Duplicate Status vs RPD	Fail	
% RPD Limit	25%	

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

Comments:

~~Blank must be rechecked due to unacceptable precision~~ N/A JAM 9/4/2020

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

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

*Ch 9/4/20*



### Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 9/9/2020  
Worksheet: 55562  
Matrix: D/W

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1994519
MB Concentration	0.075
MB Counting Uncertainty	0.085
MB MDC	0.159
MB Numerical Performance Indicator	1.74
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD55962	LCSD65962
Count Date	9/9/2020	9/9/2020
Spike I.D.	19-033	15-033
Decay Corrected Spike Concentration (pCi/ml)	24.045	24.045
Volume Used (ml)	0.10	0.10
Aliquot Volume (L, g, F)	0.506	0.506
Target Conc. (pCi/L, g, F)	4.757	4.755
Uncertainty (Calculated)	0.357	0.357
Result (pCi/L, g, F)	4.703	4.482
LCSD Counting Uncertainty (pCi/L, g, F)	0.754	0.767
Numerical Performance Indicator	-0.13	-0.69
Percent Recovery	98.55%	94.27%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	125%	125%
Lower % Recovery Limit	75%	75%

Duplicate Sample Assessment		
Sample I.D.	LCSD55962	Enter Duplicate sample IDs if other than LCSD LCSD in the space below.
Duplicate Sample I.D.	LCSD65962	
Sample Result (pCi/L, g, F)	4.703	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.754	
Sample Duplicate Result (pCi/L, g, F)	4.482	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.767	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator	0.332	
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD	4.77%	
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Pass	
% RPD Limit	25%	

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

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

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

Comments:

LAL 9/9/2020

*Handwritten signature*



### Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 9/8/2020  
Worklist: 55962  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1994518
MB Concentration	0.075
MB Counting Uncertainty	0.065
MB MCC	0.159
MB Numerical Performance Indicator	1.74
MB Status vs Numerical Indicator	N/A
MB Status vs MCC	Pass

Laboratory Control Sample Assessment	LCS0 (Y or N)?	4
		LCS05962
Count Date	9/8/2020	
Spike I.D.	19-033	
Decay Corrected Spike Concentration (pCi/mL)	24.045	
Volume Used (mL)	0.10	
Aliquot Volume (L, g, F)	0.506	
Target Conc. (pCi, g, F)	4.757	
Uncertainty (Calculated)	0.557	
Result (pCi, g, F)	4.705	
LCS/LCSD Counting Uncertainty (pCi, g, F)	0.184	
Numerical Performance Indicator	-0.13	
Percent Recovery	98.68%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

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

Duplicate Sample Assessment		Enter Duplicate Sample ID if other than LCS/LCSD in the space below.
Sample I.D.	52491305007	
Duplicate Sample I.D.	52491305007CUP	
Sample Result (pCi, g, F)	0.353	
Sample Result Counting Uncertainty (pCi, g, F)	0.338	
Sample Duplicate Result (pCi, g, F)	0.384	
Sample Duplicate Result Counting Uncertainty (pCi, g, F)	0.386	
Are sample and/or duplicate results below RPD?	See Below **	
Duplicate Numerical Performance Indicator	-0.651	
Duplicate RPD	35.49%	
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Fail***	
% RPD Limit	25%	

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

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

Comments:

\*\*\* Sample MS is being dropped due to unacceptable precision. N/A

LAL 9/9/2020

LAL 9/9/2020

LAL 9/9/20



### Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: VAL  
Date: 9/2/2020  
Worklist: 55853  
Matrix: Wt

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment	
MB Sample ID	1590047
MB Concentration	0.274
MB 2 Sigma CSU	0.225
MB MDC	0.685
MB Numerical Performance Indicator	1.65
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCS? (Y or N)?	
	LCS55853	LCS65853
Count Date	9/2/2020	9/2/2020
Spike ID	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL)	38.472	38.472
Volume Used (mL)	0.10	0.10
Aliquot Volume (L g. F)	0.810	0.812
Target Conc. (pCi/L g. F)	4.748	4.755
Uncertainty (Calculated)	0.233	0.232
Result (pCi/L g. F)	4.900	5.603
LCS/LCSD 2 Sigma CSU (pCi/L g. F)	1.118	1.205
Numerical Performance Indicator	0.37	1.38
Percent Recovery	104.53%	113.30%
Status vs Numerical Indicator	NA	NA
Status vs Recovery	Pass	Pass
Upper % Recovery Limits	135%	125%
Lower % Recovery Limits	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample ID:		
Sample MS ID:		
Sample MSD ID:		
Spike ID:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L g. F):		
MS Target Conc. (pCi/L g. F):		
MSD Aliquot (L g. F):		
MSD Target Conc. (pCi/L g. F):		
MS Spike Uncertainty (Calculated):		
MSD Spike Uncertainty (Calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L g. F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L g. F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L g. F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample ID:	LCS55853	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample ID:	LCS65853	
Sample Result (pCi/L g. F):	4.850	
Sample Result 2 Sigma CSU (pCi/L g. F):	1.118	
Sample Duplicate Result (pCi/L g. F):	5.603	
Sample Duplicate Result 2 Sigma CSU (pCi/L g. F):	1.205	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	-0.752	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	35%	

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

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

Comments:

VAL  
9-10-20

OK  
9/10/20



### Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: VAL  
Date: 9/9/2020  
Work #: 55654  
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	1550445
MB Concentration	0.006
MB 2 Sigma CSU	0.021
MB MDC	0.036
MB Numerical Performance Indicator	4.14
MB Status vs Numerical Indicator	Fail*
MB Status vs. MDC	See Comment*

Laboratory Control Sample Assessment	LCS# (Y or N)?	Y
	LCS#55654	LCS#55654
Cont Date:	9/9/2020	9/9/2020
Spike ID:	20490	20490
Decay Corrected Spike Concentration (pCi/L)	38.472	38.472
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, Ft)	3.815	0.512
Target Conc. (pCi/L, g, Ft)	4.718	4.741
Uncertainty (Calculated)	0.231	0.222
Result (pCi/L, g, Ft)	5.944	5.257
LCS/LCSD 2 Sigma CSU (pCi/L, g, Ft)	1.289	1.159
Numerical Performance Indicator	1.83	0.85
Percent Recovery	125.96%	110.65%
Status vs Numerical Indicator	Fail	Pass
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	125%	133%
Lower % Recovery Limit	80%	63%

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

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS#55654	
Duplicate Sample I.D.:	LCS#55654	
Sample Result (pCi/L, g, Ft)	5.944	
Sample Result 2 Sigma CSU (pCi/L, g, Ft)	1.289	
Sample Duplicate Result (pCi/L, g, Ft)	5.257	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, Ft)	1.159	
Are sample and/or duplicate results below RLP?	NO	
Duplicate Numerical Performance Indicator	0.777	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD	12.74%	
Duplicate Status vs Numerical Indicator	Pass	
Duplicate Status vs RPD	Pass	
% RPD Limit	36%	

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

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

Comments:

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

VAL  
9-10-20

VAL  
9-10-20

September 11, 2020

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

RE: Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92491914

Dear Joju Abraham:

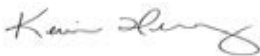
Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92491914

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### **Pace Analytical Services Pennsylvania**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92491914001	PZ-51S	Water	08/20/20 13:30	08/21/20 11:08
92491914002	PZ-51I	Water	08/20/20 11:45	08/21/20 11:08

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92491914001	PZ-51S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92491914002	PZ-51I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491914001</b>	<b>PZ-51S</b>					
EPA 9315	Radium-226	0.0795 ± 0.170 (0.400)	pCi/L		09/04/20 07:31	
EPA 9320	Radium-228	C:94% T:NA 1.11 ± 0.491 (0.779)	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	C:66% T:80% 1.19 ± 0.661 (1.18)	pCi/L		09/10/20 15:16	
<b>92491914002</b>	<b>PZ-51I</b>					
EPA 9315	Radium-226	0.237 ± 0.130 (0.209)	pCi/L		09/08/20 17:44	
EPA 9320	Radium-228	C:87% T:NA 0.700 ± 0.436 (0.811)	pCi/L		09/09/20 14:43	
Total Radium Calculation	Total Radium	C:69% T:82% 0.937 ± 0.566 (1.02)	pCi/L		09/10/20 15:16	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

**Sample: PZ-51S**      **Lab ID: 92491914001**      Collected: 08/20/20 13:30      Received: 08/21/20 11:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0795 ± 0.170 (0.400)</b> <b>C:94% T:NA</b>	pCi/L	09/04/20 07:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.11 ± 0.491 (0.779)</b> <b>C:66% T:80%</b>	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.19 ± 0.661 (1.18)</b>	pCi/L	09/10/20 15:16	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

**Sample: PZ-511**      **Lab ID: 92491914002**      Collected: 08/20/20 11:45      Received: 08/21/20 11:08      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.237 ± 0.130 (0.209)</b> <b>C:87% T:NA</b>	pCi/L	09/08/20 17:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.700 ± 0.436 (0.811)</b> <b>C:69% T:82%</b>	pCi/L	09/09/20 14:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.937 ± 0.566 (1.02)</b>	pCi/L	09/10/20 15:16	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

QC Batch: 411439

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491914001, 92491914002

METHOD BLANK: 1990347

Matrix: Water

Associated Lab Samples: 92491914001, 92491914002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.274 ± 0.326 (0.685) C:63% T:88%	pCi/L	09/09/20 12:01	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

QC Batch: 412359

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491914002

METHOD BLANK: 1994519

Matrix: Water

Associated Lab Samples: 92491914002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0753 ± 0.0856 (0.159) C:96% T:NA	pCi/L	09/08/20 17:44	

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

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

QC Batch: 411375

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92491914001

METHOD BLANK: 1989998

Matrix: Water

Associated Lab Samples: 92491914001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.135 ± 0.115 (0.203) C:91% T:NA	pCi/L	09/03/20 16:47	

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

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92491914

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92491914

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491914001	PZ-51S	EPA 9315	411375		
92491914002	PZ-51I	EPA 9315	412359		
92491914001	PZ-51S	EPA 9320	411439		
92491914002	PZ-51I	EPA 9320	411439		
92491914001	PZ-51S	Total Radium Calculation	413385		
92491914002	PZ-51I	Total Radium Calculation	413385		

**REPORT OF LABORATORY ANALYSIS**

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92491914**



92491914

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Proj. Name: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 230    Type of Ice:  Wet  Blue  None     Samples on ice, cooling process has begun

Cooler Temperature 2.6  
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and initials of person examining contents: 8/21/2004

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed    Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_    Field Data Required?    Y / N

Person Contacted: \_\_\_\_\_    Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_    Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019  
Page 1 of 1

Issuing Authority:  
Pace Analytical

**WO#: 92491914**

Project #

PM: KLH1

Due Date: 09/14/20

CLIENT: GA-GA Power

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/B015 (water) DOC, LLHg

• Bottom half of box is to list number of bottle

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

**pH Adjustment Log for Preserved Samples**

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

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





### CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT. Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTL Log-in Number Here

### ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham

Billing Information:  
 Email To: scsinvoices@southernco.com

Copy To: Golder  
 Site Collection Info/Address: Plant Branch

Phone: (404) 506-7239  
 Email: jabraham@southernco.com

Project Name: Plant Branch BCD Assessment  
 Project # CCR  
 Purchase Order #  
 Quote #

Collected By (print): Travis Martinez, Andrea McClure  
 Collected By (signature): *[Signature]*

Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  4 Day  5 Day  
 (Expedite Charges Apply)

State: Georgia City: Milledgeville Time Zone Collected:  
 PT  MT  CT  ET

Pace Profile#  
 Pace Project Manager:  
 kevin.herring@pacelabs.com

Immediately Packed on Ice:  
 Yes  No

Field Filtered (if applicable):  
 Yes  No

Analysis: \_\_\_\_\_

Container Preservative Type \*\*  
 1 1 1

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:			
	Metals App V - see comments	Fluoride	Radium 226.228	Mercury
	X	X	X	X
	X	X	X	X

Lab Sample Receipt Checklist:

Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Soils Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 CI Strips: \_\_\_\_\_  
 Sample pH Acceptable Y N NA  
 pH Strips: \_\_\_\_\_  
 Sulfide Present Y N NA  
 Lead Acetate Strips: \_\_\_\_\_

LAB USE ONLY:  
 Lab Sample # / Comments:  
 62491914

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW),  
 Product (P), Soil/Solid (S), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Cens
			Date	Time	Date	Time		
PZ-51S	GW	G	8-20-2020	1330			6.15	4
PZ-51I	GW	G	8-20-2020	1145			5.57	4

(App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, Li, Mo, Se, Ti

Type of Ice Used: Wet Blue Dry None

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used:

Lab Tracking #:

Radchem sample(s) screened (<500 cpm): Y N NA

Samples received via:  
 FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID: 232  
 Cooler 1 Temp Upon Receipt: 20°C  
 Cooler 1 Therm Corr. Factor: 0°C  
 Cooler 1 Corrected Temp: 20°C  
 Comments:

Relinquished by/Company: (Signature) <i>[Signature]</i> A. McClure/Golder	Date/Time: 8/21/20 1108	Received by/Company: (Signature) <i>[Signature]</i> K. Welch/Pace	Date/Time: 8/21/20 1108	MTL LAB USE ONLY Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

Trip Blank Received: Y N NA  
 HCL MeOH TSP Other

Non Conformance(s): YES / NO Page: 1 of 1

September 09, 2020

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

RE: Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92491917

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

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

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### **Pace Analytical Services Peachtree Corners**

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

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92491917001	PZ-51S	Water	08/20/20 13:30	08/21/20 11:08
92491917002	PZ-51I	Water	08/20/20 11:45	08/21/20 11:08

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92491917001	PZ-51S	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92491917002	PZ-51I	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92491917001</b>	<b>PZ-51S</b>					
	pH	6.15	Std. Units		09/09/20 17:02	
EPA 6020B	Barium	0.030	mg/L	0.010	08/28/20 15:53	
EPA 6020B	Chromium	0.00063J	mg/L	0.010	08/28/20 15:53	
EPA 6020B	Cobalt	0.0039J	mg/L	0.0050	08/28/20 15:53	
EPA 300.0 Rev 2.1 1993	Fluoride	0.056J	mg/L	0.10	08/25/20 20:05	
<b>92491917002</b>	<b>PZ-51I</b>					
	pH	5.57	Std. Units		09/09/20 17:02	
EPA 6020B	Antimony	0.0017J	mg/L	0.0030	08/28/20 16:16	
EPA 6020B	Barium	0.013	mg/L	0.010	08/28/20 16:16	
EPA 6020B	Beryllium	0.000077J	mg/L	0.0030	08/28/20 16:16	
EPA 6020B	Cadmium	0.0019J	mg/L	0.0025	08/28/20 16:16	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	08/28/20 16:16	
EPA 6020B	Lithium	0.019J	mg/L	0.030	08/28/20 16:16	
EPA 7470A	Mercury	0.000099J	mg/L	0.00020	08/27/20 10:24	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92491917

Sample: PZ-51S		Lab ID: 92491917001		Collected: 08/20/20 13:30		Received: 08/21/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.15	Std. Units			1		09/09/20 17:02		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	08/27/20 17:10	08/28/20 15:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 15:53	7440-38-2	
Barium	0.030	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 15:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 15:53	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 15:53	7440-43-9	
Chromium	0.00063J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 15:53	7440-47-3	
Cobalt	0.0039J	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 15:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 15:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 15:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 15:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 15:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 15:53	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	08/26/20 12:00	08/27/20 10:14	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.056J	mg/L	0.10	0.050	1		08/25/20 20:05	16984-48-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92491917

Sample: PZ-511		Lab ID: 92491917002		Collected: 08/20/20 11:45		Received: 08/21/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.57	Std. Units			1		09/09/20 17:02		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0017J	mg/L	0.0030	0.00028	1	08/27/20 17:10	08/28/20 16:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 16:16	7440-38-2	
Barium	0.013	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 16:16	7440-39-3	
Beryllium	0.000077J	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 16:16	7440-41-7	
Cadmium	0.0019J	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 16:16	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 16:16	7440-47-3	
Cobalt	0.020	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 16:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 16:16	7439-92-1	
Lithium	0.019J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 16:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 16:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 16:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 16:16	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.000099J	mg/L	0.00020	0.000078	1	08/26/20 12:00	08/27/20 10:24	7439-97-6	
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		08/25/20 20:20	16984-48-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92491917

QC Batch: 562831 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92491917001, 92491917002

METHOD BLANK: 2984655 Matrix: Water  
Associated Lab Samples: 92491917001, 92491917002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/28/20 15:42	
Arsenic	mg/L	ND	0.0050	0.00078	08/28/20 15:42	
Barium	mg/L	ND	0.010	0.00071	08/28/20 15:42	
Beryllium	mg/L	ND	0.0030	0.000046	08/28/20 15:42	
Cadmium	mg/L	ND	0.0025	0.00012	08/28/20 15:42	
Chromium	mg/L	ND	0.010	0.00055	08/28/20 15:42	
Cobalt	mg/L	ND	0.0050	0.00038	08/28/20 15:42	
Lead	mg/L	ND	0.0050	0.000036	08/28/20 15:42	
Lithium	mg/L	ND	0.030	0.00081	08/28/20 15:42	
Molybdenum	mg/L	ND	0.010	0.00069	08/28/20 15:42	
Selenium	mg/L	ND	0.010	0.0016	08/28/20 15:42	
Thallium	mg/L	ND	0.0010	0.00014	08/28/20 15:42	

LABORATORY CONTROL SAMPLE: 2984656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.095	95	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.093	93	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.089	89	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.089	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984657 2984658

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491917001 Result	Spike Conc.	Spike Conc.	Result							Result
Antimony	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20	
Barium	mg/L	0.030	0.1	0.1	0.12	0.12	94	89	75-125	4	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	1	20	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

Parameter	Units	2984657		2984658		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92491917001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	3	20		
Chromium	mg/L	0.00063J	0.1	0.1	0.098	0.095	98	94	75-125	4	20		
Cobalt	mg/L	0.0039J	0.1	0.1	0.10	0.098	96	94	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.090	0.088	90	88	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.098	0.096	97	96	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.093	93	93	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.090	0.089	90	89	75-125	1	20		

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

QC Batch: 562436

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92491917001, 92491917002

METHOD BLANK: 2982834

Matrix: Water

Associated Lab Samples: 92491917001, 92491917002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	08/27/20 10:10	

LABORATORY CONTROL SAMPLE: 2982835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982836 2982837

Parameter	Units	2982836		2982837		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0024	97	96	75-125	1	20

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92491917

QC Batch: 562094 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92491917001, 92491917002

METHOD BLANK: 2981303 Matrix: Water  
Associated Lab Samples: 92491917001, 92491917002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/25/20 12:53	

LABORATORY CONTROL SAMPLE: 2981304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981305 2981306

Parameter	Units	2981305		2981306		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92492088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	105	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981307 2981308

Parameter	Units	2981307		2981308		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92491393009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	103	103	90-110	0	10

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92491917

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92491917

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92491917001	PZ-51S				
92491917002	PZ-51I				
92491917001	PZ-51S	EPA 3005A	562831	EPA 6020B	562944
92491917002	PZ-51I	EPA 3005A	562831	EPA 6020B	562944
92491917001	PZ-51S	EPA 7470A	562436	EPA 7470A	562585
92491917002	PZ-51I	EPA 7470A	562436	EPA 7470A	562585
92491917001	PZ-51S	EPA 300.0 Rev 2.1 1993	562094		
92491917002	PZ-51I	EPA 300.0 Rev 2.1 1993	562094		

**REPORT OF LABORATORY ANALYSIS**

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92491917**



92491917

Proj. Name: \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used \_\_\_\_\_ Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 23.0

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8/24/2004

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

Project #

**WO#: 92491917**

PH: KLH1

Due Date: 09/04/20

CLIENT: GR-GA Power

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

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

• Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scrubbing vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

**pH Adjustment Log for Preserved Samples**

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

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



### CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT. Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals		Billing Information:	
Address: 2480 Maner Road Atlanta, GA 30339		Email To: scs@voices@southernco.com	
Report To: Joju Abraham		Site Collection Info/Address: Plant Branch	
Copy To: Golder		State: Georgia City: Milledgeville Time Zone Collected:   PT   MT   CT   X   ET	
Phone: (404) 506-7239 Email: j.abraham@southernco.com		Project Name: Plant Branch BCD Assessment Project # CCR	
Phone: (404) 506-7239 Email: j.abraham@southernco.com		Purchase Order # Quote #	
Collected By (print): Travis Martinez, Andrea McClure		Pace Project Manager: kevin.herring@pacelabs.com	
Collected By (signature): <i>[Signature]</i>		Turnaround Date Required:   X   Yes     No	
Rush:     Same Day     Next Day     2 Day     3 Day     4 Day     5 Day (Expedite Charges Apply)		Field Filtered (if applicable):     Yes     No	
Analysis:		Pace Profile#	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (OL), Waste (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
PZ-51S	GW	G	8-20-2020	1330			6.15	4
PZ-51I	GW	G	8-20-2020	1145			5.57	4

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

### ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type **				Lab Project Manager:			
1	1	1					
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other							
Analyses				Lab Profile/Line:			
Metals App IV - see comments	Fluoride	Radium 226,228	Mercury	Lab Sample Receipt Checklist:			
				Custody Seals Present/Intact Y N NA			
				Custody Signatures Present Y N NA			
				Collector Signature Present Y N NA			
				Bottles Intact Y N NA			
				Correct Bottles Y N NA			
				Sufficient Volume Y N NA			
				Samples Received on Ice Y N NA			
				VOA - Headspace Acceptable Y N NA			
				USDA Regulated Soils Y N NA			
				Samples in Holding Time Y N NA			
				Residual Chlorine Present Y N NA			
				Cl Strips			
				Sample pH Acceptable Y N NA			
				pH Strips			
				Sulfide Present Y N NA			
				Lead Acetate Strips			
LAB USE ONLY: Lab Sample # / Comments: <i>9241917</i>							

(App IV Metals): Sb, As, Ba, Be, Cd, Cr, Co, Hg, Pb, Li, Mo, Se, Ti	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A
Packing Material Used:	Lab Tracking #:	
Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID# <i>233</i> Cooler 1 Temp Upon Receipt: <i>20</i> °C Cooler 1 Therm Corr. Factor: <i>0</i> °C Cooler 1 Corrected Temp: <i>20</i> °C Comments:
---

Relinquished by/Company: (Signature) <i>[Signature]</i> / A. McClure / Golder	Date/Time: 8/21/20 1108	Received by/Company: (Signature) <i>[Signature]</i> / Pace	Date/Time: 8/21/20 1108
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:
Trip Blank Received: Y N NA HCL MeOH TSP Other
Non Conformance(s): YES / NO
Page: 1 of: 1

October 19, 2020

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

RE: Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92495649

Dear Joju Abraham:

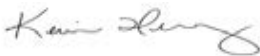
Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92495649

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### **Pace Analytical Services Pennsylvania**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92495649

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495649001	BRGWA-12S	Water	09/15/20 13:15	09/16/20 09:45
92495649002	BRGWA-12I	Water	09/15/20 11:13	09/16/20 09:45
92495649003	BRGWA-23S	Water	09/15/20 16:10	09/16/20 09:45
92495649004	BRGWC-25I	Water	09/15/20 17:20	09/16/20 09:45
92495649005	BRGWC-29I	Water	09/15/20 17:41	09/16/20 09:45
92495649006	BRGWC-32S	Water	09/16/20 09:16	09/17/20 10:00
92495649007	BRGWC-30I	Water	09/16/20 10:16	09/17/20 10:00
92495649008	BRGWC-47	Water	09/16/20 11:39	09/17/20 10:00
92495649009	BRGWC-45	Water	09/16/20 13:07	09/17/20 10:00
92495649010	BRGWC-27I	Water	09/16/20 14:35	09/17/20 10:00
92495649011	DUP-1	Water	09/16/20 00:00	09/17/20 10:00
92495649012	EB-1	Water	09/16/20 15:11	09/17/20 10:00
92495649013	BRGWC-50	Water	09/17/20 10:24	09/18/20 10:15
92495649014	BRGWC-52I	Water	09/17/20 10:07	09/18/20 10:15
92495649015	FB-2	Water	09/17/20 10:20	09/18/20 10:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92495649001	BRGWA-12S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92495649002	BRGWA-12I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92495649003	BRGWA-23S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92495649004	BRGWC-25I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92495649005	BRGWC-29I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92495649006	BRGWC-32S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649007	BRGWC-30I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649008	BRGWC-47	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649009	BRGWC-45	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649010	BRGWC-27I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649011	DUP-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649012	EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495649013	BRGWC-50	EPA 9315	LAL	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92495649014	BRGWC-52I	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92495649015	FB-2	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495649001</b>	<b>BRGWA-12S</b>					
EPA 9315	Radium-226	0.158 ± 0.206 (0.428) C:87% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	0.201 ± 0.461 (1.02) C:72% T:75%	pCi/L		10/07/20 10:50	
Total Radium Calculation	Total Radium	0.359 ± 0.667 (1.45)	pCi/L		10/09/20 14:09	
<b>92495649002</b>	<b>BRGWA-12I</b>					
EPA 9315	Radium-226	0.407 ± 0.277 (0.441) C:93% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	0.355 ± 0.459 (0.980) C:70% T:85%	pCi/L		10/07/20 10:50	
Total Radium Calculation	Total Radium	0.762 ± 0.736 (1.42)	pCi/L		10/09/20 14:09	
<b>92495649003</b>	<b>BRGWA-23S</b>					
EPA 9315	Radium-226	0.153 ± 0.255 (0.571) C:89% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	0.884 ± 0.492 (0.904) C:73% T:77%	pCi/L		10/07/20 10:50	
Total Radium Calculation	Total Radium	1.04 ± 0.747 (1.48)	pCi/L		10/09/20 14:09	
<b>92495649004</b>	<b>BRGWC-25I</b>					
EPA 9315	Radium-226	0.205 ± 0.212 (0.404) C:92% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	-0.0970 ± 0.479 (1.12) C:73% T:70%	pCi/L		10/07/20 10:50	
Total Radium Calculation	Total Radium	0.205 ± 0.691 (1.52)	pCi/L		10/09/20 14:09	

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92495649

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495649005</b>	<b>BRGWC-29I</b>					
EPA 9315	Radium-226	0.216 ± 0.249 (0.508)	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	C:89% T:NA 1.01 ± 0.593 (1.12)	pCi/L		10/07/20 10:50	
Total Radium Calculation	Total Radium	C:74% T:69% 1.23 ± 0.842 (1.63)	pCi/L		10/09/20 14:09	
<b>92495649006</b>	<b>BRGWC-32S</b>					
EPA 9315	Radium-226	0.104 ± 0.148 (0.303)	pCi/L		10/06/20 17:29	
EPA 9320	Radium-228	C:80% T:NA 0.0907 ± 0.382 (0.868)	pCi/L		10/16/20 14:41	
Total Radium Calculation	Total Radium	C:76% T:81% 0.195 ± 0.530 (1.17)	pCi/L		10/19/20 09:49	
<b>92495649007</b>	<b>BRGWC-30I</b>					
EPA 9315	Radium-226	0.177 ± 0.167 (0.320)	pCi/L		10/06/20 17:29	
EPA 9320	Radium-228	C:84% T:NA 0.253 ± 0.455 (0.995)	pCi/L		10/16/20 14:41	
Total Radium Calculation	Total Radium	C:71% T:77% 0.430 ± 0.622 (1.32)	pCi/L		10/19/20 09:49	
<b>92495649008</b>	<b>BRGWC-47</b>					
EPA 9315	Radium-226	0.160 ± 0.140 (0.259)	pCi/L		10/06/20 17:30	
EPA 9320	Radium-228	C:89% T:NA 0.350 ± 0.400 (0.839)	pCi/L		10/16/20 14:41	
Total Radium Calculation	Total Radium	C:73% T:79% 0.510 ± 0.540 (1.10)	pCi/L		10/19/20 09:49	

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS  
 Pace Project No.: 92495649

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495649009</b>	<b>BRGWC-45</b>					
EPA 9315	Radium-226	-0.00362 ± 0.148 (0.341)	pCi/L		10/06/20 17:30	
EPA 9320	Radium-228	C:86% T:NA 0.254 ± 0.452 (0.989)	pCi/L		10/16/20 14:41	
Total Radium Calculation	Total Radium	C:73% T:78% 0.254 ± 0.600 (1.33)	pCi/L		10/19/20 09:49	
<b>92495649010</b>	<b>BRGWC-271</b>					
EPA 9315	Radium-226	0.175 ± 0.261 (0.563)	pCi/L		10/06/20 17:30	
EPA 9320	Radium-228	C:82% T:NA -0.0837 ± 0.369 (0.878)	pCi/L		10/16/20 14:41	
Total Radium Calculation	Total Radium	C:72% T:81% 0.175 ± 0.630 (1.44)	pCi/L		10/19/20 09:49	
<b>92495649011</b>	<b>DUP-1</b>					
EPA 9315	Radium-226	0.184 ± 0.179 (0.346)	pCi/L		10/06/20 17:32	
EPA 9320	Radium-228	C:79% T:NA 0.119 ± 0.445 (1.00)	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	C:71% T:83% 0.303 ± 0.624 (1.35)	pCi/L		10/19/20 09:49	
<b>92495649012</b>	<b>EB-1</b>					
EPA 9315	Radium-226	-0.0240 ± 0.137 (0.425)	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	C:87% T:NA 0.369 ± 0.523 (1.12)	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	C:68% T:77% 0.369 ± 0.660 (1.55)	pCi/L		10/19/20 09:49	

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92495649

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495649013</b>	<b>BRGWC-50</b>					
EPA 9315	Radium-226	0.469 ± 0.288 (0.425) C:92% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	0.248 ± 0.403 (0.875) C:68% T:76%	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	0.717 ± 0.691 (1.30)	pCi/L		10/19/20 09:49	
<b>92495649014</b>	<b>BRGWC-521</b>					
EPA 9315	Radium-226	0.895 ± 0.390 (0.442) C:89% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	1.14 ± 0.493 (0.792) C:72% T:79%	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	2.04 ± 0.883 (1.23)	pCi/L		10/19/20 09:49	
<b>92495649015</b>	<b>FB-2</b>					
EPA 9315	Radium-226	0.155 ± 0.224 (0.482) C:86% T:NA	pCi/L		10/07/20 07:04	
EPA 9320	Radium-228	-0.0257 ± 0.323 (0.759) C:74% T:87%	pCi/L		10/16/20 14:42	
Total Radium Calculation	Total Radium	0.155 ± 0.547 (1.24)	pCi/L		10/19/20 09:49	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-12S</b> <b>Lab ID: 92495649001</b> Collected: 09/15/20 13:15      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.158 ± 0.206 (0.428)</b> <b>C:87% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.201 ± 0.461 (1.02)</b> <b>C:72% T:75%</b>	pCi/L	10/07/20 10:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.359 ± 0.667 (1.45)</b>	pCi/L	10/09/20 14:09	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-12I</b> <b>Lab ID: 92495649002</b> Collected: 09/15/20 11:13      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.407 ± 0.277 (0.441)</b> <b>C:93% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.355 ± 0.459 (0.980)</b> <b>C:70% T:85%</b>	pCi/L	10/07/20 10:50	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.762 ± 0.736 (1.42)</b>	pCi/L	10/09/20 14:09	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-23S</b> <b>Lab ID: 92495649003</b> Collected: 09/15/20 16:10      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.153 ± 0.255 (0.571)</b> <b>C:89% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.884 ± 0.492 (0.904)</b> <b>C:73% T:77%</b>	pCi/L	10/07/20 10:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.04 ± 0.747 (1.48)</b>	pCi/L	10/09/20 14:09	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-25I</b> <b>Lab ID: 92495649004</b> Collected: 09/15/20 17:20      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.205 ± 0.212 (0.404)</b> <b>C:92% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.0970 ± 0.479 (1.12)</b> <b>C:73% T:70%</b>	pCi/L	10/07/20 10:50	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.205 ± 0.691 (1.52)</b>	pCi/L	10/09/20 14:09	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-29I</b> <b>Lab ID: 92495649005</b> Collected: 09/15/20 17:41      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.216 ± 0.249 (0.508)</b> <b>C:89% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.01 ± 0.593 (1.12)</b> <b>C:74% T:69%</b>	pCi/L	10/07/20 10:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.23 ± 0.842 (1.63)</b>	pCi/L	10/09/20 14:09	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-32S</b> <b>Lab ID: 92495649006</b> Collected: 09/16/20 09:16      Received: 09/17/20 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.104 ± 0.148 (0.303)</b> <b>C:80% T:NA</b>	pCi/L	10/06/20 17:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.0907 ± 0.382 (0.868)</b> <b>C:76% T:81%</b>	pCi/L	10/16/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.195 ± 0.530 (1.17)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-30I</b> <b>Lab ID: 92495649007</b> Collected: 09/16/20 10:16      Received: 09/17/20 10:00      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.177 ± 0.167 (0.320)</b> <b>C:84% T:NA</b>	pCi/L	10/06/20 17:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.253 ± 0.455 (0.995)</b> <b>C:71% T:77%</b>	pCi/L	10/16/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.430 ± 0.622 (1.32)</b>	pCi/L	10/19/20 09:49	7440-14-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

**Sample: BRGWC-47**      **Lab ID: 92495649008**      Collected: 09/16/20 11:39      Received: 09/17/20 10:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.160 ± 0.140 (0.259)</b> <b>C:89% T:NA</b>	pCi/L	10/06/20 17:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.350 ± 0.400 (0.839)</b> <b>C:73% T:79%</b>	pCi/L	10/16/20 14:41	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.510 ± 0.540 (1.10)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

**Sample: BRGWC-45**      **Lab ID: 92495649009**      Collected: 09/16/20 13:07      Received: 09/17/20 10:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>-0.00362 ± 0.148 (0.341)</b> <b>C:86% T:NA</b>	pCi/L	10/06/20 17:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.254 ± 0.452 (0.989)</b> <b>C:73% T:78%</b>	pCi/L	10/16/20 14:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.254 ± 0.600 (1.33)</b>	pCi/L	10/19/20 09:49	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Sample: **BRGWC-271** Lab ID: **92495649010** Collected: 09/16/20 14:35 Received: 09/17/20 10:00 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.175 ± 0.261 (0.563)</b> <b>C:82% T:NA</b>	pCi/L	10/06/20 17:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0837 ± 0.369 (0.878)</b> <b>C:72% T:81%</b>	pCi/L	10/16/20 14:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.175 ± 0.630 (1.44)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

**Sample: DUP-1**      **Lab ID: 92495649011**      Collected: 09/16/20 00:00      Received: 09/17/20 10:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.184 ± 0.179 (0.346)</b> <b>C:79% T:NA</b>	pCi/L	10/06/20 17:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.119 ± 0.445 (1.00)</b> <b>C:71% T:83%</b>	pCi/L	10/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.303 ± 0.624 (1.35)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

**Sample: EB-1**      **Lab ID: 92495649012**      Collected: 09/16/20 15:11      Received: 09/17/20 10:00      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>-0.0240 ± 0.137 (0.425)</b> <b>C:87% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.369 ± 0.523 (1.12)</b> <b>C:68% T:77%</b>	pCi/L	10/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.369 ± 0.660 (1.55)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-50</b> <b>Lab ID: 92495649013</b> Collected: 09/17/20 10:24      Received: 09/18/20 10:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.469 ± 0.288 (0.425)</b> <b>C:92% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.248 ± 0.403 (0.875)</b> <b>C:68% T:76%</b>	pCi/L	10/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.717 ± 0.691 (1.30)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-52I</b> <b>Lab ID: 92495649014</b> Collected: 09/17/20 10:07      Received: 09/18/20 10:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.895 ± 0.390 (0.442)</b> <b>C:89% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.14 ± 0.493 (0.792)</b> <b>C:72% T:79%</b>	pCi/L	10/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.04 ± 0.883 (1.23)</b>	pCi/L	10/19/20 09:49	7440-14-4	

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

**Sample: FB-2**      **Lab ID: 92495649015**      Collected: 09/17/20 10:20      Received: 09/18/20 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.155 ± 0.224 (0.482)</b> <b>C:86% T:NA</b>	pCi/L	10/07/20 07:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0257 ± 0.323 (0.759)</b> <b>C:74% T:87%</b>	pCi/L	10/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.155 ± 0.547 (1.24)</b>	pCi/L	10/19/20 09:49	7440-14-4	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

QC Batch: 415615

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495649001, 92495649002, 92495649003, 92495649004, 92495649005, 92495649006, 92495649007, 92495649008, 92495649009, 92495649010, 92495649011, 92495649012, 92495649013, 92495649014, 92495649015

METHOD BLANK: 2009755

Matrix: Water

Associated Lab Samples: 92495649001, 92495649002, 92495649003, 92495649004, 92495649005, 92495649006, 92495649007, 92495649008, 92495649009, 92495649010, 92495649011, 92495649012, 92495649013, 92495649014, 92495649015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.119 ± 0.160 (0.326) C:94% T:NA	pCi/L	10/06/20 17:26	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

QC Batch: 415618

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495649001, 92495649002, 92495649003, 92495649004, 92495649005

METHOD BLANK: 2009758

Matrix: Water

Associated Lab Samples: 92495649001, 92495649002, 92495649003, 92495649004, 92495649005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.318 ± 0.350 (0.730) C:76% T:82%	pCi/L	10/07/20 10:48	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

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QC Batch:	418037	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495649006, 92495649007, 92495649008, 92495649009, 92495649010, 92495649011, 92495649012, 92495649013, 92495649014, 92495649015

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METHOD BLANK: 2021120 Matrix: Water

Associated Lab Samples: 92495649006, 92495649007, 92495649008, 92495649009, 92495649010, 92495649011, 92495649012, 92495649013, 92495649014, 92495649015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.335 ± 0.463 (0.993) C:71% T:73%	pCi/L	10/16/20 14:41	

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

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## QUALIFIERS

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92495649

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92495649

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495649001	BRGWA-12S	EPA 9315	415615		
92495649002	BRGWA-12I	EPA 9315	415615		
92495649003	BRGWA-23S	EPA 9315	415615		
92495649004	BRGWC-25I	EPA 9315	415615		
92495649005	BRGWC-29I	EPA 9315	415615		
92495649006	BRGWC-32S	EPA 9315	415615		
92495649007	BRGWC-30I	EPA 9315	415615		
92495649008	BRGWC-47	EPA 9315	415615		
92495649009	BRGWC-45	EPA 9315	415615		
92495649010	BRGWC-27I	EPA 9315	415615		
92495649011	DUP-1	EPA 9315	415615		
92495649012	EB-1	EPA 9315	415615		
92495649013	BRGWC-50	EPA 9315	415615		
92495649014	BRGWC-52I	EPA 9315	415615		
92495649015	FB-2	EPA 9315	415615		
92495649001	BRGWA-12S	EPA 9320	415618		
92495649002	BRGWA-12I	EPA 9320	415618		
92495649003	BRGWA-23S	EPA 9320	415618		
92495649004	BRGWC-25I	EPA 9320	415618		
92495649005	BRGWC-29I	EPA 9320	415618		
92495649006	BRGWC-32S	EPA 9320	418037		
92495649007	BRGWC-30I	EPA 9320	418037		
92495649008	BRGWC-47	EPA 9320	418037		
92495649009	BRGWC-45	EPA 9320	418037		
92495649010	BRGWC-27I	EPA 9320	418037		
92495649011	DUP-1	EPA 9320	418037		
92495649012	EB-1	EPA 9320	418037		
92495649013	BRGWC-50	EPA 9320	418037		
92495649014	BRGWC-52I	EPA 9320	418037		
92495649015	FB-2	EPA 9320	418037		
92495649001	BRGWA-12S	Total Radium Calculation	417873		
92495649002	BRGWA-12I	Total Radium Calculation	417873		
92495649003	BRGWA-23S	Total Radium Calculation	417873		
92495649004	BRGWC-25I	Total Radium Calculation	417873		
92495649005	BRGWC-29I	Total Radium Calculation	417873		
92495649006	BRGWC-32S	Total Radium Calculation	419126		
92495649007	BRGWC-30I	Total Radium Calculation	419126		
92495649008	BRGWC-47	Total Radium Calculation	419126		
92495649009	BRGWC-45	Total Radium Calculation	419126		
92495649010	BRGWC-27I	Total Radium Calculation	419126		
92495649011	DUP-1	Total Radium Calculation	419126		
92495649012	EB-1	Total Radium Calculation	419126		
92495649013	BRGWC-50	Total Radium Calculation	419126		
92495649014	BRGWC-52I	Total Radium Calculation	419126		
92495649015	FB-2	Total Radium Calculation	419126		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: 92495649



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace C  
Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 2/4    Type of Ice: Wet Blue None     Samples on ice, cooling process has begun

Cooler Temperature 0.8    Biological Tissue is Frozen: Yes No    Date and Initials of person examining contents: 9/16/20 CDH  
Temp should be above freezing to 6°C    Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis    Matrix: <u>W</u>		
All containers needing preservation have been checked	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed    Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

Project #

**WO# : 92495649**

PH: KLH1

Due Date: 10/07/20

CLIENT: GA-GA Power

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

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

• Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GX (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Sterilization vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

BIN

**pH Adjustment Log for Preserved Samples**

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

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





**CHAIN-OF-CUSTODY Analytical Request Document**

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTIL Log-In Number Here

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals		Billing Information:	
Address: 2480 Maner Road Atlanta, GA 30339			
Report To: Joys Abraham		Email To: scsinvoices@southernco.com	
Copy To: Golder		Site Collection Info/Address: Plant Branch	
Phone: (404) 506-7233 Email: jabraham@southernco.com		State: Georgia City: Milledgeville Time Zone Collected:   PT   MT   CT   X   ET	
Phone: (404) 506-7233 Email: jabraham@southernco.com		Project Name: Plant Branch BCD Network Project # CCR 3rd Semi-Annual	
Collected By (print): Travis Martinez, Andrea McClure		Purchase Order # Quote #	
Collected By (signature):		Turnaround Date Required: Rush:   Same Day   Next Day   2 Day   3 Day   4 Day   5 Day (Expedite Charges Apply)	
		Pace Profile # Pace Project Manager: kevin.herring@pacelabs.com Immediately Packed on Ice:   X   Yes   No Field Filtered (if applicable):   Yes   No Analysis: _____	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctrs
			Date	Time	Date	Time		
BRGWA-12S	GW	G	9-15-2020	1315			6.00	5
BRGWA-12I	GW	G	9-15-2020	1113			6.01	5
BRGWA-23S	GW	G	9-15-2020	1610			5.72	5
BRGWC-25I	GW	G	9-15-2020	1720			6.00	7
BRGWC-29I	GW	G	9-15-2020	1741			4.53	5

Container Preservative Type **				Lab Project Manager:
1		1		
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium borate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other				
Analyses				Lab Profile/Line:
Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226 228	Lab Sample Receipt Checklist:
				Custody Seals Present/Intact Y N NA
				Custody Signatures Present Y N NA
				Collector Signature Present Y N NA
				Bottles Intact Y N NA
Correct Bottles Y N NA				
Sufficient Volume Y N NA				
Samples Received on Ice Y N NA				
VOA - Headspace Acceptable Y N NA				
USDA Regulated Soils Y N NA				
Samples in Holding Time Y N NA				
Residual Chlorine Present Y N NA				
Cl Strips:				
Sample pH Acceptable Y N NA				
pH Strips:				
Sulfide Present Y N NA				
Lead Acetate Strips:				
LAB USE ONLY:				Lab Sample # / Comments:
				42465644
				+2 Rad

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received Y N NA Therm ID# _____ Cooler 1 Temp Upon Receipt: ___oC Cooler 1 Therm Corr Factor: ___oC Cooler 1 Corrected Temp: ___oC Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	
Relinquished by/Company: (Signature)	Date/Time: 9-16-2020/0800	Received by/Company: (Signature)	Date/Time: 9/16/20 0945
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
		MTIL LAB USE ONLY Table #: Acctnum: Template: Prelogin: PM: PB:	Trip Blank Received: Y N NA HCL MeOH TSP Other Non Conformance(s): YES / NO Page: 1 of 1





### Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 10/6/2020  
Worklist: 56393  
Matrix: DW

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment		
MB Sample ID	2009755	
MB Concentration	0.119	
MB Counting Uncertainty	0.158	
MB MDC	0.326	
MB Numerical Performance Indicator	1.46	
MB Status vs Numerical Indicator	N/A	
MB Status vs. MDC	Pass	

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
		LCSD56393
Count Date	10/7/2020	
Spike ID	19-039	
Decay Corrected Spike Concentration (pCi/mL)	24.044	
Volume Used (mL)	0.10	
Aliquot Volume (L g. F)	0.505	
Target Conc. (pCi/L g. F)	4.763	
Uncertainty (Calculated)	0.057	
Result (pCi/L g. F)	4.551	
LCSD/LCSD Counting Uncertainty (pCi/L g. F)	0.770	
Numerical Performance Indicator	-0.53	
Percent Recovery	35.58%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

Duplicate Sample Assessment		
Sample ID	924266490C4	Enter Duplicate sample IDs if other than the space below.
Duplicate Sample ID	924266490C4DUP	
Sample Result (pCi/L g. F)	0.256	
Sample Result Counting Uncertainty (pCi/L g. F)	0.210	
Sample Duplicate Result (pCi/L g. F)	0.229	
Sample Duplicate Result Counting Uncertainty (pCi/L g. F)	0.276	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator	-0.192	924266490C4
Duplicate RPD	15.40%	924266490C4DUP
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Pass	
% RPD Limit	25%	

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

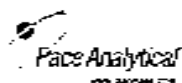
Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result		
Matrix Spike Result Counting Uncertainty (pCi/L g. F)		
Sample Matrix Spike Duplicate Result		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L g. F)		
Duplicate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

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

Comments:

LAL 10/7/2020

*On 10-7-20*



### Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 10/6/2020  
Worksheet: 56393  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	209766	
MB Concentration	0.118	
MB Counting Uncertainty	0.158	
MB MDC	0.326	
MB Numerical Performance Indicator	1.46	
MB Status vs Numerical Indicator	N/A	
MB Status vs. MDC	Pass	

	LCS/D (Y or N)?	
	LCS66393	LCS056393
Count Date	10/06/20	10/07/2020
Spike I.D.	19-039	19-039
Decay Corrected Spike Concentration (pCi/mL)	24.044	24.644
Volume Used (mL)	0.10	0.10
Aliquot Volume (L g. F)	0.505	0.510
Target Conc. (pCi/L g. F)	4.769	4.718
Uncertainty (Calculated)	0.057	0.057
Result (pCi/L g. F)	4.563	4.593
LCS/LCSD Counting Uncertainty (pCi/L g. F)	0.770	0.790
Numerical Performance Indicator	-0.53	-0.31
Percent Recovery	95.58%	97.35%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	125%	125%
Lower % Recovery Limit	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.	LC56393	Enter Duplicate sample as if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LC505393	
Sample Result (pCi/L g. F)	4.563	
Sample Result Counting Uncertainty (pCi/L g. F)	0.770	
Sample Duplicate Result (pCi/L g. F)	4.593	
Sample Duplicate Result Counting Uncertainty (pCi/L g. F)	0.790	
Are sample and/or duplicate results below RLD?	N/C	
Duplicate Numerical Performance Indicator	-0.071	92495649064
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD	1.82%	92495649064
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Pass	
% RPD Limit	25%	

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

## Evaluation of duplicate precision is not applicable. Either the sample or duplicate results are below the MDC.

Comments:

LAL 10/17/2020

Du 10/17/20



### Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Re-228  
 Analyst: VAL  
 Date: 10/14/2020  
 Work: 56680  
 Matrix: WT

Method Blank Assessment	
MB Sample ID	2021120
MB Concentration	0.235
MB 2 Sigma CSU	0.453
MB MDC	0.960
MB Numerical Performance Indicator	1.42
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCS2 (Y or N)†	
	LCS56680	LCS256680
Date:	10/16/2020	09/16/2020
Spike ID:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.004	38.004
Volume Used (mL):	0.10	0.10
Alcohol Volume (L, g, F):	0.614	0.921
Target Conc. (pCi/L, g, F):	4.568	4.927
Uncertainty (Calculated):	0.229	0.207
Result (pCi/L, g, F):	3.963	4.745
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.924	1.125
Numerical Performance Indicator:	-1.48	0.20
Percent Recovery:	84.63%	102.54%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	105%	135%
Lower % Recovery Limit:	60%	60%

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

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS56680	
Duplicate Sample I.D.:	LCS256680	
Sample Result (pCi/L, g, F):	3.950	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.824	
Sample Duplicate Result (pCi/L, g, F):	4.745	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.125	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.052	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	19.14%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	35%	

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

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

Comments:

10/14/20

## Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: VAL  
Date: 10/5/2020  
Worksheet: 56396  
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2009766
MB Concentration:	0.316
MB 2 Sigma CSU:	0.350
MB MDC:	0.730
MB Numerical Performance Indicator:	1.79
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	LCS2 (Y or N)?	
	LCS55396	LCS055396
Count Date:	10/7/2020	10/7/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.119	38.119
Volume Used (mL):	0.10	0.10
Aliquot Volume (µL, g, F):	0.81	0.808
Target Conc. (pCi/L, g, F):	4.699	4.716
Uncertainty (Calculated):	0.230	0.231
Result (pCi/L, g, F):	3.815	3.863
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.942	0.842
Numerical Performance Indicator:	-1.79	-3.04
Percent Recovery:	61.20%	71.31%
Status vs Numerical Indicator:	NA	NA
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	135%	135%
Lower % Recovery Limit:	52%	52%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample ID:		
Sample MS1 ID:		
Sample MS2 ID:		
Spike I.C.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (µL, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (µL, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (Calculated):		
MSD Spike Uncertainty (Calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limit:		
MS/MSD Lower % Recovery Limit:		

Duplicate Sample Assessment		
Sample I.D.:	LCS55396	Enter Duplicate sample IDs if other than LCS/LCSD in the space below:
Duplicate Sample I.D.:	LCS055396	
Sample Result (pCi/L, g, F):	3.815	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.942	
Sample Duplicate Result (pCi/L, g, F):	3.355	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.842	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.702	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.97%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	35%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:		
Sample MS1 I.D.:		
Sample MS2 I.D.:		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD:		
% RPD Limit:		

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

Comments:

OK  
10/5/2020

September 30, 2020

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

RE: Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Dear Joju Abraham:

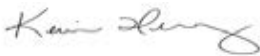
Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

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

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### **Pace Analytical Services Peachtree Corners**

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

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495653001	BRGWA-12S	Water	09/15/20 13:15	09/16/20 09:45
92495653002	BRGWA-12I	Water	09/15/20 11:13	09/16/20 09:45
92495653003	BRGWA-23S	Water	09/15/20 16:10	09/16/20 09:45
92495653004	BRGWC-25I	Water	09/15/20 17:20	09/16/20 09:45
92495653005	BRGWC-29I	Water	09/15/20 17:41	09/16/20 09:45
92495653006	BRGWC-32S	Water	09/16/20 09:16	09/17/20 10:00
92495653007	BRGWC-30I	Water	09/16/20 10:16	09/17/20 10:00
92495653008	BRGWC-47	Water	09/16/20 11:39	09/17/20 10:00
92495653009	BRGWC-45	Water	09/16/20 13:07	09/17/20 10:00
92495653010	BRGWC-27I	Water	09/16/20 14:35	09/17/20 10:00
92495653011	DUP-1	Water	09/16/20 00:00	09/17/20 10:00
92495653012	EB-1	Water	09/16/20 15:11	09/17/20 10:00
92495653013	BRGWC-50	Water	09/17/20 10:24	09/18/20 10:15
92495653014	BRGWC-52I	Water	09/17/20 10:07	09/18/20 10:15
92495653015	FB-2	Water	09/17/20 10:20	09/18/20 10:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92495653001	BRGWA-12S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495653002	BRGWA-12I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495653003	BRGWA-23S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495653004	BRGWC-25I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495653005	BRGWC-29I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495653006	BRGWC-32S	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495653007	BRGWC-30I	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495653008	BRGWC-47	EPA 6010D	DRB	1
		EPA 6020B	CW1	13

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92495653009	BRGWC-45	EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92495653010	BRGWC-27I	EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
92495653011	DUP-1	EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92495653012	EB-1	SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495653013	BRGWC-50	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	FFP	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92495653014	BRGWC-52I	EPA 7470A	FFP	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	FFP	1
		SM 2450C-2011	ALW	1
92495653015	FB-2	EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	FFP	1
		SM 2450C-2011	ALW	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Method</b>	<b>Analysts</b>	<b>Analytes Reported</b>
		EPA 300.0 Rev 2.1 1993	BRJ	3

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PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92495653001</b>	<b>BRGWA-12S</b>					
	pH	6.00	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	5.7	mg/L	1.0	09/17/20 17:55	
EPA 6020B	Barium	0.058	mg/L	0.010	09/21/20 15:38	
EPA 6020B	Chromium	0.0025J	mg/L	0.010	09/21/20 15:38	
SM 2450C-2011	Total Dissolved Solids	60.0	mg/L	10.0	09/16/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	09/18/20 20:02	
<b>92495653002</b>	<b>BRGWA-12I</b>					
	pH	6.01	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	14.5	mg/L	1.0	09/17/20 18:21	
EPA 6020B	Antimony	0.010	mg/L	0.0030	09/21/20 16:01	
EPA 6020B	Barium	0.059	mg/L	0.010	09/21/20 16:01	
EPA 6020B	Boron	0.0071J	mg/L	0.10	09/21/20 16:01	
EPA 6020B	Chromium	0.00096J	mg/L	0.010	09/21/20 16:01	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	09/21/20 16:01	
SM 2450C-2011	Total Dissolved Solids	95.0	mg/L	10.0	09/16/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	09/18/20 20:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	09/18/20 20:17	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	09/18/20 20:17	
<b>92495653003</b>	<b>BRGWA-23S</b>					
	pH	5.72	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	10.7	mg/L	1.0	09/17/20 18:25	
EPA 6020B	Antimony	0.00033J	mg/L	0.0030	09/21/20 16:06	
EPA 6020B	Barium	0.086	mg/L	0.010	09/21/20 16:06	
EPA 6020B	Boron	0.033J	mg/L	0.10	09/21/20 16:06	
EPA 6020B	Chromium	0.0019J	mg/L	0.010	09/21/20 16:06	
EPA 6020B	Cobalt	0.00076J	mg/L	0.0050	09/21/20 16:06	
EPA 6020B	Lithium	0.011J	mg/L	0.030	09/21/20 16:06	
EPA 6020B	Selenium	0.0028J	mg/L	0.010	09/21/20 16:06	
SM 2450C-2011	Total Dissolved Solids	109	mg/L	10.0	09/16/20 14:23	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	09/23/20 23:18	
EPA 300.0 Rev 2.1 1993	Sulfate	41.5	mg/L	1.0	09/23/20 23:18	
<b>92495653004</b>	<b>BRGWC-25I</b>					
	pH	6.00	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	40.1	mg/L	1.0	09/17/20 18:29	
EPA 6020B	Barium	0.024	mg/L	0.010	09/21/20 16:12	
EPA 6020B	Boron	1.2	mg/L	0.10	09/21/20 16:12	
EPA 6020B	Cobalt	0.0035J	mg/L	0.0050	09/21/20 16:12	
EPA 6020B	Molybdenum	0.00080J	mg/L	0.010	09/21/20 16:12	
SM 2450C-2011	Total Dissolved Solids	272	mg/L	10.0	09/16/20 14:23	
EPA 300.0 Rev 2.1 1993	Chloride	4.9	mg/L	1.0	09/18/20 20:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	09/18/20 20:32	
EPA 300.0 Rev 2.1 1993	Sulfate	126	mg/L	3.0	09/19/20 08:42	
<b>92495653005</b>	<b>BRGWC-29I</b>					
	pH	4.53	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	55.1	mg/L	1.0	09/17/20 18:34	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92495653005</b>	<b>BRGWC-29I</b>					
EPA 6020B	Barium	0.017	mg/L	0.010	09/21/20 16:18	
EPA 6020B	Beryllium	0.00071J	mg/L	0.0030	09/21/20 16:18	
EPA 6020B	Boron	1.1	mg/L	0.10	09/21/20 16:18	
EPA 6020B	Cobalt	0.0064	mg/L	0.0050	09/21/20 16:18	
EPA 6020B	Lead	0.00029J	mg/L	0.0050	09/21/20 16:18	
EPA 6020B	Lithium	0.0030J	mg/L	0.030	09/21/20 16:18	
EPA 6020B	Thallium	0.00016J	mg/L	0.0010	09/21/20 16:18	
SM 2450C-2011	Total Dissolved Solids	281	mg/L	10.0	09/16/20 14:23	
EPA 300.0 Rev 2.1 1993	Chloride	5.5	mg/L	1.0	09/18/20 20:46	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.10	09/18/20 20:46	M1
EPA 300.0 Rev 2.1 1993	Sulfate	241	mg/L	5.0	09/19/20 08:56	
<b>92495653006</b>	<b>BRGWC-32S</b>					
	pH	5.79	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	43.1	mg/L	1.0	09/22/20 20:40	M1
EPA 6020B	Barium	0.024	mg/L	0.010	09/22/20 17:02	
EPA 6020B	Boron	1.4	mg/L	0.10	09/22/20 17:02	
EPA 6020B	Chromium	0.0025J	mg/L	0.010	09/22/20 17:02	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	09/22/20 17:02	
EPA 6020B	Selenium	0.12	mg/L	0.010	09/22/20 17:02	
SM 2450C-2011	Total Dissolved Solids	428	mg/L	10.0	09/17/20 15:20	
EPA 300.0 Rev 2.1 1993	Chloride	5.6	mg/L	1.0	09/19/20 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	255	mg/L	5.0	09/19/20 09:55	
<b>92495653007</b>	<b>BRGWC-30I</b>					
	pH	6.29	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	106	mg/L	1.0	09/22/20 20:57	
EPA 6020B	Barium	0.022	mg/L	0.010	09/22/20 17:08	
EPA 6020B	Boron	1.7	mg/L	0.10	09/22/20 17:08	
EPA 6020B	Chromium	0.014	mg/L	0.010	09/22/20 17:08	
EPA 6020B	Cobalt	0.00080J	mg/L	0.0050	09/22/20 17:08	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	09/22/20 17:08	
EPA 6020B	Lithium	0.016J	mg/L	0.030	09/22/20 17:08	
EPA 6020B	Molybdenum	0.0022J	mg/L	0.010	09/22/20 17:08	
SM 2450C-2011	Total Dissolved Solids	634	mg/L	10.0	09/17/20 15:20	
EPA 300.0 Rev 2.1 1993	Chloride	4.4	mg/L	1.0	09/19/20 15:53	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	09/19/20 15:53	
EPA 300.0 Rev 2.1 1993	Sulfate	334	mg/L	7.0	09/20/20 02:34	M6
<b>92495653008</b>	<b>BRGWC-47</b>					
	pH	5.76	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	309	mg/L	10.0	09/23/20 12:15	
EPA 6020B	Antimony	0.00035J	mg/L	0.0030	09/22/20 17:13	B
EPA 6020B	Barium	0.028	mg/L	0.010	09/22/20 17:13	
EPA 6020B	Boron	0.47	mg/L	0.10	09/22/20 17:13	
EPA 6020B	Cobalt	0.00053J	mg/L	0.0050	09/22/20 17:13	
EPA 6020B	Lead	0.000066J	mg/L	0.0050	09/22/20 17:13	
EPA 6020B	Lithium	0.039	mg/L	0.030	09/22/20 17:13	
EPA 6020B	Selenium	0.0020J	mg/L	0.010	09/22/20 17:13	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92495653008</b>	<b>BRGWC-47</b>					
SM 2450C-2011	Total Dissolved Solids	2090	mg/L	20.0	09/21/20 16:27	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	09/19/20 16:38	
EPA 300.0 Rev 2.1 1993	Sulfate	1360	mg/L	27.0	09/20/20 03:48	
<b>92495653009</b>	<b>BRGWC-45</b>					
	pH	5.27	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	39.7	mg/L	1.0	09/22/20 21:06	
EPA 6020B	Antimony	0.0012J	mg/L	0.0030	09/22/20 17:19	B
EPA 6020B	Barium	0.085	mg/L	0.010	09/22/20 17:19	
EPA 6020B	Boron	0.028J	mg/L	0.10	09/22/20 17:19	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	09/22/20 17:19	
EPA 6020B	Cobalt	0.0049J	mg/L	0.0050	09/22/20 17:19	
EPA 6020B	Lead	0.000053J	mg/L	0.0050	09/22/20 17:19	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	09/22/20 17:19	
SM 2450C-2011	Total Dissolved Solids	275	mg/L	10.0	09/17/20 15:20	
EPA 300.0 Rev 2.1 1993	Chloride	54.9	mg/L	1.0	09/19/20 16:53	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.10	09/19/20 16:53	
EPA 300.0 Rev 2.1 1993	Sulfate	103	mg/L	2.0	09/20/20 04:03	
<b>92495653010</b>	<b>BRGWC-27I</b>					
	pH	5.81	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	62.5	mg/L	1.0	09/22/20 21:10	
EPA 6020B	Barium	0.016	mg/L	0.010	09/22/20 17:25	
EPA 6020B	Beryllium	0.00011J	mg/L	0.0030	09/22/20 17:25	
EPA 6020B	Boron	1.2	mg/L	0.10	09/22/20 17:25	
EPA 6020B	Cobalt	0.0080	mg/L	0.0050	09/22/20 17:25	
EPA 6020B	Lithium	0.0014J	mg/L	0.030	09/22/20 17:25	
EPA 6020B	Selenium	0.0042J	mg/L	0.010	09/22/20 17:25	
SM 2450C-2011	Total Dissolved Solids	301	mg/L	10.0	09/17/20 15:20	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	09/19/20 17:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	09/19/20 17:08	
EPA 300.0 Rev 2.1 1993	Sulfate	190	mg/L	4.0	09/20/20 04:17	
<b>92495653011</b>	<b>DUP-1</b>					
EPA 6010D	Calcium	108	mg/L	1.0	09/22/20 21:23	
EPA 6020B	Barium	0.022	mg/L	0.010	09/22/20 17:31	
EPA 6020B	Boron	1.7	mg/L	0.10	09/22/20 17:31	
EPA 6020B	Cobalt	0.00065J	mg/L	0.0050	09/22/20 17:31	
EPA 6020B	Lithium	0.016J	mg/L	0.030	09/22/20 17:31	
EPA 6020B	Molybdenum	0.00076J	mg/L	0.010	09/22/20 17:31	
SM 2450C-2011	Total Dissolved Solids	622	mg/L	10.0	09/18/20 09:58	
EPA 300.0 Rev 2.1 1993	Chloride	4.4	mg/L	1.0	09/19/20 17:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	09/19/20 17:23	
EPA 300.0 Rev 2.1 1993	Sulfate	343	mg/L	7.0	09/20/20 04:32	
<b>92495653012</b>	<b>EB-1</b>					
EPA 6020B	Boron	0.0066J	mg/L	0.10	09/22/20 17:36	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495653013</b>	<b>BRGWC-50</b>					
	pH	4.41	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	206	mg/L	1.0	09/22/20 22:02	
EPA 6020B	Antimony	0.00041J	mg/L	0.0030	09/23/20 20:05	
EPA 6020B	Barium	0.020	mg/L	0.010	09/23/20 20:05	
EPA 6020B	Beryllium	0.0065	mg/L	0.0030	09/24/20 17:33	
EPA 6020B	Boron	0.36	mg/L	0.10	09/24/20 17:33	
EPA 6020B	Cadmium	0.021	mg/L	0.0025	09/23/20 20:05	
EPA 6020B	Chromium	0.00098J	mg/L	0.010	09/23/20 20:05	
EPA 6020B	Cobalt	1.4	mg/L	0.050	09/24/20 17:07	
EPA 6020B	Lead	0.00015J	mg/L	0.0050	09/23/20 20:05	
EPA 6020B	Lithium	0.052	mg/L	0.030	09/24/20 17:33	
SM 2450C-2011	Total Dissolved Solids	1910	mg/L	50.0	09/24/20 11:49	D6,H1
EPA 300.0 Rev 2.1 1993	Chloride	20.1	mg/L	1.0	09/22/20 01:20	
EPA 300.0 Rev 2.1 1993	Fluoride	0.46	mg/L	0.10	09/22/20 01:20	
EPA 300.0 Rev 2.1 1993	Sulfate	1330	mg/L	26.0	09/22/20 14:58	
<b>92495653014</b>	<b>BRGWC-52I</b>					
	pH	6.12	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	35.4	mg/L	1.0	09/22/20 22:15	
EPA 6020B	Barium	0.020	mg/L	0.010	09/23/20 20:10	
EPA 6020B	Boron	1.9	mg/L	0.10	09/24/20 14:08	
EPA 6020B	Cobalt	0.00046J	mg/L	0.0050	09/23/20 20:10	
EPA 6020B	Lithium	0.0058J	mg/L	0.030	09/24/20 14:08	
EPA 6020B	Molybdenum	0.00070J	mg/L	0.010	09/23/20 20:10	
SM 2450C-2011	Total Dissolved Solids	329	mg/L	10.0	09/21/20 16:30	
EPA 300.0 Rev 2.1 1993	Chloride	6.3	mg/L	1.0	09/22/20 02:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.10	09/22/20 02:04	
EPA 300.0 Rev 2.1 1993	Sulfate	165	mg/L	4.0	09/22/20 15:13	
<b>92495653015</b>	<b>FB-2</b>					
EPA 6020B	Boron	0.0097J	mg/L	0.10	09/24/20 14:14	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: BRGWA-12S		Lab ID: 92495653001		Collected: 09/15/20 13:15		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.00	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	5.7	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 17:55	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 15:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 15:38	7440-38-2	
Barium	0.058	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 15:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 15:38	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 15:38	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 15:38	7440-43-9	
Chromium	0.0025J	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 15:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 15:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 15:38	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 15:38	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 15:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 15:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 15:38	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:07	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	60.0	mg/L	10.0	10.0	1		09/16/20 14:22		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.5	mg/L	1.0	0.60	1		09/18/20 20:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/18/20 20:02	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/18/20 20:02	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: BRGWA-12I		Lab ID: 92495653002		Collected: 09/15/20 11:13		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.01	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	14.5	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:21	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.010	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 16:01	7440-38-2	
Barium	0.059	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 16:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 16:01	7440-41-7	
Boron	0.0071J	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 16:01	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 16:01	7440-43-9	
Chromium	0.00096J	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 16:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 16:01	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 16:01	7439-92-1	
Lithium	0.0037J	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 16:01	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 16:01	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:09	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	95.0	mg/L	10.0	10.0	1		09/16/20 14:22		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		09/18/20 20:17	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		09/18/20 20:17	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		09/18/20 20:17	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: <b>BRGWA-23S</b>		Lab ID: <b>92495653003</b>		Collected: 09/15/20 16:10		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	<b>5.72</b>	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>10.7</b>	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:25	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.00033J</b>	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 16:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 16:06	7440-38-2	
Barium	<b>0.086</b>	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 16:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 16:06	7440-41-7	
Boron	<b>0.033J</b>	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 16:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 16:06	7440-43-9	
Chromium	<b>0.0019J</b>	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 16:06	7440-47-3	
Cobalt	<b>0.00076J</b>	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 16:06	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 16:06	7439-92-1	
Lithium	<b>0.011J</b>	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 16:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 16:06	7439-98-7	
Selenium	<b>0.0028J</b>	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 16:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 16:06	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:23	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>109</b>	mg/L	10.0	10.0	1		09/16/20 14:23		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>3.1</b>	mg/L	1.0	0.60	1		09/23/20 23:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/23/20 23:18	16984-48-8	
Sulfate	<b>41.5</b>	mg/L	1.0	0.50	1		09/23/20 23:18	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: BRGWC-25I		Lab ID: 92495653004		Collected: 09/15/20 17:20		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.00	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	40.1	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:29	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 16:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 16:12	7440-38-2	
Barium	0.024	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 16:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 16:12	7440-41-7	
Boron	1.2	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 16:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 16:12	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 16:12	7440-47-3	
Cobalt	0.0035J	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 16:12	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 16:12	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 16:12	7439-93-2	
Molybdenum	0.00080J	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 16:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 16:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 16:12	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:26	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	272	mg/L	10.0	10.0	1		09/16/20 14:23		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.9	mg/L	1.0	0.60	1		09/18/20 20:32	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		09/18/20 20:32	16984-48-8	
Sulfate	126	mg/L	3.0	1.5	3		09/19/20 08:42	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: BRGWC-29I		Lab ID: 92495653005		Collected: 09/15/20 17:41		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.53	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	55.1	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:34	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 16:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 16:18	7440-38-2	
Barium	0.017	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 16:18	7440-39-3	
Beryllium	0.00071J	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 16:18	7440-41-7	
Boron	1.1	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 16:18	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 16:18	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 16:18	7440-47-3	
Cobalt	0.0064	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 16:18	7440-48-4	
Lead	0.00029J	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 16:18	7439-92-1	
Lithium	0.0030J	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 16:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 16:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 16:18	7782-49-2	
Thallium	0.00016J	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 16:18	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:28	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	281	mg/L	10.0	10.0	1		09/16/20 14:23		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.5	mg/L	1.0	0.60	1		09/18/20 20:46	16887-00-6	M1
Fluoride	0.057J	mg/L	0.10	0.050	1		09/18/20 20:46	16984-48-8	M1
Sulfate	241	mg/L	5.0	2.5	5		09/19/20 08:56	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: <b>BRGWC-32S</b> Lab ID: <b>92495653006</b> Collected: 09/16/20 09:16 Received: 09/17/20 10:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	<b>5.79</b>	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>43.1</b>	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 20:40	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:02	7440-38-2	
Barium	<b>0.024</b>	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:02	7440-41-7	
Boron	<b>1.4</b>	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:02	7440-43-9	
Chromium	<b>0.0025J</b>	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:02	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:02	7439-92-1	
Lithium	<b>0.0022J</b>	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:02	7439-98-7	
Selenium	<b>0.12</b>	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:02	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:30	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>428</b>	mg/L	10.0	10.0	1		09/17/20 15:20		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>5.6</b>	mg/L	1.0	0.60	1		09/19/20 00:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 00:00	16984-48-8	
Sulfate	<b>255</b>	mg/L	5.0	2.5	5		09/19/20 09:55	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: BRGWC-30I		Lab ID: 92495653007		Collected: 09/16/20 10:16		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.29	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	106	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 20:57	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:08	7440-38-2	
Barium	0.022	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:08	7440-41-7	
Boron	1.7	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:08	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:08	7440-43-9	
Chromium	0.014	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:08	7440-47-3	
Cobalt	0.00080J	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:08	7440-48-4	
Lead	0.00011J	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:08	7439-92-1	
Lithium	0.016J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:08	7439-93-2	
Molybdenum	0.0022J	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:08	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:08	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:33	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	634	mg/L	10.0	10.0	1		09/17/20 15:20		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.4	mg/L	1.0	0.60	1		09/19/20 15:53	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		09/19/20 15:53	16984-48-8	
Sulfate	334	mg/L	7.0	3.5	7		09/20/20 02:34	14808-79-8	M6

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: BRGWC-47		Lab ID: 92495653008		Collected: 09/16/20 11:39		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.76	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	309	mg/L	10.0	0.70	10	09/22/20 14:15	09/23/20 12:15	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00035J	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:13	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:13	7440-38-2	
Barium	0.028	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:13	7440-41-7	
Boron	0.47	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:13	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:13	7440-47-3	
Cobalt	0.00053J	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:13	7440-48-4	
Lead	0.000066J	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:13	7439-92-1	
Lithium	0.039	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:13	7439-98-7	
Selenium	0.0020J	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:13	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:35	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	2090	mg/L	20.0	20.0	1		09/21/20 16:27		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.1	mg/L	1.0	0.60	1		09/19/20 16:38	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 16:38	16984-48-8	
Sulfate	1360	mg/L	27.0	13.5	27		09/20/20 03:48	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: <b>BRGWC-45</b>		Lab ID: <b>92495653009</b>		Collected: 09/16/20 13:07		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	<b>5.27</b>	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>39.7</b>	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:06	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.0012J</b>	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:19	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:19	7440-38-2	
Barium	<b>0.085</b>	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:19	7440-41-7	
Boron	<b>0.028J</b>	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:19	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:19	7440-43-9	
Chromium	<b>0.0014J</b>	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:19	7440-47-3	
Cobalt	<b>0.0049J</b>	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:19	7440-48-4	
Lead	<b>0.000053J</b>	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:19	7439-92-1	
Lithium	<b>0.0036J</b>	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:19	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:37	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>275</b>	mg/L	10.0	10.0	1		09/17/20 15:20		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>54.9</b>	mg/L	1.0	0.60	1		09/19/20 16:53	16887-00-6	
Fluoride	<b>0.052J</b>	mg/L	0.10	0.050	1		09/19/20 16:53	16984-48-8	
Sulfate	<b>103</b>	mg/L	2.0	1.0	2		09/20/20 04:03	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: BRGWC-271		Lab ID: 92495653010		Collected: 09/16/20 14:35		Received: 09/17/20 10:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.81	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	62.5	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:10	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:25	7440-38-2	
Barium	0.016	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:25	7440-39-3	
Beryllium	0.00011J	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:25	7440-41-7	
Boron	1.2	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:25	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:25	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:25	7440-47-3	
Cobalt	0.0080	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:25	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:25	7439-92-1	
Lithium	0.0014J	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:25	7439-98-7	
Selenium	0.0042J	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:25	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:40	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	301	mg/L	10.0	10.0	1		09/17/20 15:20		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		09/19/20 17:08	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		09/19/20 17:08	16984-48-8	
Sulfate	190	mg/L	4.0	2.0	4		09/20/20 04:17	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: DUP-1		Lab ID: 92495653011		Collected: 09/16/20 00:00	Received: 09/17/20 10:00	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	<b>108</b>	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:23	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:31	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:31	7440-38-2		
Barium	<b>0.022</b>	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:31	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:31	7440-41-7		
Boron	<b>1.7</b>	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:31	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:31	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:31	7440-47-3		
Cobalt	<b>0.00065J</b>	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:31	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:31	7439-92-1		
Lithium	<b>0.016J</b>	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:31	7439-93-2		
Molybdenum	<b>0.00076J</b>	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:31	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:31	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:31	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:47	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	<b>622</b>	mg/L	10.0	10.0	1		09/18/20 09:58			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	<b>4.4</b>	mg/L	1.0	0.60	1		09/19/20 17:23	16887-00-6		
Fluoride	<b>0.13</b>	mg/L	0.10	0.050	1		09/19/20 17:23	16984-48-8		
Sulfate	<b>343</b>	mg/L	7.0	3.5	7		09/20/20 04:32	14808-79-8		

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Sample: EB-1		Lab ID: 92495653012		Collected: 09/16/20 15:11	Received: 09/17/20 10:00	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 21:27	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/18/20 11:00	09/22/20 17:36	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/18/20 11:00	09/22/20 17:36	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/18/20 11:00	09/22/20 17:36	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/18/20 11:00	09/22/20 17:36	7440-41-7		
Boron	<b>0.0066J</b>	mg/L	0.10	0.0052	1	09/18/20 11:00	09/22/20 17:36	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/18/20 11:00	09/22/20 17:36	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/18/20 11:00	09/22/20 17:36	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/18/20 11:00	09/22/20 17:36	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/18/20 11:00	09/22/20 17:36	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/18/20 11:00	09/22/20 17:36	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/18/20 11:00	09/22/20 17:36	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/18/20 11:00	09/22/20 17:36	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/18/20 11:00	09/22/20 17:36	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 14:49	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/18/20 09:58			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/19/20 17:37	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/19/20 17:37	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/19/20 17:37	14808-79-8		

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: BRGWC-50      Lab ID: 92495653013      Collected: 09/17/20 10:24      Received: 09/18/20 10:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.41	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	206	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 22:02	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00041J	mg/L	0.0030	0.00028	1	09/23/20 13:53	09/23/20 20:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/23/20 13:53	09/23/20 20:05	7440-38-2	
Barium	0.020	mg/L	0.010	0.00071	1	09/23/20 13:53	09/23/20 20:05	7440-39-3	
Beryllium	0.0065	mg/L	0.0030	0.000046	1	09/23/20 13:53	09/24/20 17:33	7440-41-7	
Boron	0.36	mg/L	0.10	0.0052	1	09/23/20 13:53	09/24/20 17:33	7440-42-8	
Cadmium	0.021	mg/L	0.0025	0.00012	1	09/23/20 13:53	09/23/20 20:05	7440-43-9	
Chromium	0.00098J	mg/L	0.010	0.00055	1	09/23/20 13:53	09/23/20 20:05	7440-47-3	
Cobalt	1.4	mg/L	0.050	0.0038	10	09/23/20 13:53	09/24/20 17:07	7440-48-4	
Lead	0.00015J	mg/L	0.0050	0.000036	1	09/23/20 13:53	09/23/20 20:05	7439-92-1	
Lithium	0.052	mg/L	0.030	0.00081	1	09/23/20 13:53	09/24/20 17:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/23/20 13:53	09/23/20 20:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/23/20 13:53	09/23/20 20:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/23/20 13:53	09/23/20 20:05	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A      Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 09:25	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1910	mg/L	50.0	50.0	1		09/24/20 11:49		D6,H1
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	20.1	mg/L	1.0	0.60	1		09/22/20 01:20	16887-00-6	
Fluoride	0.46	mg/L	0.10	0.050	1		09/22/20 01:20	16984-48-8	
Sulfate	1330	mg/L	26.0	13.0	26		09/22/20 14:58	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: BRGWC-52I Lab ID: 92495653014 Collected: 09/17/20 10:07 Received: 09/18/20 10:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.12	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	35.4	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 22:15	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/23/20 13:53	09/23/20 20:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/23/20 13:53	09/23/20 20:10	7440-38-2	
Barium	0.020	mg/L	0.010	0.00071	1	09/23/20 13:53	09/23/20 20:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/23/20 13:53	09/24/20 14:08	7440-41-7	
Boron	1.9	mg/L	0.10	0.0052	1	09/23/20 13:53	09/24/20 14:08	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/23/20 13:53	09/23/20 20:10	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/23/20 13:53	09/23/20 20:10	7440-47-3	
Cobalt	0.00046J	mg/L	0.0050	0.00038	1	09/23/20 13:53	09/23/20 20:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/23/20 13:53	09/23/20 20:10	7439-92-1	
Lithium	0.0058J	mg/L	0.030	0.00081	1	09/23/20 13:53	09/24/20 14:08	7439-93-2	
Molybdenum	0.00070J	mg/L	0.010	0.00069	1	09/23/20 13:53	09/23/20 20:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/23/20 13:53	09/23/20 20:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/23/20 13:53	09/23/20 20:10	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 09:27	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	329	mg/L	10.0	10.0	1		09/21/20 16:30		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.3	mg/L	1.0	0.60	1		09/22/20 02:04	16887-00-6	
Fluoride	0.074J	mg/L	0.10	0.050	1		09/22/20 02:04	16984-48-8	
Sulfate	165	mg/L	4.0	2.0	4		09/22/20 15:13	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Sample: FB-2		Lab ID: 92495653015		Collected: 09/17/20 10:20		Received: 09/18/20 10:15		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	09/22/20 14:15	09/22/20 22:20	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/23/20 13:53	09/23/20 20:16	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/23/20 13:53	09/23/20 20:16	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/23/20 13:53	09/23/20 20:16	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/23/20 13:53	09/24/20 14:14	7440-41-7		
Boron	<b>0.0097J</b>	mg/L	0.10	0.0052	1	09/23/20 13:53	09/24/20 14:14	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/23/20 13:53	09/23/20 20:16	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/23/20 13:53	09/23/20 20:16	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/23/20 13:53	09/23/20 20:16	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/23/20 13:53	09/23/20 20:16	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/23/20 13:53	09/24/20 14:14	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/23/20 13:53	09/23/20 20:16	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/23/20 13:53	09/23/20 20:16	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/23/20 13:53	09/23/20 20:16	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 09:30	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/21/20 16:30			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/22/20 02:19	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/22/20 02:19	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/22/20 02:19	14808-79-8		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 566871 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005

METHOD BLANK: 3003868 Matrix: Water  
Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/17/20 17:42	

LABORATORY CONTROL SAMPLE: 3003869

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.93J	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3003870 3003871

Parameter	Units	3003870		3003871		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	5.7	1	1	6.6	6.6	89	87	75-125	0	20

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

QC Batch: 568100 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495653006, 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012, 92495653013, 92495653014, 92495653015

METHOD BLANK: 3010230 Matrix: Water  
Associated Lab Samples: 92495653006, 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012, 92495653013, 92495653014, 92495653015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/22/20 20:31	

LABORATORY CONTROL SAMPLE: 3010231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.92J	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010232 3010233

Parameter	Units	92495653006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	43.1	1	1	44.0	43.4	83	22	75-125	1	20	M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 566966 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005

METHOD BLANK: 3004543 Matrix: Water  
Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/21/20 15:26	
Arsenic	mg/L	ND	0.0050	0.00078	09/21/20 15:26	
Barium	mg/L	ND	0.010	0.00071	09/21/20 15:26	
Beryllium	mg/L	ND	0.0030	0.000046	09/21/20 15:26	
Boron	mg/L	ND	0.10	0.0052	09/21/20 15:26	
Cadmium	mg/L	ND	0.0025	0.00012	09/21/20 15:26	
Chromium	mg/L	ND	0.010	0.00055	09/21/20 15:26	
Cobalt	mg/L	ND	0.0050	0.00038	09/21/20 15:26	
Lead	mg/L	ND	0.0050	0.000036	09/21/20 15:26	
Lithium	mg/L	ND	0.030	0.00081	09/21/20 15:26	
Molybdenum	mg/L	ND	0.010	0.00069	09/21/20 15:26	
Selenium	mg/L	ND	0.010	0.0016	09/21/20 15:26	
Thallium	mg/L	ND	0.0010	0.00014	09/21/20 15:26	

LABORATORY CONTROL SAMPLE: 3004544

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	105	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3004545 3004546

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653001	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	2	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.096	101	96	75-125	5	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Parameter	Units	3004545		3004546		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.058	0.1	0.1	0.16	0.15	99	95	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.096	102	96	75-125	6	20		
Boron	mg/L	ND	1	1	1.0	0.98	103	97	75-125	5	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20		
Chromium	mg/L	0.0025J	0.1	0.1	0.11	0.099	103	96	75-125	7	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	2	20		
Lead	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	104	100	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	99	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.094	97	94	75-125	4	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 567397 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495653006, 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012

METHOD BLANK: 3006748 Matrix: Water  
Associated Lab Samples: 92495653006, 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00033J	0.0030	0.00028	09/22/20 15:42	
Arsenic	mg/L	ND	0.0050	0.00078	09/22/20 15:42	
Barium	mg/L	ND	0.010	0.00071	09/22/20 15:42	
Beryllium	mg/L	ND	0.0030	0.000046	09/22/20 15:42	
Boron	mg/L	ND	0.10	0.0052	09/22/20 15:42	
Cadmium	mg/L	ND	0.0025	0.00012	09/22/20 15:42	
Chromium	mg/L	ND	0.010	0.00055	09/22/20 15:42	
Cobalt	mg/L	ND	0.0050	0.00038	09/22/20 15:42	
Lead	mg/L	ND	0.0050	0.000036	09/22/20 15:42	
Lithium	mg/L	ND	0.030	0.00081	09/22/20 15:42	
Molybdenum	mg/L	ND	0.010	0.00069	09/22/20 15:42	
Selenium	mg/L	ND	0.010	0.0016	09/22/20 15:42	
Thallium	mg/L	ND	0.0010	0.00014	09/22/20 15:42	

LABORATORY CONTROL SAMPLE: 3006749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	106	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.11	106	80-120	
Boron	mg/L	1	1.1	112	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.10	105	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3006750 3006751

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495870002	Spike Conc.	Spike Conc.	Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	106	75-125	2	20
Arsenic	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Parameter	Units	3006750		3006751		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495870002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.019	0.1	0.1	0.12	0.12	97	99	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20		
Boron	mg/L	0.0053J	1	1	1.0	1.0	100	101	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	1	20		
Chromium	mg/L	0.00086J	0.1	0.1	0.10	0.10	103	104	75-125	1	20		
Cobalt	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Molybdenum	mg/L	ND	0.1	0.1	0.096	0.096	95	96	75-125	0	20		
Selenium	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	1	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 568417 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495653013, 92495653014, 92495653015

METHOD BLANK: 3011604 Matrix: Water  
Associated Lab Samples: 92495653013, 92495653014, 92495653015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/23/20 18:33	
Arsenic	mg/L	ND	0.0050	0.00078	09/23/20 18:33	
Barium	mg/L	ND	0.010	0.00071	09/23/20 18:33	
Beryllium	mg/L	ND	0.0030	0.000046	09/23/20 18:33	
Boron	mg/L	ND	0.10	0.0052	09/23/20 18:33	
Cadmium	mg/L	ND	0.0025	0.00012	09/23/20 18:33	
Chromium	mg/L	ND	0.010	0.00055	09/23/20 18:33	
Cobalt	mg/L	ND	0.0050	0.00038	09/23/20 18:33	
Lead	mg/L	ND	0.0050	0.000036	09/23/20 18:33	
Lithium	mg/L	ND	0.030	0.00081	09/23/20 18:33	
Molybdenum	mg/L	ND	0.010	0.00069	09/23/20 18:33	
Selenium	mg/L	ND	0.010	0.0016	09/23/20 18:33	
Thallium	mg/L	ND	0.0010	0.00014	09/23/20 18:33	

LABORATORY CONTROL SAMPLE: 3011605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	105	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	105	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011606 3011607

Parameter	Units	92495876001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	1	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

Parameter	Units	92495876001		3011606		3011607		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Barium	mg/L	0.030	0.1	0.1	0.13	0.13	96	95	75-125	1	20			
Beryllium	mg/L	0.00012J	0.1	0.1	0.098	0.095	98	95	75-125	2	20			
Boron	mg/L	0.0065J	1	1	1.0	0.98	100	97	75-125	3	20			
Cadmium	mg/L	0.00016J	0.1	0.1	0.10	0.098	100	98	75-125	2	20			
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20			
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	1	20			
Lead	mg/L	0.00065J	0.1	0.1	0.098	0.099	97	99	75-125	2	20			
Lithium	mg/L	0.0014J	0.1	0.1	0.10	0.10	101	100	75-125	0	20			
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20			
Selenium	mg/L	ND	0.1	0.1	0.097	0.096	96	95	75-125	1	20			
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20			

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 567375 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005, 92495653006, 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012

METHOD BLANK: 3006615 Matrix: Water  
Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005, 92495653006, 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/18/20 14:02	

LABORATORY CONTROL SAMPLE: 3006616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3006617 3006618

Parameter	Units	92495653002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0026	100	103	75-125	3	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

QC Batch:	568004	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495653013, 92495653014, 92495653015

METHOD BLANK: 3009596 Matrix: Water

Associated Lab Samples: 92495653013, 92495653014, 92495653015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/23/20 08:40	

LABORATORY CONTROL SAMPLE: 3009597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009598 3009599

Parameter	Units	3009598		3009599		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92496275006 ND	0.0025	0.0025	0.0025	98	94	75-125	5	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

QC Batch:	566772	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005

METHOD BLANK: 3003519

Matrix: Water

Associated Lab Samples: 92495653001, 92495653002, 92495653003, 92495653004, 92495653005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/16/20 14:20	

LABORATORY CONTROL SAMPLE: 3003520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	392	98	84-108	

SAMPLE DUPLICATE: 3003521

Parameter	Units	92495054002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	90.0	94.0	4	10	

SAMPLE DUPLICATE: 3003522

Parameter	Units	92495047012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 567147 Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495653006, 92495653007, 92495653009, 92495653010

METHOD BLANK: 3005362 Matrix: Water  
Associated Lab Samples: 92495653006, 92495653007, 92495653009, 92495653010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/17/20 15:18	

LABORATORY CONTROL SAMPLE: 3005363

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	84-108	

SAMPLE DUPLICATE: 3005364

Parameter	Units	92495870005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3005365

Parameter	Units	92495900007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1890	1860	2	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

QC Batch: 567372	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495653011, 92495653012

METHOD BLANK: 3006601 Matrix: Water

Associated Lab Samples: 92495653011, 92495653012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/18/20 09:58	

LABORATORY CONTROL SAMPLE: 3006602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	387	97	84-108	

SAMPLE DUPLICATE: 3006603

Parameter	Units	92495653011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	622	654	5	10	

SAMPLE DUPLICATE: 3006604

Parameter	Units	92495900008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1220	1250	3	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

QC Batch:	567882	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495653008, 92495653014, 92495653015

METHOD BLANK: 3009251 Matrix: Water

Associated Lab Samples: 92495653008, 92495653014, 92495653015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/21/20 16:27	

LABORATORY CONTROL SAMPLE: 3009252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 3009253

Parameter	Units	92495653008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2090	2130	2	10	

SAMPLE DUPLICATE: 3009254

Parameter	Units	92495870011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	25.0	18.0	33	10	D6

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

QC Batch: 569364

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495653013

METHOD BLANK: 3016819

Matrix: Water

Associated Lab Samples: 92495653013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/24/20 11:49	

LABORATORY CONTROL SAMPLE: 3016820

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	84-108	

SAMPLE DUPLICATE: 3016821

Parameter	Units	92495653013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1910	2160	13	10	D6,H1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 567529 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495653001, 92495653002, 92495653004, 92495653005, 92495653006

METHOD BLANK: 3007534 Matrix: Water  
Associated Lab Samples: 92495653001, 92495653002, 92495653004, 92495653005, 92495653006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/18/20 16:46	
Fluoride	mg/L	ND	0.10	0.050	09/18/20 16:46	
Sulfate	mg/L	ND	1.0	0.50	09/18/20 16:46	

LABORATORY CONTROL SAMPLE: 3007535

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	52.4	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007536 3007537

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496029001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	13.6	50	50	68.1	69.2	109	111	90-110	2	10	M1	
Fluoride	mg/L	0.10	2.5	2.5	2.8	2.9	109	112	90-110	3	10	M1	
Sulfate	mg/L	7.4	50	50	62.2	63.3	110	112	90-110	2	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007538 3007539

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	5.5	50	50	58.5	62.8	106	115	90-110	7	10	M1	
Fluoride	mg/L	0.057J	2.5	2.5	2.8	3.0	108	116	90-110	7	10	M1	
Sulfate	mg/L	241	50	50	287	291	91	100	90-110	2	10		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 567607 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012

METHOD BLANK: 3008004 Matrix: Water  
Associated Lab Samples: 92495653007, 92495653008, 92495653009, 92495653010, 92495653011, 92495653012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/19/20 15:23	
Fluoride	mg/L	ND	0.10	0.050	09/19/20 15:23	
Sulfate	mg/L	ND	1.0	0.50	09/19/20 15:23	

LABORATORY CONTROL SAMPLE: 3008005

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.3	105	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	52.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008006 3008007

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653007	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.4	50	50	57.4	58.2	106	108	90-110	1	10		
Fluoride	mg/L	0.13	2.5	2.5	2.8	2.8	107	109	90-110	1	10		
Sulfate	mg/L	334	50	50	389	385	111	103	90-110	1	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008008 3008009

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495964005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	7.9	50	50	61.3	62.0	107	108	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	108	90-110	1	10		
Sulfate	mg/L	256	50	50	298	299	85	87	90-110	0	10	M6	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 567942 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92495653013, 92495653014, 92495653015

METHOD BLANK: 3009478 Matrix: Water  
Associated Lab Samples: 92495653013, 92495653014, 92495653015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/21/20 23:05	
Fluoride	mg/L	ND	0.10	0.050	09/21/20 23:05	
Sulfate	mg/L	ND	1.0	0.50	09/21/20 23:05	

LABORATORY CONTROL SAMPLE: 3009479

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.8	106	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	52.8	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009480 3009481

Parameter	Units	92495047013		3009480		3009481		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1.7	50	50	53.8	53.6	104	104	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	103	90-110	0	10		
Sulfate	mg/L	8.6	50	50	60.9	60.8	105	104	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009482 3009483

Parameter	Units	92495870010		3009482		3009483		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	0.97J	50	50	53.1	53.5	104	105	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	105	90-110	2	10		
Sulfate	mg/L	ND	50	50	52.3	52.7	104	105	90-110	1	10		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

QC Batch: 568234 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495653003

METHOD BLANK: 3010905 Matrix: Water  
Associated Lab Samples: 92495653003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/23/20 17:04	
Fluoride	mg/L	ND	0.10	0.050	09/23/20 17:04	
Sulfate	mg/L	ND	1.0	0.50	09/23/20 17:04	

LABORATORY CONTROL SAMPLE: 3010906

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.0	106	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	53.2	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010909 3010910

Parameter	Units	92496730002		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	364	50	50	389	389	249	249	90-110	0	10		
Fluoride	mg/L	0.60	2.5	2.5	3.3	3.4	110	110	90-110	1	10		
Sulfate	mg/L	3.0	50	50	57.3	57.3	109	109	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011115 3011116

Parameter	Units	92496730004		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	109	50	50	158	158	97	97	90-110	0	10		
Fluoride	mg/L	0.43	2.5	2.5	3.1	3.2	108	109	90-110	1	10		
Sulfate	mg/L	79.4	50	50	120	120	81	81	90-110	0	10 M1		

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## QUALIFIERS

Project: BRANCH BCD NETWORK

Pace Project No.: 92495653

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H1 Analysis conducted outside the EPA method holding time.

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

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495653001	BRGWA-12S				
92495653002	BRGWA-12I				
92495653003	BRGWA-23S				
92495653004	BRGWC-25I				
92495653005	BRGWC-29I				
92495653006	BRGWC-32S				
92495653007	BRGWC-30I				
92495653008	BRGWC-47				
92495653009	BRGWC-45				
92495653010	BRGWC-27I				
92495653013	BRGWC-50				
92495653014	BRGWC-52I				
92495653001	BRGWA-12S	EPA 3010A	566871	EPA 6010D	566908
92495653002	BRGWA-12I	EPA 3010A	566871	EPA 6010D	566908
92495653003	BRGWA-23S	EPA 3010A	566871	EPA 6010D	566908
92495653004	BRGWC-25I	EPA 3010A	566871	EPA 6010D	566908
92495653005	BRGWC-29I	EPA 3010A	566871	EPA 6010D	566908
92495653006	BRGWC-32S	EPA 3010A	568100	EPA 6010D	568125
92495653007	BRGWC-30I	EPA 3010A	568100	EPA 6010D	568125
92495653008	BRGWC-47	EPA 3010A	568100	EPA 6010D	568125
92495653009	BRGWC-45	EPA 3010A	568100	EPA 6010D	568125
92495653010	BRGWC-27I	EPA 3010A	568100	EPA 6010D	568125
92495653011	DUP-1	EPA 3010A	568100	EPA 6010D	568125
92495653012	EB-1	EPA 3010A	568100	EPA 6010D	568125
92495653013	BRGWC-50	EPA 3010A	568100	EPA 6010D	568125
92495653014	BRGWC-52I	EPA 3010A	568100	EPA 6010D	568125
92495653015	FB-2	EPA 3010A	568100	EPA 6010D	568125
92495653001	BRGWA-12S	EPA 3005A	566966	EPA 6020B	566971
92495653002	BRGWA-12I	EPA 3005A	566966	EPA 6020B	566971
92495653003	BRGWA-23S	EPA 3005A	566966	EPA 6020B	566971
92495653004	BRGWC-25I	EPA 3005A	566966	EPA 6020B	566971
92495653005	BRGWC-29I	EPA 3005A	566966	EPA 6020B	566971
92495653006	BRGWC-32S	EPA 3005A	567397	EPA 6020B	567512
92495653007	BRGWC-30I	EPA 3005A	567397	EPA 6020B	567512
92495653008	BRGWC-47	EPA 3005A	567397	EPA 6020B	567512
92495653009	BRGWC-45	EPA 3005A	567397	EPA 6020B	567512
92495653010	BRGWC-27I	EPA 3005A	567397	EPA 6020B	567512
92495653011	DUP-1	EPA 3005A	567397	EPA 6020B	567512
92495653012	EB-1	EPA 3005A	567397	EPA 6020B	567512
92495653013	BRGWC-50	EPA 3005A	568417	EPA 6020B	568454
92495653014	BRGWC-52I	EPA 3005A	568417	EPA 6020B	568454
92495653015	FB-2	EPA 3005A	568417	EPA 6020B	568454
92495653001	BRGWA-12S	EPA 7470A	567375	EPA 7470A	567456
92495653002	BRGWA-12I	EPA 7470A	567375	EPA 7470A	567456
92495653003	BRGWA-23S	EPA 7470A	567375	EPA 7470A	567456
92495653004	BRGWC-25I	EPA 7470A	567375	EPA 7470A	567456

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK  
Pace Project No.: 92495653

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495653005	BRGWC-29I	EPA 7470A	567375	EPA 7470A	567456
92495653006	BRGWC-32S	EPA 7470A	567375	EPA 7470A	567456
92495653007	BRGWC-30I	EPA 7470A	567375	EPA 7470A	567456
92495653008	BRGWC-47	EPA 7470A	567375	EPA 7470A	567456
92495653009	BRGWC-45	EPA 7470A	567375	EPA 7470A	567456
92495653010	BRGWC-27I	EPA 7470A	567375	EPA 7470A	567456
92495653011	DUP-1	EPA 7470A	567375	EPA 7470A	567456
92495653012	EB-1	EPA 7470A	567375	EPA 7470A	567456
92495653013	BRGWC-50	EPA 7470A	568004	EPA 7470A	568115
92495653014	BRGWC-52I	EPA 7470A	568004	EPA 7470A	568115
92495653015	FB-2	EPA 7470A	568004	EPA 7470A	568115
92495653001	BRGWA-12S	SM 2450C-2011	566772		
92495653002	BRGWA-12I	SM 2450C-2011	566772		
92495653003	BRGWA-23S	SM 2450C-2011	566772		
92495653004	BRGWC-25I	SM 2450C-2011	566772		
92495653005	BRGWC-29I	SM 2450C-2011	566772		
92495653006	BRGWC-32S	SM 2450C-2011	567147		
92495653007	BRGWC-30I	SM 2450C-2011	567147		
92495653008	BRGWC-47	SM 2450C-2011	567882		
92495653009	BRGWC-45	SM 2450C-2011	567147		
92495653010	BRGWC-27I	SM 2450C-2011	567147		
92495653011	DUP-1	SM 2450C-2011	567372		
92495653012	EB-1	SM 2450C-2011	567372		
92495653013	BRGWC-50	SM 2450C-2011	569364		
92495653014	BRGWC-52I	SM 2450C-2011	567882		
92495653015	FB-2	SM 2450C-2011	567882		
92495653001	BRGWA-12S	EPA 300.0 Rev 2.1 1993	567529		
92495653002	BRGWA-12I	EPA 300.0 Rev 2.1 1993	567529		
92495653003	BRGWA-23S	EPA 300.0 Rev 2.1 1993	568234		
92495653004	BRGWC-25I	EPA 300.0 Rev 2.1 1993	567529		
92495653005	BRGWC-29I	EPA 300.0 Rev 2.1 1993	567529		
92495653006	BRGWC-32S	EPA 300.0 Rev 2.1 1993	567529		
92495653007	BRGWC-30I	EPA 300.0 Rev 2.1 1993	567607		
92495653008	BRGWC-47	EPA 300.0 Rev 2.1 1993	567607		
92495653009	BRGWC-45	EPA 300.0 Rev 2.1 1993	567607		
92495653010	BRGWC-27I	EPA 300.0 Rev 2.1 1993	567607		
92495653011	DUP-1	EPA 300.0 Rev 2.1 1993	567607		
92495653012	EB-1	EPA 300.0 Rev 2.1 1993	567607		
92495653013	BRGWC-50	EPA 300.0 Rev 2.1 1993	567942		
92495653014	BRGWC-52I	EPA 300.0 Rev 2.1 1993	567942		
92495653015	FB-2	EPA 300.0 Rev 2.1 1993	567942		

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92495653**



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Oth

Tracking #: \_\_\_\_\_ Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_ Thermometer Used 2/4 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 0.8 Biological Tissue is Frozen: Yes No  Date and Initials of person examining contents: 9/16/2004 Temp should be above freezing to 6°C

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

Project #

**WO# : 92495653**

PM: KLH1

Due Date: 09/30/20

CLIENT: GA-GA Power

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHg  
♦ Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP9A-250 mL plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Sterilization vials (N/A)	
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

BEIN

**pH Adjustment Log for Preserved Samples**

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

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



# CHAIN-OF-CUSTODY Analytical Request Document

Chain of Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or Last Page Workorder Number or  
MTIL Log-in Number Here

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Jody Abraham  
 Copy To: Golder  
 phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 State: Georgia City: Milledgeville Time Zone: Collect-d  
 Billing Information:  
 Email To: scsvoices@southernco.com  
 Site Collection Info/Address: Plant Branch  
 Project Name: Plant Branch BCD Network  
 Project # CCR 3rd Semi-Annual  
 Pace Profile#  
 Purchased By (print): Travis Martinez, Andrea McClure  
 Quote #  
 Turnaround Date Required  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWA-12S	GW	G	9-15-2020	1315			6.00	5
BRGWA-12I	GW	G	9-15-2020	1113			6.01	5
BRGWA-23S	GW	G	9-15-2020	1610			5.72	5
BRGWC-25I	GW	G	9-15-2020	1720			6.00	7
BRGWC-29I	GW	G	9-15-2020	1741			4.53	5

Container Preservative Type \*\*  
 1 1  
 Lab Project Manager:  
 \*\* Preservative Types (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other  
 Analyses  
 Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signatures Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Soils Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 O Strips:  
 Sample pH Acceptable Y N NA  
 pH Strips:  
 Sulfide Present Y N NA  
 Lead Acetate Strips:  
 LAB USE ONLY:  
 Lab Sample # / Comments:  
 02445653  
 +2 Rad

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier  
 Relinquished by/Company: (Signature) Jody Abraham  
 Date/Time: 9-16-2020/0800  
 Received by/Company: (Signature) Charles Hodge  
 Date/Time: 9/16/20 0945  
 MTIL LAB USE ONLY  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s): YES / NO  
 Page 1 of 1

October 08, 2020

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

RE: Project: BRANCH BCD/E BACKGROUND RADS  
Pace Project No.: 92495654

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 16, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

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### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495654001	BRGWA-6S	Water	09/15/20 09:45	09/16/20 09:45
92495654002	BRGWA-5S	Water	09/15/20 13:20	09/16/20 09:45
92495654003	BRGWA-5I	Water	09/15/20 14:02	09/16/20 09:45
92495654004	BRGWA-2S	Water	09/15/20 15:01	09/16/20 09:45
92495654005	BRGWA-2I	Water	09/15/20 16:07	09/16/20 09:45

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92495654001	BRGWA-6S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495654002	BRGWA-5S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495654003	BRGWA-5I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495654004	BRGWA-2S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495654005	BRGWA-2I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND RADS  
Pace Project No.: 92495654

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495654001</b>	<b>BRGWA-6S</b>					
EPA 9315	Radium-226	0.00810 ± 0.162 (0.444) C:88% T:NA	pCi/L		09/30/20 07:18	
EPA 9320	Radium-228	0.466 ± 0.418 (0.851) C:71% T:86%	pCi/L		10/05/20 15:06	
Total Radium Calculation	Total Radium	0.474 ± 0.580 (1.30)	pCi/L		10/06/20 14:01	
<b>92495654002</b>	<b>BRGWA-5S</b>					
EPA 9315	Radium-226	0.0906 ± 0.218 (0.520) C:87% T:NA	pCi/L		09/30/20 07:18	
EPA 9320	Radium-228	0.459 ± 0.553 (1.17) C:71% T:84%	pCi/L		10/05/20 17:44	
Total Radium Calculation	Total Radium	0.550 ± 0.771 (1.69)	pCi/L		10/06/20 14:01	
<b>92495654003</b>	<b>BRGWA-5I</b>					
EPA 9315	Radium-226	0.0999 ± 0.226 (0.535) C:87% T:NA	pCi/L		09/30/20 07:18	
EPA 9320	Radium-228	0.115 ± 0.622 (1.42) C:66% T:76%	pCi/L		10/05/20 17:44	
Total Radium Calculation	Total Radium	0.215 ± 0.848 (1.96)	pCi/L		10/06/20 14:01	
<b>92495654004</b>	<b>BRGWA-2S</b>					
EPA 9315	Radium-226	0.109 ± 0.177 (0.389) C:91% T:NA	pCi/L		09/30/20 07:18	
EPA 9320	Radium-228	0.470 ± 0.606 (1.29) C:63% T:77%	pCi/L		10/05/20 17:44	
Total Radium Calculation	Total Radium	0.579 ± 0.783 (1.68)	pCi/L		10/06/20 14:01	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92495654005</b>	<b>BRGWA-2I</b>					
EPA 9315	Radium-226	-0.0263 ± 0.159 (0.461) C:94% T:NA	pCi/L		09/30/20 07:18	
EPA 9320	Radium-228	0.0583 ± 0.776 (1.80) C:44% T:84%	pCi/L		10/05/20 17:44	
Total Radium Calculation	Total Radium	0.0583 ± 0.935 (2.26)	pCi/L		10/06/20 14:01	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-6S</b> <b>Lab ID: 92495654001</b> Collected: 09/15/20 09:45      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.00810 ± 0.162 (0.444)</b> <b>C:88% T:NA</b>	pCi/L	09/30/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.466 ± 0.418 (0.851)</b> <b>C:71% T:86%</b>	pCi/L	10/05/20 15:06	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.474 ± 0.580 (1.30)</b>	pCi/L	10/06/20 14:01	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-5S</b> <b>Lab ID: 92495654002</b> Collected: 09/15/20 13:20      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0906 ± 0.218 (0.520)</b> <b>C:87% T:NA</b>	pCi/L	09/30/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.459 ± 0.553 (1.17)</b> <b>C:71% T:84%</b>	pCi/L	10/05/20 17:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.550 ± 0.771 (1.69)</b>	pCi/L	10/06/20 14:01	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

**Sample: BRGWA-5I**      **Lab ID: 92495654003**      Collected: 09/15/20 14:02      Received: 09/16/20 09:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0999 ± 0.226 (0.535)</b> <b>C:87% T:NA</b>	pCi/L	09/30/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.115 ± 0.622 (1.42)</b> <b>C:66% T:76%</b>	pCi/L	10/05/20 17:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.215 ± 0.848 (1.96)</b>	pCi/L	10/06/20 14:01	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-2S</b> <b>Lab ID: 92495654004</b> Collected: 09/15/20 15:01      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.109 ± 0.177 (0.389)</b> <b>C:91% T:NA</b>	pCi/L	09/30/20 07:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.470 ± 0.606 (1.29)</b> <b>C:63% T:77%</b>	pCi/L	10/05/20 17:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.579 ± 0.783 (1.68)</b>	pCi/L	10/06/20 14:01	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-2I</b> <b>Lab ID: 92495654005</b> Collected: 09/15/20 16:07      Received: 09/16/20 09:45      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>-0.0263 ± 0.159 (0.461)</b> <b>C:94% T:NA</b>	pCi/L	09/30/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.0583 ± 0.776 (1.80)</b> <b>C:44% T:84%</b>	pCi/L	10/05/20 17:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.0583 ± 0.935 (2.26)</b>	pCi/L	10/06/20 14:01	7440-14-4	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

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QC Batch:	415401	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495654001, 92495654002, 92495654003, 92495654004, 92495654005

---

METHOD BLANK: 2008969 Matrix: Water

Associated Lab Samples: 92495654001, 92495654002, 92495654003, 92495654004, 92495654005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.804 ± 0.467 (0.852) C:69% T:78%	pCi/L	10/05/20 15:01	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

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QC Batch:	415400	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495654001, 92495654002, 92495654003, 92495654004, 92495654005

---

METHOD BLANK: 2008968 Matrix: Water

Associated Lab Samples: 92495654001, 92495654002, 92495654003, 92495654004, 92495654005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0938 ± 0.181 (0.415) C:94% T:NA	pCi/L	09/30/20 07:18	

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

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92495654

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD/E BACKGROUND RAD5

Pace Project No.: 92495654

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495654001	BRGWA-6S	EPA 9315	415400		
92495654002	BRGWA-5S	EPA 9315	415400		
92495654003	BRGWA-5I	EPA 9315	415400		
92495654004	BRGWA-2S	EPA 9315	415400		
92495654005	BRGWA-2I	EPA 9315	415400		
92495654001	BRGWA-6S	EPA 9320	415401		
92495654002	BRGWA-5S	EPA 9320	415401		
92495654003	BRGWA-5I	EPA 9320	415401		
92495654004	BRGWA-2S	EPA 9320	415401		
92495654005	BRGWA-2I	EPA 9320	415401		
92495654001	BRGWA-6S	Total Radium Calculation	417208		
92495654002	BRGWA-5S	Total Radium Calculation	417208		
92495654003	BRGWA-5I	Total Radium Calculation	417208		
92495654004	BRGWA-2S	Total Radium Calculation	417208		
92495654005	BRGWA-2I	Total Radium Calculation	417208		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Rec

WO#: 92495654

Client Name: GA Power



92495654

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Oth

Tracking #: \_\_\_\_\_

Proj. Due Date: \_\_\_\_\_  
Proj. Name: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used \_\_\_\_\_    Type of Ice:  Wet  Blue  None     Samples on ice, cooling process has begun

Cooler Temperature 0.8    Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/16/2004

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, colform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed    Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?    Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

Project #

WO#: 92495654

PM: KLH1

Due Date: 09/30/20

CLIENT: GA-GA Power

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

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

Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFLU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

pH Adjustment Log for Preserved Samples

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

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





# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Attach Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Company: Georgia Power - Coal Combustion Residuals		Billing information	
Address: 2480 Maner Road Atlanta, GA 30339			
Report To: Joey Abraham		Email To: scmvoices@southernco.com	
Copy To: Golder		Site Collection Info/Address: Plant Branch	
Phone: (404) 506-7239 Email: j.abraham@southernco.com		State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET	
Phone: (404) 506-7239 Email: j.abraham@southernco.com		Project Name: Plant Branch BCD/E Background Project # CCR 3rd Semi-Annual Pace Profile#	
Collected By (print): Travis Martinez, Andrea McClure		Purchase Order # Quote # Face Project Manager: kevin.berring@pacelab.com	
Collected By (signature):		Turnaround Date Required: Immediately Packed on Ice: [X] Yes [ ] No	
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)		Field Filtered (if applicable): [ ] Yes [ ] No	

**ALL SHADED AREAS are for LAB USE ONLY**

Container Preservative Type **		Lab Project Manager:
1	2	

\*\* Preservative Types (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) nitric acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses				Lab Profile/Line:	
Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226.228	Lab Sample Receipt Checklist:	
				Custody Seals Present/Intact Y N NA	
				Custody Signatures Present Y N NA	
				Collector Signatures Present Y N NA	
				Bottles Intact Y N NA	
				Correct Bottles Y N NA	
				Sufficient Volume Y N NA	
				Samples Received on Ice Y N NA	
				VDA - Headspace Acceptable Y N NA	
				USDA Regulated Soils Y N NA	
				Samples in Holding Time Y N NA	
				Residual Chlorine Present Y N NA	
				Cl Strips:	
				Sample pH Acceptable Y N NA	
				pH Strips:	
				Sulfide Present Y N NA	
				Lead Acetate Strips:	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (O), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWA-6S	GW	G	9-15-2020	0945			6.43	5
BRGWA-5S	GW	G	9-15-2020	1320			6.25	5
BRGWA-5E	GW	G	9-15-2020	1402			6.27	5
BRGWA-2S	GW	G	9-15-2020	1501			6.01	5
BRGWA-2I	GW	G	9-15-2020	1607			6.64	5

LAB USE ONLY: Lab Sample # / Comments:	
92495654	

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Ti, Hg		Type of Ice Used: Wet Blue Dry None		SHORT HOLDS PRESENT (<72 hours): Y N N/A		LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: Cooler 1 Temp Upon Receipt: ___°C Cooler 1 Therm Corr. Factor: ___°C Cooler 1 Corrected Temp: ___°C Comments:	
Packing Material Used:		Radchem sample(s) screened (<500 cpm): Y N NA		Lab Tracking #:		Trip Blank Received: Y N NA HCL MeOH TSP Other	
Relinquished by/Company: (Signature) 		Date/Time: 9-16-2020/0800		Received by/Company: (Signature) 		Date/Time: 9/16/20 0945	
Relinquished by/Company: (Signature)		Date/Time:		Received by/Company: (Signature)		Date/Time:	
Relinquished by/Company: (Signature)		Date/Time:		Received by/Company: (Signature)		Date/Time:	

MTJL LAB USE ONLY	
Table #	
Acctnum:	
Template:	
Prelogin:	
PM:	
PB:	



## Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 9/29/2020  
Worksheet: 55344  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID:	2008968
MB concentration:	0.094
MB Counting Uncertainty:	0.180
MB MDC:	0.416
MB Numerical Performance Indicator:	1.02
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCSD56344	LCSD56344
Count Date:	9/29/2020	9/29/2020
Spike C.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044	24.044
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.509	0.505
Target Conc. (pCi/L, g, F):	4.723	4.761
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	3.850	3.912
LCSD/MSD Counting Uncertainty (pCi/L, g, F):	0.659	0.653
Numerical Performance Indicator:	-2.36	-2.39
Percent Recovery:	82.15%	82.18%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	125%	125%
Lower % Recovery Limit:	75%	75%

Duplicate Sample Assessment		
Sample ID:	LCSD56344	Enter Duplicate sample IDs if other than LCSD in the space below.
Duplicate Sample ID:	LCSD56344	
Sample Result (pCi/L, g, F):	3.850	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.659	
Sample Duplicate Result (pCi/L, g, F):	3.912	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.693	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.085	924969605C1
(Based on the LCSD/MSD Percent Recoveries) Duplicate RPD:	0.04%	924969605C1/2UP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

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

Comments:

*lall 10/1/2020*

*lall 10/1/2020*





## Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAC  
Date: 9/29/2020  
Worklist: 56344  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2008968
MB Concentration	0.054
MB Counting Uncertainty	0.180
MB MDC	0.418
MB Numerical Performance Indicator	Pass
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCS# (Y or N)?	N
		LCS#56344
Count Date	9/30/2020	
Spike I.D.	19-033	
Decay Corrected Spike Concentration (pCi/mL)	24.544	
Volume Used (mL)	0.10	
Aliquot Volume (L, g, F)	0.909	
Target Conc. (pCi/L, g, F)	4.728	
Uncertainty (Calculated)	0.057	
Result (pCi/L, g, F)	3.582	
LCS1, CS0 Counting Uncertainty (pCi/L, g, F)	0.599	
Numerical Performance Indicator	-2.56	
Percent Recovery	82.15%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS#LCS# or the space below:
Sample I.D.	92495960001	
Duplicate Sample I.D.	92495960001 DUP	
Sample Result (pCi/L, g, F)	0.399	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.282	
Sample Duplicate Result (pCi/L, g, F)	0.162	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.250	
Are sample and/or duplicate results below RL?	See Below #	
Duplicate Numerical Performance Indicator	1.284	92495960001
Duplicate RPD	89.47%	92495960001 DUP
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Fail**	
% RPD Limit	25%	

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

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

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

Comments:

~~Subst. in spike prep prep sub to unacceptable precision~~ N/A

LAM 10/1/2020

LAM 10/1/2020

LAM 10/1/2020



## Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: VAL  
Date: 9/29/2020  
Worklist: 56345  
Matrix: WFT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	000069	
MB Concentration	0.504	
MB 2 Sigma CSU	0.467	
MB MDC	0.852	
MB Numerical Performance Indicator	3.58	
MB Status vs Numerical Indicator	Fail	
MB Status vs MDC	Pass	

Laboratory Control Sample Assessment	LCS# FY or NY?	
	LCS56345	LCS256345
Count Date	10-22-20	10-22-20
Spike I.D.	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL)	38.140	38.140
Volume Used (mL)	0.10	0.10
Aliquot Volume (mL, g, F)	0.219	0.206
Target Conc. (pCi, g, F)	4.639	4.752
Uncertainty (Calculated)	0.228	0.232
Result (pCi, g, F)	4.461	4.137
LCS/LCSD 2 Sigma CSU (pCi, g, F)	1.517	1.135
Numerical Performance Indicator	-0.25	-0.88
Percent Recovery	96.38%	87.43%
Status vs Numerical Indicator	NA	NA
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	135%	135%
Lower % Recovery Limit	50%	50%

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

Duplicate Sample Assessment		
Sample I.D.	LCS56345	Enter Duplicate sample IDs if other than LCS/LCSD in the space below
Duplicate Sample I.D.	LCS256345	
Sample Result (pCi, g, F)	4.461	
Sample Result 2 Sigma CSU (pCi, g, F)	1.517	
Sample Duplicate Result (pCi, g, F)	4.137	
Sample Duplicate Result 2 Sigma CSU (pCi, g, F)	1.305	
Are sample and/or duplicate results below RFD?	NO	
Duplicate Numerical Performance Indicator	0.373	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD	9.74%	
Duplicate Status vs Numerical Indicator	Pass	
Duplicate Status vs RPD	Pass	
% RPD Limit	35%	

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

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

**Comments:**

If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-blanked.

*Handwritten note:* 10/29/20

*Handwritten signature:* VAL 10/29/20

September 27, 2020

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

RE: Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92495656

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 16, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92495656

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495656001	BRGWA-6S	Water	09/15/20 09:45	09/16/20 09:45
92495656002	BRGWA-5S	Water	09/15/20 13:20	09/16/20 09:45
92495656003	BRGWA-5I	Water	09/15/20 14:02	09/16/20 09:45
92495656004	BRGWA-2S	Water	09/15/20 15:01	09/16/20 09:45
92495656005	BRGWA-2I	Water	09/15/20 16:07	09/16/20 09:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92495656001	BRGWA-6S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495656002	BRGWA-5S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495656003	BRGWA-5I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495656004	BRGWA-2S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495656005	BRGWA-2I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92495656001</b>	<b>BRGWA-6S</b>					
	pH	6.43	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	3.7	mg/L	1.0	09/17/20 18:38	
EPA 6020B	Barium	0.013	mg/L	0.010	09/21/20 16:55	
EPA 6020B	Chromium	0.014	mg/L	0.010	09/21/20 16:55	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	09/21/20 16:55	
SM 2450C-2011	Total Dissolved Solids	79.0	mg/L	10.0	09/17/20 15:25	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	09/23/20 23:33	
<b>92495656002</b>	<b>BRGWA-5S</b>					
	pH	6.25	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	16.8	mg/L	1.0	09/17/20 18:43	
EPA 6020B	Barium	0.038	mg/L	0.010	09/21/20 17:00	
EPA 6020B	Chromium	0.0048J	mg/L	0.010	09/21/20 17:00	
EPA 6020B	Lead	0.000043J	mg/L	0.0050	09/21/20 17:00	
SM 2450C-2011	Total Dissolved Solids	116	mg/L	10.0	09/17/20 15:26	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	09/23/20 23:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	09/23/20 23:48	
<b>92495656003</b>	<b>BRGWA-5I</b>					
	pH	6.27	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	12.7	mg/L	1.0	09/17/20 18:47	
EPA 6020B	Barium	0.022	mg/L	0.010	09/21/20 17:06	
EPA 6020B	Chromium	0.0069J	mg/L	0.010	09/21/20 17:06	
EPA 6020B	Cobalt	0.00050J	mg/L	0.0050	09/21/20 17:06	
EPA 6020B	Lead	0.0013J	mg/L	0.0050	09/21/20 17:06	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	09/21/20 17:06	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	09/21/20 17:06	
SM 2450C-2011	Total Dissolved Solids	100	mg/L	10.0	09/17/20 15:26	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	09/24/20 00:03	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	09/24/20 00:03	
<b>92495656004</b>	<b>BRGWA-2S</b>					
	pH	6.01	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	3.9	mg/L	1.0	09/17/20 19:00	
EPA 6020B	Barium	0.0094J	mg/L	0.010	09/21/20 17:12	
EPA 6020B	Chromium	0.0082J	mg/L	0.010	09/21/20 17:12	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	09/21/20 17:12	
SM 2450C-2011	Total Dissolved Solids	69.0	mg/L	10.0	09/17/20 15:26	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	09/24/20 00:48	
<b>92495656005</b>	<b>BRGWA-2I</b>					
	pH	6.64	Std. Units		09/22/20 12:29	
EPA 6010D	Calcium	14.1	mg/L	1.0	09/17/20 19:04	
EPA 6020B	Barium	0.0083J	mg/L	0.010	09/21/20 17:18	
EPA 6020B	Lithium	0.033	mg/L	0.030	09/21/20 17:18	
EPA 6020B	Molybdenum	0.00070J	mg/L	0.010	09/21/20 17:18	
SM 2450C-2011	Total Dissolved Solids	116	mg/L	10.0	09/17/20 15:26	
EPA 300.0 Rev 2.1 1993	Chloride	1.9	mg/L	1.0	09/24/20 07:27	
EPA 300.0 Rev 2.1 1993	Sulfate	5.9	mg/L	1.0	09/24/20 07:27	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Sample: BRGWA-6S		Lab ID: 92495656001		Collected: 09/15/20 09:45		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.43	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	3.7	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:38	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 16:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 16:55	7440-38-2	
Barium	0.013	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 16:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 16:55	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 16:55	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 16:55	7440-43-9	
Chromium	0.014	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 16:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 16:55	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 16:55	7439-92-1	
Lithium	0.0027J	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 16:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 16:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 16:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 16:55	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 12:58	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	79.0	mg/L	10.0	10.0	1		09/17/20 15:25		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.3	mg/L	1.0	0.60	1		09/23/20 23:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/23/20 23:33	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/23/20 23:33	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Sample: BRGWA-5S		Lab ID: 92495656002		Collected: 09/15/20 13:20		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.25	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	16.8	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:43	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 17:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 17:00	7440-38-2	
Barium	0.038	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 17:00	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 17:00	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 17:00	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 17:00	7440-43-9	
Chromium	0.0048J	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 17:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 17:00	7440-48-4	
Lead	0.000043J	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 17:00	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 17:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 17:00	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 17:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 17:00	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 13:07	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	116	mg/L	10.0	10.0	1		09/17/20 15:26		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.7	mg/L	1.0	0.60	1		09/23/20 23:48	16887-00-6	
Fluoride	0.051J	mg/L	0.10	0.050	1		09/23/20 23:48	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/23/20 23:48	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Sample: BRGWA-5I		Lab ID: 92495656003		Collected: 09/15/20 14:02		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.27	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	12.7	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 18:47	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 17:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 17:06	7440-38-2	
Barium	0.022	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 17:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 17:06	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 17:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 17:06	7440-43-9	
Chromium	0.0069J	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 17:06	7440-47-3	
Cobalt	0.00050J	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 17:06	7440-48-4	
Lead	0.0013J	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 17:06	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 17:06	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 17:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 17:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 17:06	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 13:10	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	100	mg/L	10.0	10.0	1		09/17/20 15:26		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.7	mg/L	1.0	0.60	1		09/24/20 00:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/24/20 00:03	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		09/24/20 00:03	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Sample: BRGWA-2S		Lab ID: 92495656004		Collected: 09/15/20 15:01		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.01	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	3.9	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 19:00	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 17:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 17:12	7440-38-2	
Barium	0.0094J	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 17:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 17:12	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 17:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 17:12	7440-43-9	
Chromium	0.0082J	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 17:12	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 17:12	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 17:12	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 17:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 17:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 17:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 17:12	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 13:12	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	69.0	mg/L	10.0	10.0	1		09/17/20 15:26		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		09/24/20 00:48	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/24/20 00:48	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/24/20 00:48	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Sample: BRGWA-2I		Lab ID: 92495656005		Collected: 09/15/20 16:07		Received: 09/16/20 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.64	Std. Units			1		09/22/20 12:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	14.1	mg/L	1.0	0.070	1	09/16/20 15:14	09/17/20 19:04	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/16/20 18:16	09/21/20 17:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/16/20 18:16	09/21/20 17:18	7440-38-2	
Barium	0.0083J	mg/L	0.010	0.00071	1	09/16/20 18:16	09/21/20 17:18	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/16/20 18:16	09/21/20 17:18	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	09/16/20 18:16	09/21/20 17:18	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/16/20 18:16	09/21/20 17:18	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/16/20 18:16	09/21/20 17:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/16/20 18:16	09/21/20 17:18	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/16/20 18:16	09/21/20 17:18	7439-92-1	
Lithium	0.033	mg/L	0.030	0.00081	1	09/16/20 18:16	09/21/20 17:18	7439-93-2	
Molybdenum	0.00070J	mg/L	0.010	0.00069	1	09/16/20 18:16	09/21/20 17:18	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/16/20 18:16	09/21/20 17:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/16/20 18:16	09/21/20 17:18	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/18/20 08:30	09/18/20 13:14	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	116	mg/L	10.0	10.0	1		09/17/20 15:26		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.9	mg/L	1.0	0.60	1		09/24/20 07:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/24/20 07:27	16984-48-8	
Sulfate	5.9	mg/L	1.0	0.50	1		09/24/20 07:27	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

QC Batch:	566871	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

METHOD BLANK: 3003868 Matrix: Water  
Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/17/20 17:42	

LABORATORY CONTROL SAMPLE: 3003869

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.93J	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3003870 3003871

Parameter	Units	3003870		3003871		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	5.7	1	1	6.6	6.6	89	87	75-125	0	20

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

QC Batch: 566966

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

METHOD BLANK: 3004543

Matrix: Water

Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/21/20 15:26	
Arsenic	mg/L	ND	0.0050	0.00078	09/21/20 15:26	
Barium	mg/L	ND	0.010	0.00071	09/21/20 15:26	
Beryllium	mg/L	ND	0.0030	0.000046	09/21/20 15:26	
Boron	mg/L	ND	0.10	0.0052	09/21/20 15:26	
Cadmium	mg/L	ND	0.0025	0.00012	09/21/20 15:26	
Chromium	mg/L	ND	0.010	0.00055	09/21/20 15:26	
Cobalt	mg/L	ND	0.0050	0.00038	09/21/20 15:26	
Lead	mg/L	ND	0.0050	0.000036	09/21/20 15:26	
Lithium	mg/L	ND	0.030	0.00081	09/21/20 15:26	
Molybdenum	mg/L	ND	0.010	0.00069	09/21/20 15:26	
Selenium	mg/L	ND	0.010	0.0016	09/21/20 15:26	
Thallium	mg/L	ND	0.0010	0.00014	09/21/20 15:26	

LABORATORY CONTROL SAMPLE: 3004544

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	105	80-120	
Boron	mg/L	1	1.1	109	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3004545 3004546

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653001	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	2	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.096	101	96	75-125	5	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

Parameter	Units	3004545		3004546		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.058	0.1	0.1	0.16	0.15	99	95	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.096	102	96	75-125	6	20		
Boron	mg/L	ND	1	1	1.0	0.98	103	97	75-125	5	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20		
Chromium	mg/L	0.0025J	0.1	0.1	0.11	0.099	103	96	75-125	7	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	2	20		
Lead	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	104	100	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	99	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.094	97	94	75-125	4	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

QC Batch:	567255	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

METHOD BLANK: 3006139 Matrix: Water

Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/18/20 12:53	

LABORATORY CONTROL SAMPLE: 3006140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3006141 3006142

Parameter	Units	3006141		3006142		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0026	0.0025	102	100	75-125	2	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92495656

QC Batch: 567139 Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

METHOD BLANK: 3005336 Matrix: Water  
Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004, 92495656005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/17/20 15:22	

LABORATORY CONTROL SAMPLE: 3005337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	420	105	84-108	

SAMPLE DUPLICATE: 3005338

Parameter	Units	92494171032 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	146	142	3	10	

SAMPLE DUPLICATE: 3005339

Parameter	Units	92495656003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	100	95.0	5	10	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92495656

QC Batch: 568234 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004

METHOD BLANK: 3010905 Matrix: Water  
Associated Lab Samples: 92495656001, 92495656002, 92495656003, 92495656004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/23/20 17:04	
Fluoride	mg/L	ND	0.10	0.050	09/23/20 17:04	
Sulfate	mg/L	ND	1.0	0.50	09/23/20 17:04	

LABORATORY CONTROL SAMPLE: 3010906

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.0	106	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	53.2	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010909 3010910

Parameter	Units	92496730002		3010909		3010910		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	264	50	50	389	389	249	249	90-110	0	10		
Fluoride	mg/L	0.60	2.5	2.5	3.3	3.4	110	110	90-110	1	10		
Sulfate	mg/L	3.0	50	50	57.3	57.3	109	109	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011115 3011116

Parameter	Units	92496730004		3011115		3011116		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	109	50	50	158	158	97	97	90-110	0	10		
Fluoride	mg/L	0.43	2.5	2.5	3.1	3.2	108	109	90-110	1	10		
Sulfate	mg/L	79.4	50	50	120	120	81	81	90-110	0	10 M1		

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

QC Batch: 568377	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495656005

METHOD BLANK: 3011350 Matrix: Water

Associated Lab Samples: 92495656005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/24/20 06:58	
Fluoride	mg/L	ND	0.10	0.050	09/24/20 06:58	
Sulfate	mg/L	ND	1.0	0.50	09/24/20 06:58	

LABORATORY CONTROL SAMPLE: 3011351

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011352 3011353

Parameter	Units	92495656005		3011352		3011353		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result				
Chloride	mg/L	1.9	50	50	55.8	56.2	108	109	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	109	110	90-110	1	10
Sulfate	mg/L	5.9	50	50	59.3	59.6	107	108	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011354 3011355

Parameter	Units	92496524001		3011354		3011355		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result				
Chloride	mg/L	2.6	50	50	56.8	57.6	108	110	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.7	2.8	108	110	90-110	2	10
Sulfate	mg/L	1.0	50	50	54.0	54.8	106	108	90-110	1	10

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

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92495656

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92495656

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495656001	BRGWA-6S				
92495656002	BRGWA-5S				
92495656003	BRGWA-5I				
92495656004	BRGWA-2S				
92495656005	BRGWA-2I				
92495656001	BRGWA-6S	EPA 3010A	566871	EPA 6010D	566908
92495656002	BRGWA-5S	EPA 3010A	566871	EPA 6010D	566908
92495656003	BRGWA-5I	EPA 3010A	566871	EPA 6010D	566908
92495656004	BRGWA-2S	EPA 3010A	566871	EPA 6010D	566908
92495656005	BRGWA-2I	EPA 3010A	566871	EPA 6010D	566908
92495656001	BRGWA-6S	EPA 3005A	566966	EPA 6020B	566971
92495656002	BRGWA-5S	EPA 3005A	566966	EPA 6020B	566971
92495656003	BRGWA-5I	EPA 3005A	566966	EPA 6020B	566971
92495656004	BRGWA-2S	EPA 3005A	566966	EPA 6020B	566971
92495656005	BRGWA-2I	EPA 3005A	566966	EPA 6020B	566971
92495656001	BRGWA-6S	EPA 7470A	567255	EPA 7470A	567454
92495656002	BRGWA-5S	EPA 7470A	567255	EPA 7470A	567454
92495656003	BRGWA-5I	EPA 7470A	567255	EPA 7470A	567454
92495656004	BRGWA-2S	EPA 7470A	567255	EPA 7470A	567454
92495656005	BRGWA-2I	EPA 7470A	567255	EPA 7470A	567454
92495656001	BRGWA-6S	SM 2450C-2011	567139		
92495656002	BRGWA-5S	SM 2450C-2011	567139		
92495656003	BRGWA-5I	SM 2450C-2011	567139		
92495656004	BRGWA-2S	SM 2450C-2011	567139		
92495656005	BRGWA-2I	SM 2450C-2011	567139		
92495656001	BRGWA-6S	EPA 300.0 Rev 2.1 1993	568234		
92495656002	BRGWA-5S	EPA 300.0 Rev 2.1 1993	568234		
92495656003	BRGWA-5I	EPA 300.0 Rev 2.1 1993	568234		
92495656004	BRGWA-2S	EPA 300.0 Rev 2.1 1993	568234		
92495656005	BRGWA-2I	EPA 300.0 Rev 2.1 1993	568377		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 92495656

Client Name: GA Power



92495656

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: \_\_\_\_\_

Proj. Name: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used \_\_\_\_\_ Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 0.8 Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/16/2004

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, colform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

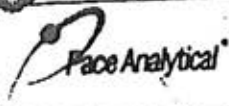
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

Project #

**WO# : 92495656**

PM: KLH1 Due Date: 09/30/20  
CLIENT: GA-GA Power

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHg

Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3H-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GX (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP9A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Sedimentation vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

**pH Adjustment Log for Preserved Samples**

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

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





### CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Attach Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Manner Road, Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 Phone: (404) 506-7239  
 Email: j.abraham@southernco.com

Billing Information  
 Email To: scsvoices@southernco.com

State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET [ ] AT

Project Name: Plant Branch BCD/E Background  
 Project # CCR 3rd Semi-Annual  
 Pace Profile #  
 Purchase Order #  
 Quote #  
 Turnaround Date Required  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Pace Project Manager: kevin.herring@pacelab.com  
 Immediately Packed on Ice: [X] Yes [ ] No  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis: \_\_\_\_\_

### ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type \*\*  
 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 10 [ ] 11 [ ] 12 [ ] 13 [ ] 14 [ ] 15 [ ] 16 [ ] 17 [ ] 18 [ ] 19 [ ] 20 [ ]

Lab Project Manager: \_\_\_\_\_

\*\* Preservative Types (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) nitric acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:
Metals 6010/6020/7470 - see comments	Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA CI Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____
TOS	
Chloride/Fluoride/Sulfate	
Radium 226/228	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (O), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (for Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
BRGWA-6S	GW	G	9-15-2020	0945			6.43	5
BRGWA-5S	GW	G	9-15-2020	1320			6.25	5
BRGWA-5I	GW	G	9-15-2020	1402			6.27	5
BRGWA-2S	GW	G	9-15-2020	1501			6.01	5
BRGWA-2I	GW	G	9-15-2020	1607			6.64	5

LAB USE ONLY:  
 Lab Sample # / Comments: 92495656

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg

Type of Ice Used: Wet Blue Dry None  
 Packing Material Used: \_\_\_\_\_  
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #: \_\_\_\_\_  
 Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_oC  
 Cooler 1 Therm Corr. Factor: \_\_\_oC  
 Cooler 1 Corrected Temp: \_\_\_oC  
 Comments: \_\_\_\_\_

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 9-16-2020/0800	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 9/16/20 0945	MTJL LAB USE ONLY Table #
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Account: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Trip Blank Received: Y N NA HCL MeOH TSP Other
Non Conformance(s): YES / NO				Page: 1 of: 1



October 12, 2020

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

RE: Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92496249

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92496249

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### **Pace Analytical Services Pennsylvania**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92496249001	PZ-51S	Water	09/17/20 12:44	09/18/20 10:15
92496249002	PZ-51I	Water	09/17/20 13:02	09/18/20 10:15

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: BRANCH BCD ASSESSMENT RADS  
 Pace Project No.: 92496249

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92496249001	PZ-51S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496249002	PZ-51I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

**REPORT OF LABORATORY ANALYSIS**

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92496249001</b>	<b>PZ-51S</b>					
EPA 9315	Radium-226	0.241 ± 0.236 (0.445) C:80% T:NA	pCi/L		09/30/20 09:00	
EPA 9320	Radium-228	0.711 ± 0.513 (1.00) C:65% T:78%	pCi/L		10/06/20 11:53	
Total Radium Calculation	Total Radium	0.952 ± 0.749 (1.45)	pCi/L		10/07/20 15:56	
<b>92496249002</b>	<b>PZ-51I</b>					
EPA 9315	Radium-226	0.798 ± 0.353 (0.410) C:93% T:NA	pCi/L		09/30/20 09:00	
EPA 9320	Radium-228	0.960 ± 0.553 (1.02) C:64% T:77%	pCi/L		10/06/20 11:52	
Total Radium Calculation	Total Radium	1.76 ± 0.906 (1.43)	pCi/L		10/07/20 16:11	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

Sample: **PZ-51S** Lab ID: **92496249001** Collected: 09/17/20 12:44 Received: 09/18/20 10:15 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.241 ± 0.236 (0.445)</b> <b>C:80% T:NA</b>	pCi/L	09/30/20 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.711 ± 0.513 (1.00)</b> <b>C:65% T:78%</b>	pCi/L	10/06/20 11:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.952 ± 0.749 (1.45)</b>	pCi/L	10/07/20 15:56	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

**Sample: PZ-511**      **Lab ID: 92496249002**      Collected: 09/17/20 13:02      Received: 09/18/20 10:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.798 ± 0.353 (0.410)</b> <b>C:93% T:NA</b>	pCi/L	09/30/20 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.960 ± 0.553 (1.02)</b> <b>C:64% T:77%</b>	pCi/L	10/06/20 11:52	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.76 ± 0.906 (1.43)</b>	pCi/L	10/07/20 16:11	7440-14-4	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

QC Batch:	415402	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92496249001, 92496249002

METHOD BLANK: 2008971 Matrix: Water

Associated Lab Samples: 92496249001, 92496249002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0214 ± 0.170 (0.482) C:94% T:NA	pCi/L	09/30/20 08:23	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

QC Batch: 415403

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92496249001, 92496249002

METHOD BLANK: 2008973

Matrix: Water

Associated Lab Samples: 92496249001, 92496249002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.789 ± 0.460 (0.832) C:67% T:72%	pCi/L	10/06/20 11:47	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92496249

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92496249001	PZ-51S	EPA 9315	415402		
92496249002	PZ-51I	EPA 9315	415402		
92496249001	PZ-51S	EPA 9320	415403		
92496249002	PZ-51I	EPA 9320	415403		
92496249001	PZ-51S	Total Radium Calculation	417460		
92496249002	PZ-51I	Total Radium Calculation	417462		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon R

WO#: 92496249

Client Name: GA Power



92496249

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Proj. Name: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 214    Type of Ice: Wet Blue None     Samples on ice cooling process has begun

Cooler Temperature 3.8    Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 9/17/12 OC/ck

Temp should be above freezing to 6°C    Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed    Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

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

Project #

WO#: 92496249

PH: KLH1

Due Date: 10/09/20

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BO15 (water) DOC, LLHg

\* Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFLU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG3H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile-Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VS6U-20 mL Scintillation vials (N/A)	
	1																											
	2																											
	3																											
	4																											
	5																											
	6																											
	7																											
	8																											
	9																											
	10																											
	11																											
	12																											

pH Adjustment Log for Preserved Samples

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

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



### CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL SHADED AREAS are for LAB USE ONLY**

Container Preservative Type \*\*

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses

Lab Profile/Line:

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 Project Name: Plant Branch BCD Assessment  
 Project # CCR 3rd Semi-Annual  
 Collected By (print): Travis Martinez, Andrea McClure  
 Collected By (signature): *[Signature]*  
 State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET  
 Pace Project Manager: kevin.herring@pacelabs.com  
 Immediately Packed on Ice: [X] Yes [ ] No  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis: \_\_\_\_\_

Analyses	Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226,228
	X	X	X	X
	X	X	X	X

Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Solids Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 Cl Strips: \_\_\_\_\_  
 Sample pH Acceptable Y N NA  
 pH Strips: \_\_\_\_\_  
 Sulfide Present Y N NA  
 Lead Acetate Strips: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
PZ-51s	GW	G	9-17-2020	1244			5.777	
PZ-51i	GW	G	9-17-2020	1302			4.935	

LAB USE ONLY:  
 Lab Sample # / Comments:  
 92496249  
 +2 Radium

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Si, Ti, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_oC  
 Cooler 1 Therm Corr. Factor: \_\_\_oC  
 Cooler 1 Corrected Temp: \_\_\_oC  
 Comments:

Relinquished by/Company (Signature): *[Signature]*  
 Relinquished by/Company (Signature):  
 Relinquished by/Company (Signature):

Date/Time: 9-18-2020/0800  
 Date/Time:  
 Date/Time:

Received by/Company (Signature): *[Signature]*  
 Received by/Company (Signature):  
 Received by/Company (Signature):

Date/Time: 9/17/2010/15  
 Date/Time:  
 Date/Time:

MTJL LAB USE ONLY  
 Table #:  
 Acctnum:  
 Template:  
 Prelogin:  
 PM:  
 PB:

Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s):  
 YES / NO  
 Page 1 of 1

### Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: LAL  
Date: 8/29/2020  
Worksheet: 56346  
Matrix: CW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2008571
MB Concentration	<0.02
MB Counting Uncertainty	0.179
MB MDC	0.422
MB Numerical Performance Indicator	<0.25
MB Status vs Numerical Indicator	NA
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LCS# 7Y or 17P	
	LCS#6246	LCS#56346
Count Date	8/29/2020	9/23/2020
Spike - D	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL)	24.044	24.044
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, F)	0.504	0.505
Target Conc. (pCi/L, g, F)	4.774	4.731
Uncertainty (Calculated)	0.057	0.057
Result (pCi/L, g, F)	5.385	4.719
LCS/LCSD Counting Uncertainty (pCi/L, g, F)	0.860	0.760
Numerical Performance Indicator	1.40	<0.03
Percent Recovery	112.87%	99.74%
Status vs Numerical Indicator	NA	NA
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	125%	125%
Lower % Recovery Limit	75%	75%

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

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS56346	
Duplicate Sample I.D.:	LCS56346	
Sample Result (pCi/L, g, F)	5.385	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.860	
Sample Duplicate Result (pCi/L, g, F)	4.719	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.760	
Are sample and/or duplicate results below RPD?	NO	
Duplicate Numerical Performance Indicator (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.128	
Duplicate Status vs Numerical Indicator	NA	
Duplicate Status vs RPD	Pass	
% RPD Limit	25%	

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

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

Comments:

*Quint 1/2020*

*LAM 10/1/2020*



### Quality Control Sample Performance Assessment



Test: Ra-229  
Analyst: CAL  
Date: 9/29/2020  
Worklist: 58348  
Matrix: DVN

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment		
MB Sample ID	200697	
MB Concentration	< 0.21	
MB Counting Uncertainty	0.170	
MB MDC	0.482	
MB Numerical Performance Indicator	0.25	
MB Status vs Numerical Indicator	N/A	
MB Status vs MDC	Pass	

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCSD56345	LCSD56346
Count Date	9/30/2020	
Spike ID	19-033	
Decay Corrected Spike Concentration (pCi/L)	24.084	
Volume Used (mL)	0.10	
Adjust Volume (L, g, F)	0.534	
Target Conc. (pCi/L, g, F)	4.774	
Uncertainty (Calculated)	0.657	
Result (pCi/L, g, F)	5.063	
LGS/LCSD Counting Uncertainty (pCi/L, g, F)	0.880	
Numerical Performance Indicator	1.40	
Percent Recovery	112.87%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

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

Duplicate Sample Assessment		
Sample ID	92495249001	Enter Duplicate sample IDs separated by the space below:
Duplicate Sample ID	92495249001DUP	
Sample Result (pCi/L, g, F)	0.241	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.234	
Sample Duplicate Result (pCi/L, g, F)	0.452	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.344	
Are sample and/or duplicate results below RPD?	See Below #	
Duplicate Numerical Performance Indicator	0.993	
Duplicate RPD	50.22%	
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD	Fail**	
% RPD Limit	25%	

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

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

Comments:

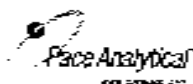
~~Blank must be re-prepared due to unacceptable precision. N/A~~

CAL 10/1/2020

CAL 10/1/2020

CAL 10/1/2020





### Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: VAL  
Date: 9/29/2020  
Worklist: 56347  
Matrix: WT

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment	
MB Sample ID	2002973
MB Concentration	0.752
MB 2 Sigma CSU	0.480
MB MDC	0.832
MB Numerical Performance Indicator	3.38
MB Status vs Numerical Indicator	Fail*
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
		LCSD66347
Count Date	13/6/2020	
Spike ID	20-030	
Decay Corrected Spike Concentration (pCi/mL)	38.131	
Volume Used (mL)	0.10	
Aliquot Volume (L, g, F)	0.814	
Target Conc. (pCi/L, g, F)	4.587	
Uncertainty (Calculated)	0.212	
Result (pCi/L, g, F)	6.284	
LCSD/CSU 2 Sigma CSU (pCi/L, g, F)	1.522	
Numerical Performance Indicator	2.52	
Percent Recovery	142.15%	
Status vs Numerical Indicator	Warning	
Status vs Recovery	Fail High**	
Upper % Recovery Limit	135%	
Lower % Recovery Limit	50%	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCSD/CSU in the space below
Sample ID:	92496249001	
Duplicate Sample ID:	92496249001DUP	
Sample Result (pCi/L, g, F)	0.711	
Sample Result 2 Sigma CSU (pCi/L, g, F)	0.513	
Sample Duplicate Result (pCi/L, g, F)	0.232	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F)	0.943	
Are sample and/or duplicate results below RPD?	See Below **	
Duplicate Numerical Performance Indicator	1.254	92496249001
Duplicate RPD	121.90%	92496249001DUP
Duplicate Status vs Numerical Indicator	Pass	
Duplicate Status vs RPD	Fail**	
% RPD Limit	30%	

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

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

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

**Comments:**

\* If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable, otherwise this batch must be re-grappd.

\*\* If all sample results are below MDC, the batch is acceptable, otherwise this batch must be re-prepped due to LCS failure

*10/1/20*

*VAL  
10/1/20 20*

October 01, 2020

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

RE: Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92496260

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

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

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### **Pace Analytical Services Peachtree Corners**

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

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92496260001	PZ-51S	Water	09/17/20 12:44	09/18/20 10:15
92496260002	PZ-51I	Water	09/17/20 13:02	09/18/20 10:15

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**SAMPLE ANALYTE COUNT**

Project: BRANCH BCD ASSESSMENT  
 Pace Project No.: 92496260

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92496260001	PZ-51S	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	FFP	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92496260002	PZ-51I	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	FFP	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3

PASI-A = Pace Analytical Services - Asheville  
 PASI-C = Pace Analytical Services - Charlotte  
 PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92496260001</b>	<b>PZ-51S</b>					
	pH	5.77	Std. Units		09/18/20 11:29	
EPA 6010D	Calcium	7.7	mg/L	1.0	09/25/20 19:05	
EPA 6020B	Antimony	0.00043J	mg/L	0.0030	09/23/20 19:53	
EPA 6020B	Barium	0.033	mg/L	0.010	09/23/20 19:53	
EPA 6020B	Boron	0.0063J	mg/L	0.10	09/24/20 14:02	
EPA 6020B	Cobalt	0.0062	mg/L	0.0050	09/23/20 19:53	
SM 2450C-2011	Total Dissolved Solids	101	mg/L	10.0	09/21/20 16:29	
EPA 300.0 Rev 2.1 1993	Chloride	4.6	mg/L	1.0	09/22/20 13:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	09/22/20 13:00	
EPA 300.0 Rev 2.1 1993	Sulfate	0.53J	mg/L	1.0	09/22/20 13:00	
<b>92496260002</b>	<b>PZ-51I</b>					
	pH	4.93	Std. Units		09/18/20 11:29	
EPA 6010D	Calcium	168	mg/L	1.0	09/25/20 19:22	
EPA 6020B	Barium	0.015	mg/L	0.010	09/23/20 19:59	
EPA 6020B	Beryllium	0.000096J	mg/L	0.0030	09/24/20 17:27	
EPA 6020B	Boron	0.43	mg/L	0.10	09/24/20 17:27	
EPA 6020B	Cadmium	0.033	mg/L	0.0025	09/23/20 19:59	
EPA 6020B	Chromium	0.00098J	mg/L	0.010	09/23/20 19:59	
EPA 6020B	Cobalt	0.022	mg/L	0.0050	09/23/20 19:59	
EPA 6020B	Lead	0.00036J	mg/L	0.0050	09/23/20 19:59	
EPA 6020B	Lithium	0.021J	mg/L	0.030	09/24/20 17:27	
SM 2450C-2011	Total Dissolved Solids	1600	mg/L	10.0	09/21/20 16:29	
EPA 300.0 Rev 2.1 1993	Chloride	10.5	mg/L	1.0	09/22/20 13:15	
EPA 300.0 Rev 2.1 1993	Sulfate	1030	mg/L	21.0	09/22/20 19:09	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92496260

Sample: PZ-51S		Lab ID: 92496260001		Collected: 09/17/20 12:44		Received: 09/18/20 10:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.77	Std. Units			1		09/18/20 11:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	7.7	mg/L	1.0	0.070	1	09/24/20 14:17	09/25/20 19:05	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00043J	mg/L	0.0030	0.00028	1	09/23/20 13:53	09/23/20 19:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/23/20 13:53	09/23/20 19:53	7440-38-2	
Barium	0.033	mg/L	0.010	0.00071	1	09/23/20 13:53	09/23/20 19:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/23/20 13:53	09/24/20 14:02	7440-41-7	
Boron	0.0063J	mg/L	0.10	0.0052	1	09/23/20 13:53	09/24/20 14:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/23/20 13:53	09/23/20 19:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/23/20 13:53	09/23/20 19:53	7440-47-3	
Cobalt	0.0062	mg/L	0.0050	0.00038	1	09/23/20 13:53	09/23/20 19:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/23/20 13:53	09/23/20 19:53	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/23/20 13:53	09/24/20 14:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/23/20 13:53	09/23/20 19:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/23/20 13:53	09/23/20 19:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/23/20 13:53	09/23/20 19:53	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 09:44	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	101	mg/L	10.0	10.0	1		09/21/20 16:29		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.6	mg/L	1.0	0.60	1		09/22/20 13:00	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		09/22/20 13:00	16984-48-8	
Sulfate	0.53J	mg/L	1.0	0.50	1		09/22/20 13:00	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

Sample: PZ-511 Lab ID: 92496260002 Collected: 09/17/20 13:02 Received: 09/18/20 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
pH	4.93	Std. Units			1		09/18/20 11:29		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	168	mg/L	1.0	0.070	1	09/24/20 14:17	09/25/20 19:22	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/23/20 13:53	09/23/20 19:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/23/20 13:53	09/23/20 19:59	7440-38-2	
Barium	0.015	mg/L	0.010	0.00071	1	09/23/20 13:53	09/23/20 19:59	7440-39-3	
Beryllium	0.000096J	mg/L	0.0030	0.000046	1	09/23/20 13:53	09/24/20 17:27	7440-41-7	
Boron	0.43	mg/L	0.10	0.0052	1	09/23/20 13:53	09/24/20 17:27	7440-42-8	
Cadmium	0.033	mg/L	0.0025	0.00012	1	09/23/20 13:53	09/23/20 19:59	7440-43-9	
Chromium	0.00098J	mg/L	0.010	0.00055	1	09/23/20 13:53	09/23/20 19:59	7440-47-3	
Cobalt	0.022	mg/L	0.0050	0.00038	1	09/23/20 13:53	09/23/20 19:59	7440-48-4	
Lead	0.00036J	mg/L	0.0050	0.000036	1	09/23/20 13:53	09/23/20 19:59	7439-92-1	
Lithium	0.021J	mg/L	0.030	0.00081	1	09/23/20 13:53	09/24/20 17:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/23/20 13:53	09/23/20 19:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/23/20 13:53	09/23/20 19:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/23/20 13:53	09/23/20 19:59	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 09:46	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1600	mg/L	10.0	10.0	1		09/21/20 16:29		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	10.5	mg/L	1.0	0.60	1		09/22/20 13:15	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/22/20 13:15	16984-48-8	
Sulfate	1030	mg/L	21.0	10.5	21		09/22/20 19:09	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

QC Batch: 568747

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496260001, 92496260002

METHOD BLANK: 3013294

Matrix: Water

Associated Lab Samples: 92496260001, 92496260002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/25/20 18:16	

LABORATORY CONTROL SAMPLE: 3013295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013296 3013297

Parameter	Units	3013296		3013297		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	75.8	1	74.9	75.7	-84	-9	75-125	1	20	M1

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92496260

QC Batch: 568417 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92496260001, 92496260002

METHOD BLANK: 3011604 Matrix: Water  
Associated Lab Samples: 92496260001, 92496260002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/23/20 18:33	
Arsenic	mg/L	ND	0.0050	0.00078	09/23/20 18:33	
Barium	mg/L	ND	0.010	0.00071	09/23/20 18:33	
Beryllium	mg/L	ND	0.0030	0.000046	09/23/20 18:33	
Boron	mg/L	ND	0.10	0.0052	09/23/20 18:33	
Cadmium	mg/L	ND	0.0025	0.00012	09/23/20 18:33	
Chromium	mg/L	ND	0.010	0.00055	09/23/20 18:33	
Cobalt	mg/L	ND	0.0050	0.00038	09/23/20 18:33	
Lead	mg/L	ND	0.0050	0.000036	09/23/20 18:33	
Lithium	mg/L	ND	0.030	0.00081	09/23/20 18:33	
Molybdenum	mg/L	ND	0.010	0.00069	09/23/20 18:33	
Selenium	mg/L	ND	0.010	0.0016	09/23/20 18:33	
Thallium	mg/L	ND	0.0010	0.00014	09/23/20 18:33	

LABORATORY CONTROL SAMPLE: 3011605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	105	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	105	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.11	106	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011606 3011607

Parameter	Units	92495876001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	1	20	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

Parameter	Units	92495876001		3011606		3011607		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Barium	mg/L	0.030	0.1	0.1	0.13	0.13	96	95	75-125	1	20			
Beryllium	mg/L	0.00012J	0.1	0.1	0.098	0.095	98	95	75-125	2	20			
Boron	mg/L	0.0065J	1	1	1.0	0.98	100	97	75-125	3	20			
Cadmium	mg/L	0.00016J	0.1	0.1	0.10	0.098	100	98	75-125	2	20			
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20			
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	1	20			
Lead	mg/L	0.00065J	0.1	0.1	0.098	0.099	97	99	75-125	2	20			
Lithium	mg/L	0.0014J	0.1	0.1	0.10	0.10	101	100	75-125	0	20			
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20			
Selenium	mg/L	ND	0.1	0.1	0.097	0.096	96	95	75-125	1	20			
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20			

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

QC Batch: 568004

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496260001, 92496260002

METHOD BLANK: 3009596

Matrix: Water

Associated Lab Samples: 92496260001, 92496260002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/23/20 08:40	

LABORATORY CONTROL SAMPLE: 3009597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009598 3009599

Parameter	Units	3009598		3009599		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0024	98	94	75-125	5	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

QC Batch: 567882

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496260001, 92496260002

METHOD BLANK: 3009251

Matrix: Water

Associated Lab Samples: 92496260001, 92496260002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/21/20 16:27	

LABORATORY CONTROL SAMPLE: 3009252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 3009253

Parameter	Units	92495653008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2090	2130	2	10	

SAMPLE DUPLICATE: 3009254

Parameter	Units	92495870011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	25.0	18.0	33	10	D6

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92496260

QC Batch: 567943 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92496260001, 92496260002

METHOD BLANK: 3009484 Matrix: Water  
Associated Lab Samples: 92496260001, 92496260002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/22/20 07:03	
Fluoride	mg/L	ND	0.10	0.050	09/22/20 07:03	
Sulfate	mg/L	ND	1.0	0.50	09/22/20 07:03	

LABORATORY CONTROL SAMPLE: 3009485

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	54.8	110	90-110	
Fluoride	mg/L	2.5	2.7	110	90-110	
Sulfate	mg/L	50	54.9	110	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009486 3009487

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495894011 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	105	50	50	50	152	155	94	101	90-110	2	10	
Fluoride	mg/L	0.10	2.5	2.5	2.5	2.7	2.7	103	104	90-110	1	10	
Sulfate	mg/L	209	50	50	50	255	261	92	103	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009488 3009489

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495900016 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	ND	50	50	50	52.8	52.5	106	105	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	2.6	105	104	90-110	1	10	
Sulfate	mg/L	ND	50	50	50	52.6	52.2	105	104	90-110	1	10	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92496260

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92496260001	PZ-51S				
92496260002	PZ-51I				
92496260001	PZ-51S	EPA 3010A	568747	EPA 6010D	568813
92496260002	PZ-51I	EPA 3010A	568747	EPA 6010D	568813
92496260001	PZ-51S	EPA 3005A	568417	EPA 6020B	568454
92496260002	PZ-51I	EPA 3005A	568417	EPA 6020B	568454
92496260001	PZ-51S	EPA 7470A	568004	EPA 7470A	568115
92496260002	PZ-51I	EPA 7470A	568004	EPA 7470A	568115
92496260001	PZ-51S	SM 2450C-2011	567882		
92496260002	PZ-51I	SM 2450C-2011	567882		
92496260001	PZ-51S	EPA 300.0 Rev 2.1 1993	567943		
92496260002	PZ-51I	EPA 300.0 Rev 2.1 1993	567943		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: 92496260



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 2.14    Type of Ice: Wet Blue None     Samples on ice cooling process has begun

Cooler Temperature 3.8    Biological Tissue is Frozen: Yes No    Date and Initials of person examining contents: 9/17/12 OC/ck  
Temp should be above freezing to 6°C    Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed    Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required?    Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

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



Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolina Quality Control

WO#: 92496260

PM: KLH1 Due Date: 10/02/20  
CLIENT: GA-GA Power

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

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/BD15 (water) DOC, LLHg

\* Bottom half of box is to list number of bottle

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3H-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFLU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP2T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile-Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VG6U-20 mL Scintillation vials (N/A)
	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

BPM

21-A

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals
Address: 2480 Maner Road
Atlanta, GA 30339
Report To: Joju Abraham
Copy To: Golder

Billing information:
Email To: scinvoices@southernco.com
Site Collection Info/Address: Plant Branch
State: Georgia City: Milledgeville Time Zone Collected

phone: (404) 506-7239
Email: jabraham@southernco.com
Project Name: Plant Branch BCD Assessment
Project # CCR 3rd Semi-Annual
Collected By (print): Travis Martinez, Andrea McClure
Collected By (signature): [Signature]

Pace Profiles#
Pace Project Manager: kevin.herring@pacelabs.com
Immediately Packed on Ice: [X] Yes [ ] No
Field Filtered (if applicable) [ ] Yes [ ] No
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)
Analysis: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Table with columns: Customer Sample ID, Matrix, Comp / Grab, Collected (or Composite Start) Date/Time, Composite End Date/Time, pH, # of Cnrs. Contains handwritten entries for samples PZ-5Is and PZ-5Ii.

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here
ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type \*\*
Lab Project Manager:
\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) acetic acid, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Table with columns: Analyses (Metals 6010/6020/7470 - see comments, TDS, Chloride/Fluoride/Sulfate, Radium 226,228). Contains handwritten 'X' marks for analysis results.

Lab Profile/Line:
Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VDA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Surfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:
02491260
+2 Radium

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, U, Tl, Hg
Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: °C
Cooler 1 Therm Corr. Factor: °C
Cooler 1 Corrected Temp: °C
Comments:

Relinquished by/Company: (Signature) Date/Time: 9-18-2020/0800

Received by/Company: (Signature) Date/Time: 9/17/2010/15

Relinquished by/Company: (Signature) Date/Time:
Received by/Company: (Signature) Date/Time:
Relinquished by/Company: (Signature) Date/Time:
Received by/Company: (Signature) Date/Time:

MTJL LAB USE ONLY
Table #:
AccNum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other
Non Conformance(s): Page 1
YES / NO of 1

November 11, 2020

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

RE: Project: PLANT BRANCH  
Pace Project No.: 92502483

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: PLANT BRANCH

Pace Project No.: 92502483

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

North Carolina Certification #: 381  
South Carolina Certification #: 98011001  
Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: PLANT BRANCH

Pace Project No.: 92502483

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92502483001	PZ-50D	Water	10/27/20 09:40	10/28/20 09:00
92502483002	PZ-51D	Water	10/27/20 12:45	10/28/20 09:00
92502483003	PZ-51I	Water	10/27/20 14:10	10/28/20 09:00
92502483004	FB	Water	10/27/20 10:00	10/28/20 09:00
92502483005	EB	Water	10/27/20 11:20	10/28/20 09:00
92502483006	FD	Water	10/27/20 00:00	10/28/20 09:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: PLANT BRANCH  
Pace Project No.: 92502483

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92502483001	PZ-50D	EPA 6010D	DRB	4
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92502483002	PZ-51D	EPA 6010D	DRB	4
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92502483003	PZ-51I	EPA 6010D	DRB	4
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92502483004	FB	EPA 6010D	DRB	4
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92502483005	EB	EPA 6010D	DRB	4
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92502483006	FD	EPA 6010D	DRB	4
		EPA 6020B	CW1	3
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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### SUMMARY OF DETECTION

Project: PLANT BRANCH

Pace Project No.: 92502483

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92502483001</b>	<b>PZ-50D</b>					
	Performed by	CUSTOME			10/28/20 15:41	
		R				
	pH	6.47	Std. Units		10/28/20 15:41	
EPA 6010D	Potassium	9.7	mg/L	0.20	11/04/20 21:28	
EPA 6010D	Sodium	31.9	mg/L	1.0	11/04/20 21:28	
EPA 6010D	Calcium	159	mg/L	1.0	11/04/20 21:28	
EPA 6010D	Magnesium	49.2	mg/L	0.050	11/04/20 21:28	
EPA 6020B	Boron	0.15	mg/L	0.10	10/28/20 18:43	
EPA 6020B	Cobalt	0.0037J	mg/L	0.0050	10/28/20 18:43	
SM 2450C-2011	Total Dissolved Solids	914	mg/L	20.0	10/28/20 18:53	
SM 2320B-2011	Alkalinity, Total as CaCO3	90.2	mg/L	5.0	11/10/20 14:52	
EPA 300.0 Rev 2.1 1993	Chloride	5.6	mg/L	1.0	10/30/20 13:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.28	mg/L	0.10	10/30/20 13:08	
EPA 300.0 Rev 2.1 1993	Sulfate	492	mg/L	11.0	10/31/20 00:28	
<b>92502483002</b>	<b>PZ-51D</b>					
	Performed by	CUSTOME			10/28/20 15:41	
		R				
	pH	6.79	Std. Units		10/28/20 15:41	
EPA 6010D	Potassium	8.7	mg/L	0.20	11/04/20 21:33	
EPA 6010D	Sodium	25.2	mg/L	1.0	11/04/20 21:33	
EPA 6010D	Calcium	132	mg/L	1.0	11/04/20 21:33	
EPA 6010D	Magnesium	32.5	mg/L	0.050	11/04/20 21:33	
EPA 6020B	Boron	0.029J	mg/L	0.10	10/28/20 19:01	
EPA 6020B	Cobalt	0.00041J	mg/L	0.0050	10/28/20 19:01	
SM 2450C-2011	Total Dissolved Solids	680	mg/L	20.0	10/28/20 18:53	
SM 2320B-2011	Alkalinity, Total as CaCO3	116	mg/L	5.0	11/10/20 15:03	
EPA 300.0 Rev 2.1 1993	Chloride	6.3	mg/L	1.0	10/30/20 13:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	10/30/20 13:22	
EPA 300.0 Rev 2.1 1993	Sulfate	357	mg/L	8.0	10/31/20 00:42	
<b>92502483003</b>	<b>PZ-51I</b>					
	Performed by	CUSTOME			10/28/20 15:41	
		R				
	pH	5.49	Std. Units		10/28/20 15:41	
EPA 6010D	Potassium	10.9	mg/L	0.20	11/04/20 21:38	
EPA 6010D	Sodium	42.6	mg/L	1.0	11/04/20 21:38	
EPA 6010D	Calcium	183	mg/L	1.0	11/04/20 21:38	
EPA 6010D	Magnesium	111	mg/L	0.050	11/04/20 21:38	
EPA 6020B	Boron	0.37	mg/L	0.10	10/28/20 19:06	
EPA 6020B	Cadmium	0.0051	mg/L	0.0025	10/28/20 19:06	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	10/28/20 19:06	
SM 2450C-2011	Total Dissolved Solids	1200	mg/L	50.0	10/28/20 18:53	
SM 2320B-2011	Alkalinity, Total as CaCO3	22.9	mg/L	5.0	11/10/20 15:28	
EPA 300.0 Rev 2.1 1993	Chloride	11.0	mg/L	1.0	10/30/20 13:37	
EPA 300.0 Rev 2.1 1993	Sulfate	893	mg/L	20.0	10/31/20 00:57	
<b>92502483004</b>	<b>FB</b>					
EPA 6020B	Boron	0.0054J	mg/L	0.10	10/28/20 19:29	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: PLANT BRANCH

Pace Project No.: 92502483

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92502483005</b>	<b>EB</b>					
EPA 6010D	Potassium	0.067J	mg/L	0.20	11/04/20 21:59	B
<b>92502483006</b>	<b>FD</b>					
EPA 6010D	Potassium	10.8	mg/L	0.20	11/04/20 22:04	
EPA 6010D	Sodium	42.4	mg/L	1.0	11/04/20 22:04	
EPA 6010D	Calcium	183	mg/L	1.0	11/04/20 22:04	
EPA 6010D	Magnesium	111	mg/L	0.050	11/04/20 22:04	
EPA 6020B	Boron	0.32	mg/L	0.10	10/28/20 19:41	
EPA 6020B	Cadmium	0.0043	mg/L	0.0025	10/28/20 19:41	
EPA 6020B	Cobalt	0.018	mg/L	0.0050	10/28/20 19:41	
SM 2450C-2011	Total Dissolved Solids	1390	mg/L	50.0	10/28/20 18:55	
SM 2320B-2011	Alkalinity, Total as CaCO <sub>3</sub>	23.0	mg/L	5.0	11/10/20 15:45	
EPA 300.0 Rev 2.1 1993	Chloride	11.0	mg/L	1.0	10/30/20 15:47	
EPA 300.0 Rev 2.1 1993	Sulfate	892	mg/L	20.0	10/31/20 01:11	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: PLANT BRANCH  
Pace Project No.: 92502483

Sample: PZ-50D		Lab ID: 92502483001		Collected: 10/27/20 09:40		Received: 10/28/20 09:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		10/28/20 15:41		
pH	<b>6.47</b>	Std. Units			1		10/28/20 15:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	<b>9.7</b>	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:28	7440-09-7	
Sodium	<b>31.9</b>	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:28	7440-23-5	
Calcium	<b>159</b>	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:28	7440-70-2	
Magnesium	<b>49.2</b>	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:28	7439-95-4	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.15</b>	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 18:43	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 18:43	7440-43-9	
Cobalt	<b>0.0037J</b>	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 18:43	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>914</b>	mg/L	20.0	20.0	1		10/28/20 18:53		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO3	<b>90.2</b>	mg/L	5.0	5.0	1		11/10/20 14:52		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>5.6</b>	mg/L	1.0	0.60	1		10/30/20 13:08	16887-00-6	
Fluoride	<b>0.28</b>	mg/L	0.10	0.050	1		10/30/20 13:08	16984-48-8	
Sulfate	<b>492</b>	mg/L	11.0	5.5	11		10/31/20 00:28	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 92502483

**Sample: PZ-51D**      **Lab ID: 92502483002**      Collected: 10/27/20 12:45      Received: 10/28/20 09:00      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		10/28/20 15:41		
pH	<b>6.79</b>	Std. Units			1		10/28/20 15:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	<b>8.7</b>	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:33	7440-09-7	
Sodium	<b>25.2</b>	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:33	7440-23-5	
Calcium	<b>132</b>	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:33	7440-70-2	
Magnesium	<b>32.5</b>	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:33	7439-95-4	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.029J</b>	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:01	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:01	7440-43-9	
Cobalt	<b>0.00041J</b>	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:01	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>680</b>	mg/L	20.0	20.0	1		10/28/20 18:53		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO3	<b>116</b>	mg/L	5.0	5.0	1		11/10/20 15:03		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>6.3</b>	mg/L	1.0	0.60	1		10/30/20 13:22	16887-00-6	
Fluoride	<b>0.21</b>	mg/L	0.10	0.050	1		10/30/20 13:22	16984-48-8	
Sulfate	<b>357</b>	mg/L	8.0	4.0	8		10/31/20 00:42	14808-79-8	

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## ANALYTICAL RESULTS

Project: PLANT BRANCH  
Pace Project No.: 92502483

**Sample: PZ-511**      **Lab ID: 92502483003**      Collected: 10/27/20 14:10      Received: 10/28/20 09:00      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		10/28/20 15:41		
pH	<b>5.49</b>	Std. Units			1		10/28/20 15:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	<b>10.9</b>	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:38	7440-09-7	
Sodium	<b>42.6</b>	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:38	7440-23-5	
Calcium	<b>183</b>	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:38	7440-70-2	
Magnesium	<b>111</b>	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:38	7439-95-4	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.37</b>	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:06	7440-42-8	
Cadmium	<b>0.0051</b>	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:06	7440-43-9	
Cobalt	<b>0.020</b>	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:06	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1200</b>	mg/L	50.0	50.0	1		10/28/20 18:53		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO3	<b>22.9</b>	mg/L	5.0	5.0	1		11/10/20 15:28		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>11.0</b>	mg/L	1.0	0.60	1		10/30/20 13:37	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/30/20 13:37	16984-48-8	
Sulfate	<b>893</b>	mg/L	20.0	10.0	20		10/31/20 00:57	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: PLANT BRANCH  
Pace Project No.: 92502483

**Sample: FB**      **Lab ID: 92502483004**      Collected: 10/27/20 10:00      Received: 10/28/20 09:00      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	ND	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:54	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:54	7440-23-5	
Calcium	ND	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:54	7440-70-2	
Magnesium	ND	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:54	7439-95-4	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.0054J</b>	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:29	7440-43-9	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:29	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/28/20 18:54		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	5.0	5.0	1		11/10/20 15:37		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		10/30/20 13:51	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/30/20 13:51	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		10/30/20 13:51	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: PLANT BRANCH  
Pace Project No.: 92502483

Sample: EB		Lab ID: 92502483005		Collected: 10/27/20 11:20		Received: 10/28/20 09:00		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Potassium	0.067J	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 21:59	7440-09-7	B	
Sodium	ND	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 21:59	7440-23-5		
Calcium	ND	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 21:59	7440-70-2		
Magnesium	ND	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 21:59	7439-95-4		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:35	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:35	7440-43-9		
Cobalt	ND	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:35	7440-48-4		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/28/20 18:54			
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	5.0	5.0	1		11/10/20 15:41			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		10/30/20 15:04	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		10/30/20 15:04	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		10/30/20 15:04	14808-79-8		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: PLANT BRANCH

Pace Project No.: 92502483

**Sample: FD**      **Lab ID: 92502483006**      Collected: 10/27/20 00:00      Received: 10/28/20 09:00      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Potassium	<b>10.8</b>	mg/L	0.20	0.056	1	11/04/20 09:30	11/04/20 22:04	7440-09-7	
Sodium	<b>42.4</b>	mg/L	1.0	0.26	1	11/04/20 09:30	11/04/20 22:04	7440-23-5	
Calcium	<b>183</b>	mg/L	1.0	0.070	1	11/04/20 09:30	11/04/20 22:04	7440-70-2	
Magnesium	<b>111</b>	mg/L	0.050	0.0076	1	11/04/20 09:30	11/04/20 22:04	7439-95-4	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.32</b>	mg/L	0.10	0.0052	1	10/28/20 13:12	10/28/20 19:41	7440-42-8	
Cadmium	<b>0.0043</b>	mg/L	0.0025	0.00012	1	10/28/20 13:12	10/28/20 19:41	7440-43-9	
Cobalt	<b>0.018</b>	mg/L	0.0050	0.00038	1	10/28/20 13:12	10/28/20 19:41	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1390</b>	mg/L	50.0	50.0	1		10/28/20 18:55		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Total as CaCO <sub>3</sub>	<b>23.0</b>	mg/L	5.0	5.0	1		11/10/20 15:45		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	<b>11.0</b>	mg/L	1.0	0.60	1		10/30/20 15:47	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/30/20 15:47	16984-48-8	
Sulfate	<b>892</b>	mg/L	20.0	10.0	20		10/31/20 01:11	14808-79-8	

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### QUALITY CONTROL DATA

Project: PLANT BRANCH  
Pace Project No.: 92502483

QC Batch: 577828 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

METHOD BLANK: 3057104 Matrix: Water  
Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	11/04/20 20:25	
Magnesium	mg/L	ND	0.050	0.0076	11/04/20 20:25	
Potassium	mg/L	0.060J	0.20	0.056	11/04/20 20:25	
Sodium	mg/L	ND	1.0	0.26	11/04/20 20:25	

LABORATORY CONTROL SAMPLE: 3057105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Potassium	mg/L	1	1.1	109	80-120	
Sodium	mg/L	1	1.1	111	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3057106 3057107

Parameter	Units	92502714002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Calcium	mg/L	ND	1	1	1.5	1.5	101	103	75-125	1	20	
Magnesium	mg/L	0.54	1	1	1.6	1.6	103	107	75-125	2	20	
Potassium	mg/L	1.2	1	1	2.2	2.3	104	116	75-125	5	20	
Sodium	mg/L	2.0	1	1	3.0	3.0	102	103	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3057108 3057109

Parameter	Units	92502714004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Calcium	mg/L	1.5	1	1	180	178	17900	17700	75-125	1	20	M1
Magnesium	mg/L	0.76	1	1	110	109	10900	10800	75-125	1	20	M1
Potassium	mg/L	2.6	1	1	11.8	11.7	915	913	75-125	0	20	M1
Sodium	mg/L	3.3	1	1	42.8	42.3	3940	3900	75-125	1	20	M1

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### QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 92502483

QC Batch: 576372 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

METHOD BLANK: 3050232 Matrix: Water  
 Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0052	10/28/20 17:52	
Cadmium	mg/L	ND	0.0025	0.00012	10/28/20 17:52	
Cobalt	mg/L	ND	0.0050	0.00038	10/28/20 17:52	

LABORATORY CONTROL SAMPLE: 3050233

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3050234 3050235

Parameter	Units	92502483003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.37	1	1	1.2	1.2	79	83	75-125	3	20	
Cadmium	mg/L	0.0051	0.1	0.1	0.10	0.10	99	100	75-125	1	20	
Cobalt	mg/L	0.020	0.1	0.1	0.12	0.12	98	95	75-125	2	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 92502483

QC Batch:	576299	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

METHOD BLANK: 3049857 Matrix: Water  
Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/28/20 11:28	

LABORATORY CONTROL SAMPLE: 3049858

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	406	102	84-108	

SAMPLE DUPLICATE: 3049859

Parameter	Units	92502386001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	285	300	5	10	

SAMPLE DUPLICATE: 3053735

Parameter	Units	92502714018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	232	262	12	10	D6

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 92502483

QC Batch: 578902

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

METHOD BLANK: 3063052

Matrix: Water

Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	11/10/20 13:25	

LABORATORY CONTROL SAMPLE: 3063053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	53.6	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3063054 3063055

Parameter	Units	3063054		3063055		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	56.8	56.6	105	104	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3063056 3063057

Parameter	Units	3063056		3063057		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	116	50	50	164	162	95	92	80-120	1	25	

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### QUALITY CONTROL DATA

Project: PLANT BRANCH

Pace Project No.: 92502483

QC Batch: 576824 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

METHOD BLANK: 3052721

Matrix: Water

Associated Lab Samples: 92502483001, 92502483002, 92502483003, 92502483004, 92502483005, 92502483006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/30/20 12:39	
Fluoride	mg/L	ND	0.10	0.050	10/30/20 12:39	
Sulfate	mg/L	ND	1.0	0.50	10/30/20 12:39	

LABORATORY CONTROL SAMPLE: 3052722

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.6	101	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3052723 3052724

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92502483004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	ND	50	50	50.0	50.1	100	100	90-110	0	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.5	2.5	99	100	90-110	1	10	
Sulfate	mg/L	ND	ND	50	50	48.2	48.3	96	96	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3052725 3052726

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92502483005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	ND	50	50	50.1	50.3	100	101	90-110	0	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.3	2.4	93	97	90-110	4	10	
Sulfate	mg/L	ND	ND	50	50	48.2	48.4	96	97	90-110	1	10	

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## QUALIFIERS

Project: PLANT BRANCH  
Pace Project No.: 92502483

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT BRANCH  
Pace Project No.: 92502483

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92502483001	PZ-50D				
92502483002	PZ-51D				
92502483003	PZ-51I				
92502483001	PZ-50D	EPA 3010A	577828	EPA 6010D	577926
92502483002	PZ-51D	EPA 3010A	577828	EPA 6010D	577926
92502483003	PZ-51I	EPA 3010A	577828	EPA 6010D	577926
92502483004	FB	EPA 3010A	577828	EPA 6010D	577926
92502483005	EB	EPA 3010A	577828	EPA 6010D	577926
92502483006	FD	EPA 3010A	577828	EPA 6010D	577926
92502483001	PZ-50D	EPA 3005A	576372	EPA 6020B	576467
92502483002	PZ-51D	EPA 3005A	576372	EPA 6020B	576467
92502483003	PZ-51I	EPA 3005A	576372	EPA 6020B	576467
92502483004	FB	EPA 3005A	576372	EPA 6020B	576467
92502483005	EB	EPA 3005A	576372	EPA 6020B	576467
92502483006	FD	EPA 3005A	576372	EPA 6020B	576467
92502483001	PZ-50D	SM 2450C-2011	576299		
92502483002	PZ-51D	SM 2450C-2011	576299		
92502483003	PZ-51I	SM 2450C-2011	576299		
92502483004	FB	SM 2450C-2011	576299		
92502483005	EB	SM 2450C-2011	576299		
92502483006	FD	SM 2450C-2011	576299		
92502483001	PZ-50D	SM 2320B-2011	578902		
92502483002	PZ-51D	SM 2320B-2011	578902		
92502483003	PZ-51I	SM 2320B-2011	578902		
92502483004	FB	SM 2320B-2011	578902		
92502483005	EB	SM 2320B-2011	578902		
92502483006	FD	SM 2320B-2011	578902		
92502483001	PZ-50D	EPA 300.0 Rev 2.1 1993	576824		
92502483002	PZ-51D	EPA 300.0 Rev 2.1 1993	576824		
92502483003	PZ-51I	EPA 300.0 Rev 2.1 1993	576824		
92502483004	FB	EPA 300.0 Rev 2.1 1993	576824		
92502483005	EB	EPA 300.0 Rev 2.1 1993	576824		
92502483006	FD	EPA 300.0 Rev 2.1 1993	576824		

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Sample Condition Upon Receipt

WO#: 92502483

Client Name: GA Power



92502483

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
Tracking #: \_\_\_\_\_

Proj. Due Date: \_\_\_\_\_  
Proj. Name: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no      Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other ZPIOC

Thermometer Used THR214      Type of Ice:  Ice Blue None  Samples on ice, cooling process has begun

Cooler Temperature 3.1      Biological Tissue Is Frozen: Yes No

Date and initials of person examining contents: KRW 10/28/25

Temp should be above freezing to 6°C      Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix: <u>W</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

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

F-ALLC003rev.3, 11September2008





Document Name:  
Bottle Identification Form (BIF)  
Document No.:  
F-CAR-CS-043-Rev.00

Document Issued: March 14, 2019  
Page 1 of 1  
Issuing Authority:  
Pace Carolinas Quality Office

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

Project #

**WO# : 92502483**

PM: KLH1

Due Date: 11/11/20

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLH2

\* Bottom half of box is to list number of bottle

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

**pH Adjustment Log for Preserved Samples**

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

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





### CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b>		<b>Section B</b>		<b>Section C</b>		Page : 1 Of 1	
<b>Required Client Information:</b>		<b>Required Project Information:</b>		<b>Invoice Information:</b>			
Company: Golder Associates (GA Power)		Report To: Karim Minkara		Attention:			
Address: 5170 Peachtree Road		Copy To:		Company Name:			
Building: 100, Suite 300, Atlanta, GA 30341		Purchase Order #:		Address:			
eMail: karim_minkara@golder.com		Project Name: Plant Branch		Pace Quote:		<b>Regulatory Agency</b>	
Phone: (615)566-1402 Fax:		Project #:		Pace Project Manager: kevin.berrington@pacelabs.com		<b>State / Location</b>	
Requested Due Date:				Pace Profile #: 10038		<b>GA</b>	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9), - 1 Sample IDs must be unique	MATRIX CODE Drinking Water: DW Water: WT Waste Water: WW Product: P Sewage: SW Oil: OL Wastewater: WP Air: AR Dioxin: DX Residue: RS	CODED DW WT WW P SW OL WP AR DX RS	COLLECTED		SAMPLE TEMP AT COLLECTION	PRESERVATIVES							Y/N	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)							
				DATE			TIME		UNPREPARED	H2SO4	HNO3	HCl	NaOH		Na2S2O3	Methanol	Other		ANALYSIS TOAST	C, F, SO4/Cl	TDS	B, Ca, Cd, Co, Cu, Hg, K			
				START	END		START	END																	
1	PZ-S0D	WG		10-27-20	09:40	9% 32	1								X	X	X						pH = 6.47		
2	PZ-S1D	WG		10-27-20	12:45	32	1								X	X	X							pH = 6.79	
3	PZ-S1I	WG		10-27-20	14:10	32	1								X	X	X							pH = 5.49	
4	FB	WG		10-27-20	10:00	32	1								X	X	X								
5	EB	WG		10-27-20	11:20	32	1								X	X	X								
6	FD	WG		10-27-20	-	32	1								X	X	X								
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	REMOVED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Karin Minkara / Golder	10/28/20	09:00	K. Minkara / Golder	10/28/20	09:00	3.1 Y N Y

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on		
PRINT Name of SAMPLER:	Karin Minkara			Isoc:	(Y/N)
SIGNATURE of SAMPLER:	<i>[Signature]</i>			Color:	(Y/N)
		DATE Signed:	10-27-2020		

May 03, 2021

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

RE: Project: BRANCH BCD/E BACKGROUND RADS  
Pace Project No.: 92524837

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 02, 2021 and March 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

---

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92524837001	BRGWA-6S	Water	03/01/21 16:30	03/02/21 10:05
92524837002	BRGWA-2I	Water	03/01/21 16:39	03/02/21 10:05
92524837003	BRGWA-5S	Water	03/02/21 09:29	03/03/21 10:03
92524837004	BRGWA-5I	Water	03/02/21 10:11	03/03/21 10:03
92524837005	BRGWA-2S	Water	03/02/21 12:05	03/03/21 10:03

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92524837001	BRGWA-6S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92524837002	BRGWA-2I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92524837003	BRGWA-5S	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92524837004	BRGWA-5I	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92524837005	BRGWA-2S	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND RADS  
Pace Project No.: 92524837

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92524837001</b>	<b>BRGWA-6S</b>					
EPA 9315	Radium-226	-0.00545 ± 0.102 (0.290) C:70% T:NA	pCi/L		03/15/21 09:18	
EPA 9320	Radium-228	0.215 ± 0.314 (0.676) C:79% T:90%	pCi/L		03/15/21 16:09	
Total Radium Calculation	Total Radium	0.215 ± 0.416 (0.966)	pCi/L		03/19/21 14:02	
<b>92524837002</b>	<b>BRGWA-2I</b>					
EPA 9315	Radium-226	-0.0504 ± 0.0524 (0.222) C:86% T:NA	pCi/L		03/15/21 09:18	
EPA 9320	Radium-228	0.127 ± 0.294 (0.654) C:79% T:93%	pCi/L		03/15/21 16:09	
Total Radium Calculation	Total Radium	0.127 ± 0.346 (0.876)	pCi/L		03/19/21 14:02	
<b>92524837003</b>	<b>BRGWA-5S</b>					
EPA 9315	Radium-226	0.0258 ± 0.0722 (0.179) C:89% T:NA	pCi/L		03/26/21 08:08	
EPA 9320	Radium-228	0.336 ± 0.311 (0.635) C:83% T:92%	pCi/L		03/22/21 13:11	
Total Radium Calculation	Total Radium	0.362 ± 0.383 (0.814)	pCi/L		03/26/21 14:37	
<b>92524837004</b>	<b>BRGWA-5I</b>					
EPA 9315	Radium-226	0.115 ± 0.106 (0.196) C:88% T:NA	pCi/L		03/26/21 08:08	
EPA 9320	Radium-228	0.294 ± 0.329 (0.689) C:84% T:84%	pCi/L		03/22/21 13:11	
Total Radium Calculation	Total Radium	0.409 ± 0.435 (0.885)	pCi/L		03/26/21 14:37	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92524837005</b>	<b>BRGWA-2S</b>					
EPA 9315	Radium-226	0.0214 ± 0.0865 (0.222) C:76% T:NA	pCi/L		03/26/21 08:08	
EPA 9320	Radium-228	0.321 ± 0.308 (0.627) C:84% T:84%	pCi/L		03/22/21 13:11	
Total Radium Calculation	Total Radium	0.342 ± 0.395 (0.849)	pCi/L		03/26/21 14:37	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

**Sample: BRGWA-6S**      **Lab ID: 92524837001**      Collected: 03/01/21 16:30      Received: 03/02/21 10:05      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>-0.00545 ± 0.102 (0.290)</b> <b>C:70% T:NA</b>	pCi/L	03/15/21 09:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.215 ± 0.314 (0.676)</b> <b>C:79% T:90%</b>	pCi/L	03/15/21 16:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.215 ± 0.416 (0.966)</b>	pCi/L	03/19/21 14:02	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-2I</b> <b>Lab ID: 92524837002</b> Collected: 03/01/21 16:39      Received: 03/02/21 10:05      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>-0.0504 ± 0.0524 (0.222)</b> <b>C:86% T:NA</b>	pCi/L	03/15/21 09:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.127 ± 0.294 (0.654)</b> <b>C:79% T:93%</b>	pCi/L	03/15/21 16:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.127 ± 0.346 (0.876)</b>	pCi/L	03/19/21 14:02	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-5S</b> <b>Lab ID: 92524837003</b> Collected: 03/02/21 09:29      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0258 ± 0.0722 (0.179)</b> <b>C:89% T:NA</b>	pCi/L	03/26/21 08:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.336 ± 0.311 (0.635)</b> <b>C:83% T:92%</b>	pCi/L	03/22/21 13:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.362 ± 0.383 (0.814)</b>	pCi/L	03/26/21 14:37	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-5I</b> <b>Lab ID: 92524837004</b> Collected: 03/02/21 10:11      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.115 ± 0.106 (0.196)</b> <b>C:88% T:NA</b>	pCi/L	03/26/21 08:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.294 ± 0.329 (0.689)</b> <b>C:84% T:84%</b>	pCi/L	03/22/21 13:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.409 ± 0.435 (0.885)</b>	pCi/L	03/26/21 14:37	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-2S</b> <b>Lab ID: 92524837005</b> Collected: 03/02/21 12:05      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0214 ± 0.0865 (0.222)</b> <b>C:76% T:NA</b>	pCi/L	03/26/21 08:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.321 ± 0.308 (0.627)</b> <b>C:84% T:84%</b>	pCi/L	03/22/21 13:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.342 ± 0.395 (0.849)</b>	pCi/L	03/26/21 14:37	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

QC Batch: 437599

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92524837001, 92524837002

METHOD BLANK: 2112389

Matrix: Water

Associated Lab Samples: 92524837001, 92524837002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00470 ± 0.0712 (0.214) C:85% T:NA	pCi/L	03/15/21 09:18	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

QC Batch:	438266	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92524837003, 92524837004, 92524837005

METHOD BLANK: 2115671 Matrix: Water

Associated Lab Samples: 92524837003, 92524837004, 92524837005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.142 ± 0.131 (0.243) C:77% T:NA	pCi/L	03/26/21 08:05	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

QC Batch: 437641

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92524837001, 92524837002

METHOD BLANK: 2112538

Matrix: Water

Associated Lab Samples: 92524837001, 92524837002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.312 ± 0.330 (0.686) C:82% T:90%	pCi/L	03/15/21 16:07	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

QC Batch:	438909	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92524837003, 92524837004, 92524837005

METHOD BLANK: 2118824 Matrix: Water

Associated Lab Samples: 92524837003, 92524837004, 92524837005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.308 ± 0.318 (0.657) C:79% T:84%	pCi/L	03/22/21 13:09	

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

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND RADS

Pace Project No.: 92524837

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD/E BACKGROUND RADS  
Pace Project No.: 92524837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92524837001	BRGWA-6S	EPA 9315	437599		
92524837002	BRGWA-2I	EPA 9315	437599		
92524837003	BRGWA-5S	EPA 9315	438266		
92524837004	BRGWA-5I	EPA 9315	438266		
92524837005	BRGWA-2S	EPA 9315	438266		
92524837001	BRGWA-6S	EPA 9320	437641		
92524837002	BRGWA-2I	EPA 9320	437641		
92524837003	BRGWA-5S	EPA 9320	438909		
92524837004	BRGWA-5I	EPA 9320	438909		
92524837005	BRGWA-2S	EPA 9320	438909		
92524837001	BRGWA-6S	Total Radium Calculation	439586		
92524837002	BRGWA-2I	Total Radium Calculation	439586		
92524837003	BRGWA-5S	Total Radium Calculation	440668		
92524837004	BRGWA-5I	Total Radium Calculation	440668		
92524837005	BRGWA-2S	Total Radium Calculation	440668		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 1 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition:  
Upon Receipt

Client Name:

Project #:

WO#: 92524840

Carrier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other:



92524840

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: MT 3/2/21

Packing Material:  Bubble Wrap  Bubble Sags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID: 230

Type of Ice:

Wet  Blue  None

Cooler Temp:

4.4

Correction Factor:

Add/Subtract (°C)

± 0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

4.4

USDA Regulated Soil (  N/A, water sample)

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

Yes  No

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

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<22 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>GW</i>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY - ADD WORKORDER/LAB# (Add Here if List Price Workorder Number or MTA Log-In Number Here)

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Waver Road  
 Atlanta, GA 30339  
 Report To: Joji Abraham  
 Copy To: Goldier  
 Email: jo.abraham@southemco.com  
 Email: ssci@sciences@southemco.com  
 Site Collection Info/Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET  
 Project Name: Plant Branch BDDYE Background  
 Project # ODR 4th Semi-Annual  
 Face Profiled  
 Face Project Manager  
 bevin.herring@pacelabs.com  
 Purchase Order #  
 Quote #  
 Turnaround Date Required:  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Immediately Packed on Ice: [X] Yes [ ] No  
 Analysis: \_\_\_\_\_

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) 50% HNO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub>, (5) 20% Acetic, (6) methanol, (7) 10% H<sub>2</sub>O<sub>2</sub>, (8) sodium thiosulfate, (9) borane, (10) ascorbic acid, (11) ammonium sulfate, (12) ammonium hydroxide, (13) TSP, (14) Unpreserved, (15) Other

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (BL), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collect of (or Composite Start)		Composite End		pH	# of Cans
			Date	Time	Date	Time		
BRGWA-6S	GW	G	3-1-21	1630			6.70	5
BRGWA-2F	GW	G	3-1-21	1639			6.66	5

Analytes	Metals 6010/6020/7470 - see comments		TDS	Chloride/Fluoride/Sulfate	Radium 226,228
	Y	N			
Metals 6010/6020/7470 - see comments	X	X	X	X	X
TDS			X		
Chloride/Fluoride/Sulfate				X	
Radium 226,228					X

Lab Profile/Link:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y/N/NA  
 Custody Signatures Present Y/N/NA  
 Collector Signatures Present Y/N/NA  
 Berlese Insect Y/N/NA  
 Correct Bottles Y/N/NA  
 Sublabel Volume Y/N/NA  
 Samples Received on Ice Y/N/NA  
 WDA - Headspace Acceptable Y/N/NA  
 USDA Regulated Soils Y/N/NA  
 Samples in Holding Time Y/N/NA  
 Residual Chlorine Present Y/N/NA  
 C-Strips:  
 Sample pH Acceptable Y/N/NA  
 pH Strip:  
 Sulfide Present Y/N/NA  
 Rapid Access Strip:

LAB USE ONLY:  
 Lab Sample # / Comments:

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg  
 Type of Ice Used:  Wet  Blue  Dry  None  
 Packing Material Used: *other*  
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOURS PRESENT (<72 hours):  Y  N  N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client  Courier  Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID# *230*  
 Cooler 3 Temp Upon Receipt:  Y  N  NA  
 Cooler 3 Therm Corr Factor: *0.0*  
 Cooler 3 Corrected Temp: *5.0*  
 Comments:

Relinquished by/Company: (Signature)  
*[Signature]*  
 Date/Time:  
 3-2-21/0815

Received by/Company: (Signature)  
*[Signature]*  
 Date/Time:  
 3/2/21 10:05

MTD: LAB USE ONLY  
 Table #:  
 Amount:  
 Template:  
 Preights:  
 PM:  
 PE:

Trip Blank Received: Y N  NA  
 HCL MeOH TSP Other  
 Non Conformance(s):  
 YES / NO  
 Page 1 of 1

Company: Georgia Power - Coal Combustion Residuals     Billing Information:

Address: 2480 Maner Road  
Atlanta, GA 30339

Report To: John Abraham     Email To: scsvoices@southernco.com

Copy To: Golder     Site Collection info/Address: Plant Branch

Phone: (404) 506-7239     State: Georgia     City: Milledgeville     Time Zone Collected: [PT] [MT] [CT] [X]ET

Email: jabraham@southernco.com     Project Name: Plant Branch BCDE Background  
Project # CCR 4th Semi-Annual     Pace Profile #

Phone: (404) 506-7239     Project Manager: Kevin J. Yang  
Email: jbraham@southernco.com     Purchase Order #     Quote #     Pace Project Manager: kevin.j.yang@faceanaly.com

Collected By (Print): Travis Martineau, Andrea McClure     Turnaround Date Required: [X] Yes [ ] No

Collected By (Signature): *[Signature]*     Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Leadtime Charges Apply)     Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: \_\_\_\_\_

Container Preservative Type \*\*     Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium borate, (8) sodium phosphate, (9) benzene, (A) ascorbic acid, (B) arsenic acid, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (F) Other

Analyses

Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226,228
X	X	X	X
X	X	X	X
X	X	X	X

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Relaxed: Y N NA

Custody Signatures Present: Y N NA

Collector Signature Present: Y N NA

Bottles Leaked: Y N NA

Correct Bottles: Y N NA

Sufficient Volume: Y N NA

Samples Recooled on Ice: Y N NA

WDA - Headspace Acceptable: Y N NA

WDA Rinsed/Salted: Y N NA

Samples in Holding Time: Y N NA

Residual Chlorine Present: Y N NA

Cl Strips: \_\_\_\_\_

Sample pH Acceptable: Y N NA

pH Strips: \_\_\_\_\_

Sulfide Present: Y N NA

Lead Acetate Strips: \_\_\_\_\_

LAB USE ONLY:

Lab Sample # / Comments: \_\_\_\_\_

\* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Soil/Solid (S), Oil (OL), Wipe (WPL), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Dns
			Date	Time	Date	Time		
BRGWA-5S	GW	G	3-2-21	0929			6.42	5
BRGWA-5S	GW	G	3-2-21	1011			6.47	5
BRGWA-2S	GW	G	3-2-21	1205			6.20	5

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg     Type of Ice Used: Wet Blue Dry None     SHORT HOLDS PRESENT (<72 hours): Y # N/A

Packing Material Used: \_\_\_\_\_     Lab Tracking #: \_\_\_\_\_

Radchem sample(s) screened (<500 cpm): Y N NA     Samples received via: FEDEX UPS Other Courier Page Courier

Lab Sample Temperature Info: Temp Blank Received: Y N NA     (Matrix ID): \_\_\_\_\_

Cooler 1 Temp Upon Receipt: \_\_\_\_ °C     Cooler 1 Temp Corr Factor: \_\_\_\_ °C

Cooler 1 Container Temp: \_\_\_\_ °C     Comments: \_\_\_\_\_

Requisitioned by/Company: (Signature) <i>[Signature]</i>	Date/Time: 3-3-21 10815	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 3/3/21 1001	MTX LAB USE ONLY	Trip Blank Rechecked: Y N NA INCL MeOH TSP Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Account: Template: Prescribe:	Non Conformance(s): YES / NO
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:	Page: 1 of: 1



## Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 3/5/2021  
Worklist: 59152  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID:	2112380	
MB concentration:	-0.005	
MB Counting Uncertainty:	0.071	
MB MDC:	0.214	
MB Numerical Performance Indicator:	-0.13	
MB Status vs Numerical Indicator:	NA	
MB Status vs. MDC:	Pass	

Laboratory Control Sample Assessment	LCS0 (Y or N)?	
	LCS59152	LCS059152
Count Date:	3/15/2021	3/15/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.029	24.029
Volume Used (mL):	0.10	0.10
Actual Volume (L, g, F):	0.504	0.504
Target Conc. (pCi, g, F):	4.772	4.767
Uncertainty (Calculated):	0.057	0.057
Result (pCi, g, F):	5.329	5.520
LCS/LCSD Counting Uncertainty (pCi, g, F):	0.525	0.640
Numerical Performance Indicator:	1.77	2.29
Percent Recovery:	111.90%	115.78%
Status vs Numerical Indicator:	NA	NA
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment		
Sample I.D.:	LCS59152	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCS059152	
Sample Result (pCi, g, F):	5.329	
Sample Result Counting Uncertainty (pCi, g, F):	0.625	
Sample Duplicate Result (pCi, g, F):	5.520	
Sample Duplicate Result Counting Uncertainty (pCi, g, F):	0.640	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.296	92524736004
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.45%	62524736004DUJ
Duplicate Status vs Numerical Indicator:	NA	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

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

Comments:

LAL 3/15/21

LAL 3/15/21



### Quality Control Sample Performance Assessment

Text: Ra-226  
 Analyst: LAL  
 Date: 3/9/2021  
 Worksheet: 59152  
 Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MS Sample ID	2112365	
MB Concentration:	-0.005	
MB Counting Uncertainty:	0.071	
MB MDC:	0.234	
MS Numerical Performance Indicator:	-0.13	
MB Status vs Numerical Indicator:	N/A	
MB Status vs MDC:	Pass	

Laboratory Control Sample Assessment	LCS# (Y or N)?	N
	LCS#9152	LCS#9152
Count Date:	3/15/2021	
Spike ID:	194033	
Decay Corrected Spike Concentration (pCi/mL)	24.033	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.504	
Target Conc. (pCiL, g, F):	4.772	
Uncertainty (Calculated):	0.057	
Result (pCiL, g, F):	5.379	
LCS/LCSD Counting Uncertainty (pCiL, g, F):	0.625	
Numerical Performance Indicator:	1.77	
Percent Recovery:	111.86%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

Duplicate Sample Assessment		
Sample I.D.:	92524756004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	92524756004-D.P.	
Sample Result (pCiL, g, F):	0.309	
Sample Result Counting Uncertainty (pCiL, g, F):	0.185	
Sample Duplicate Result (pCiL, g, F):	0.280	
Sample Duplicate Result Counting Uncertainty (pCiL, g, F):	0.189	
Are sample and/or duplicate results below RL?	See Below #:	
Duplicate Numerical Performance Indicator:	0.294	92524756004
Duplicate RPD:	16.51%	92524756004-D.P.
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

Comments:

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

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

LAM 3/15/21

ONE 3/15/21



### Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: CLA  
Date: 3/18/2021  
Worksheet: 59289  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	215671	
MB Concentration:	0.142	
MB Counting Uncertainty:	0.129	
MB MDC:	0.243	
MB Numerical Performance Indicator:	2.16	
MB Status vs Numerical Indicator:	N/A	
MB Status vs MDC:	Pass	

Laboratory Control Sample Assessment	LCS/D (Y or N)?	N
	LCS59289	LCS059289
Count Date:	3/26/2021	
Spike I.D.:	19-000	
Decay Corrected Spike Concentration: (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	4.797	
Uncertainty (Calculated):	0.258	
Result (pCi/L, g, F):	5.221	
LCS/D Counting Uncertainty (pCi/L, g, F):	0.520	
Numerical Performance Indicator:	1.56	
Percent Recovery:	108.3%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment		
Sample I.D.	92525905004	Enter Duplicate sample IDs if other than LCS/LCSD in the space below
Duplicate Sample I.D.	92525905004GUP	
Sample Result (pCi/L, g, F):	0.131	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.145	
Sample Duplicate Result (pCi/L, g, F):	0.079	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.113	
Are sample and/or duplicate results below RL?	See Below MDC	
Duplicate Numerical Performance Indicator	0.654	92525905004
Duplicate RPD	49.44%	92525905004GUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail**	
% RPD Limit:	25%	

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

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

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

Comments:

~~Quality control is re-prepped due to unacceptable precision.~~ N/A 1AM3126121

3/18/2021

1AM3126121





### Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: CJA  
Date: 3/18/2021  
Worklist: 55289  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
VB Sample ID	2115671	
MB Concentration	0.142	
MB Counting Uncertainty	0.129	
MB MDC	0.243	
MB Numerical Performance Indicator	2.16	
MB Status vs Numerical Indicator	N/A	
MB Status vs MDC	Pass	

	LCSD (Y or N)?	
	Y	N
Count Date:	3/25/2021	3/25/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.501	0.505
Target Conc. (pCi/L, g, F):	4.797	4.761
Uncertainty (Calculated):	0.058	0.057
Result (pCi/L, g, F):	5.221	5.012
LCSD/CSD Counting Uncertainty (pCi/L, g, F):	0.536	0.536
Numerical Performance Indicator:	1.56	0.91
Percent Recovery:	109.87%	105.27%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	125%	125%
Lower % Recovery Limit:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCSD59289	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Duplicate Sample I.D.:	LCSD59289	
Sample Result (pCi/L, g, F):	5.221	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.530	
Sample Duplicate Result (pCi/L, g, F):	5.012	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.536	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.641	9265905004
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	3.37%	9265905004CUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

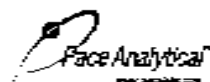
Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical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

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

Comments:

*[Handwritten signature]*

VAM3/26/21



## Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: VAL  
Date: 3/11/2021  
Worklist: 59157  
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID:	2112506
MB concentration:	0.312
MB 2 Sigma CSU:	0.330
MB MDC:	0.636
MB Numerical Performance Indicator:	1.85
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD59157	LCSD69157
Count Date:	3-15-2021	3-15-2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.456	38.456
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.810	0.807
Target Conc. (pCi/L, g, F):	4.747	4.768
Uncertainty (Calculated):	0.233	0.234
Result (pCi/L, g, F):	3.492	2.971
LC/LCSD 2 Sigma CSU (pCi/L, g, F):	0.863	0.784
Numerical Performance Indicator:	-2.75	-4.30
Percent Recovery:	72.52%	62.31%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	133%	153%
Lower % Recovery Limit:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:	LCSD59157	Enter Duplicate sample IDs if other than LCSD59157 in the space below:
Duplicate Sample I.D.:	LCSD50157	
Sample Result (pCi/L, g, F):	3.492	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.863	
Sample Duplicate Result (pCi/L, g, F):	2.971	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.784	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.875	
(Based on the LC/LCSD Percent Recoveries) Duplicate RPD:	16.54%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	35%	

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

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

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

Comments:

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*Handwritten signature/initials*



### Quality Control Sample Performance Assessment

Test: RA-228  
 Analyst: VAL  
 Date: 3/19/2021  
 Worksheet: 59356  
 Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2118824
MB Concentration	0.308
MB 2 Sigma CSU	0.216
MB MDC	0.657
MB Numerical Performance Indicator	1.90
MB Status vs Numerical Indicator	Pass
MB StdLvs. MDC	Pass

Laboratory Control Sample Assessment	LCSD IN or NI?	Y
	LCSD59356	LCSD59356
Count Date	3/22/2021	3/22/2021
Spike I.D.	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL)	38.365	38.362
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, F)	0.814	0.816
Target Conc. (pCi/L, g, F)	4.715	4.700
Uncertainty (Calculated)	0.231	0.230
Result (pCi/L, g, F)	3.779	3.842
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F)	0.901	0.781
Numerical Performance Indicator	-1.97	-3.99
Percent Recovery	80.5%	64.72%
Status vs Numerical Indicator	NA	NA
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	135%	135%
Lower % Recovery Limit	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCSD59356	Enter Duplicate sample I.D.s if other than LCSD/LCSD in the space below
Duplicate Sample I.D.:	LCSD59356	
Sample Result (pCi/L, g, F)	3.779	
Sample Result 2 Sigma CSU (pCi/L, g, F)	0.901	
Sample Duplicate Result (pCi/L, g, F)	3.043	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F)	0.781	
Are sample and/or duplicate results below RPD?	NO	
Duplicate Numerical Performance Indicator	1.213	
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	21.34%	
Duplicate Status vs Numerical Indicator	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	35%	

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

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

Comments:

*VAL*  
3/19/21

May 03, 2021

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

RE: Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Dear Joju Abraham:

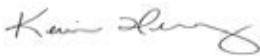
Enclosed are the analytical results for sample(s) received by the laboratory between March 02, 2021 and March 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92524840001	BRGWA-6S	Water	03/01/21 16:30	03/02/21 10:05
92524840002	BRGWA-2I	Water	03/01/21 16:39	03/02/21 10:05
92524840003	BRGWA-5S	Water	03/02/21 09:29	03/03/21 10:03
92524840004	BRGWA-5I	Water	03/02/21 10:11	03/03/21 10:03
92524840005	BRGWA-2S	Water	03/02/21 12:05	03/03/21 10:03

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92524840001	BRGWA-6S	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92524840002	BRGWA-2I	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92524840003	BRGWA-5S	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2540C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92524840004	BRGWA-5I	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2540C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92524840005	BRGWA-2S	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2540C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92524840001</b>	<b>BRGWA-6S</b>					
	Performed by	CUSTOME			03/22/21 11:45	
		R				
	pH	6.70	Std. Units		03/22/21 11:45	
EPA 6010D	Calcium	4.2	mg/L	1.0	03/03/21 17:44	
EPA 6020B	Barium	0.016	mg/L	0.0050	03/03/21 17:34	
EPA 6020B	Chromium	0.011	mg/L	0.0050	03/03/21 17:34	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	03/03/21 17:34	
SM 2540C-2011	Total Dissolved Solids	39.0	mg/L	10.0	03/02/21 15:43	
EPA 300.0 Rev 2.1 1993	Chloride	2.1	mg/L	1.0	03/06/21 16:02	
EPA 300.0 Rev 2.1 1993	Sulfate	0.74J	mg/L	1.0	03/06/21 16:02	
<b>92524840002</b>	<b>BRGWA-2I</b>					
	Performed by	CUSTOME			03/22/21 11:45	
		R				
	pH	6.66	Std. Units		03/22/21 11:45	
EPA 6010D	Calcium	15.4	mg/L	1.0	03/03/21 17:49	
EPA 6020B	Barium	0.0074	mg/L	0.0050	03/03/21 17:40	
EPA 6020B	Lithium	0.027J	mg/L	0.030	03/03/21 17:40	
SM 2540C-2011	Total Dissolved Solids	98.0	mg/L	10.0	03/02/21 15:43	
EPA 300.0 Rev 2.1 1993	Chloride	1.8	mg/L	1.0	03/06/21 16:16	
EPA 300.0 Rev 2.1 1993	Sulfate	4.7	mg/L	1.0	03/06/21 16:16	
<b>92524840003</b>	<b>BRGWA-5S</b>					
	Performed by	CUSTOME			03/22/21 11:45	
		R				
	pH	6.42	Std. Units		03/22/21 11:45	
EPA 6010D	Calcium	16.8	mg/L	1.0	03/10/21 00:43	
EPA 6020B	Barium	0.037	mg/L	0.0050	03/08/21 21:35	
EPA 6020B	Boron	0.0071J	mg/L	0.040	03/08/21 21:35	
EPA 6020B	Chromium	0.0044J	mg/L	0.0050	03/08/21 21:35	
SM 2540C-2011	Total Dissolved Solids	96.0	mg/L	10.0	03/05/21 11:06	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	03/12/21 03:34	
<b>92524840004</b>	<b>BRGWA-5I</b>					
	Performed by	CUSTOME			03/22/21 11:45	
		R				
	pH	6.47	Std. Units		03/22/21 11:45	
EPA 6010D	Calcium	13.2	mg/L	1.0	03/10/21 00:57	
EPA 6020B	Barium	0.023	mg/L	0.0050	03/08/21 21:41	
EPA 6020B	Boron	0.0053J	mg/L	0.040	03/08/21 21:41	
EPA 6020B	Chromium	0.0064	mg/L	0.0050	03/08/21 21:41	
EPA 6020B	Cobalt	0.00053J	mg/L	0.0050	03/08/21 21:41	
EPA 6020B	Lead	0.000037J	mg/L	0.0010	03/08/21 21:41	
EPA 6020B	Lithium	0.00081J	mg/L	0.030	03/08/21 21:41	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	03/08/21 21:41	
SM 2540C-2011	Total Dissolved Solids	80.0	mg/L	10.0	03/05/21 11:06	
EPA 300.0 Rev 2.1 1993	Chloride	3.8	mg/L	1.0	03/12/21 03:48	
EPA 300.0 Rev 2.1 1993	Sulfate	2.2	mg/L	1.0	03/12/21 03:48	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92524840005</b>	<b>BRGWA-2S</b>					
	Performed by	CUSTOME			03/22/21 11:45	
		R				
	pH	6.20	Std. Units		03/22/21 11:45	
EPA 6010D	Calcium	4.0	mg/L	1.0	03/10/21 01:02	
EPA 6020B	Barium	0.0094	mg/L	0.0050	03/08/21 21:58	
EPA 6020B	Chromium	0.0074	mg/L	0.0050	03/08/21 21:58	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	03/08/21 21:58	
SM 2540C-2011	Total Dissolved Solids	43.0	mg/L	10.0	03/05/21 11:06	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	03/12/21 04:02	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Sample: BRGWA-6S		Lab ID: 92524840001		Collected: 03/01/21 16:30		Received: 03/02/21 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.70</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>4.2</b>	mg/L	1.0	0.070	1	03/03/21 10:17	03/03/21 17:44	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/03/21 10:24	03/03/21 17:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:24	03/03/21 17:34	7440-38-2	
Barium	<b>0.016</b>	mg/L	0.0050	0.00071	1	03/03/21 10:24	03/03/21 17:34	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:24	03/03/21 17:34	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	03/03/21 10:24	03/03/21 17:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:24	03/03/21 17:34	7440-43-9	
Chromium	<b>0.011</b>	mg/L	0.0050	0.00055	1	03/03/21 10:24	03/03/21 17:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:24	03/03/21 17:34	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/03/21 10:24	03/03/21 17:34	7439-92-1	
Lithium	<b>0.0036J</b>	mg/L	0.030	0.00081	1	03/03/21 10:24	03/03/21 17:34	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/03/21 10:24	03/03/21 17:34	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:24	03/04/21 14:03	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:24	03/03/21 17:34	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 13:16	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>39.0</b>	mg/L	10.0	10.0	1		03/02/21 15:43		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>2.1</b>	mg/L	1.0	0.60	1		03/06/21 16:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/06/21 16:02	16984-48-8	
Sulfate	<b>0.74J</b>	mg/L	1.0	0.50	1		03/06/21 16:02	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Sample: BRGWA-2I		Lab ID: 92524840002		Collected: 03/01/21 16:39		Received: 03/02/21 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.66</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>15.4</b>	mg/L	1.0	0.070	1	03/03/21 10:17	03/03/21 17:49	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/03/21 10:24	03/03/21 17:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:24	03/03/21 17:40	7440-38-2	
Barium	<b>0.0074</b>	mg/L	0.0050	0.00071	1	03/03/21 10:24	03/03/21 17:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:24	03/03/21 17:40	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	03/03/21 10:24	03/03/21 17:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:24	03/03/21 17:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:24	03/03/21 17:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:24	03/03/21 17:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/03/21 10:24	03/03/21 17:40	7439-92-1	
Lithium	<b>0.027J</b>	mg/L	0.030	0.00081	1	03/03/21 10:24	03/03/21 17:40	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/03/21 10:24	03/03/21 17:40	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:24	03/04/21 14:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:24	03/03/21 17:40	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 13:18	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>98.0</b>	mg/L	10.0	10.0	1		03/02/21 15:43		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>1.8</b>	mg/L	1.0	0.60	1		03/06/21 16:16	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/06/21 16:16	16984-48-8	
Sulfate	<b>4.7</b>	mg/L	1.0	0.50	1		03/06/21 16:16	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Sample: BRGWA-5S		Lab ID: 92524840003		Collected: 03/02/21 09:29		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.42</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>16.8</b>	mg/L	1.0	0.070	1	03/05/21 10:53	03/10/21 00:43	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/05/21 13:31	03/08/21 21:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/05/21 13:31	03/08/21 21:35	7440-38-2	
Barium	<b>0.037</b>	mg/L	0.0050	0.00071	1	03/05/21 13:31	03/08/21 21:35	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/05/21 13:31	03/08/21 21:35	7440-41-7	
Boron	<b>0.0071J</b>	mg/L	0.040	0.0052	1	03/05/21 13:31	03/08/21 21:35	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/05/21 13:31	03/08/21 21:35	7440-43-9	
Chromium	<b>0.0044J</b>	mg/L	0.0050	0.00055	1	03/05/21 13:31	03/08/21 21:35	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/05/21 13:31	03/08/21 21:35	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/05/21 13:31	03/08/21 21:35	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/05/21 13:31	03/08/21 21:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/05/21 13:31	03/08/21 21:35	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/05/21 13:31	03/08/21 21:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/05/21 13:31	03/08/21 21:35	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 14:54	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>96.0</b>	mg/L	10.0	10.0	1		03/05/21 11:06		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>3.7</b>	mg/L	1.0	0.60	1		03/12/21 03:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/12/21 03:34	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/12/21 03:34	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Sample: BRGWA-5I		Lab ID: 92524840004		Collected: 03/02/21 10:11		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.47</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>13.2</b>	mg/L	1.0	0.070	1	03/05/21 10:53	03/10/21 00:57	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/05/21 13:31	03/08/21 21:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/05/21 13:31	03/08/21 21:41	7440-38-2	
Barium	<b>0.023</b>	mg/L	0.0050	0.00071	1	03/05/21 13:31	03/08/21 21:41	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/05/21 13:31	03/08/21 21:41	7440-41-7	
Boron	<b>0.0053J</b>	mg/L	0.040	0.0052	1	03/05/21 13:31	03/08/21 21:41	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/05/21 13:31	03/08/21 21:41	7440-43-9	
Chromium	<b>0.0064</b>	mg/L	0.0050	0.00055	1	03/05/21 13:31	03/08/21 21:41	7440-47-3	
Cobalt	<b>0.00053J</b>	mg/L	0.0050	0.00038	1	03/05/21 13:31	03/08/21 21:41	7440-48-4	
Lead	<b>0.000037J</b>	mg/L	0.0010	0.000036	1	03/05/21 13:31	03/08/21 21:41	7439-92-1	
Lithium	<b>0.00081J</b>	mg/L	0.030	0.00081	1	03/05/21 13:31	03/08/21 21:41	7439-93-2	
Molybdenum	<b>0.0015J</b>	mg/L	0.010	0.00069	1	03/05/21 13:31	03/08/21 21:41	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/05/21 13:31	03/08/21 21:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/05/21 13:31	03/08/21 21:41	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 14:56	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>80.0</b>	mg/L	10.0	10.0	1		03/05/21 11:06		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>3.8</b>	mg/L	1.0	0.60	1		03/12/21 03:48	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/12/21 03:48	16984-48-8	
Sulfate	<b>2.2</b>	mg/L	1.0	0.50	1		03/12/21 03:48	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Sample: BRGWA-2S		Lab ID: 92524840005		Collected: 03/02/21 12:05		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:45		
pH	6.20	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	4.0	mg/L	1.0	0.070	1	03/05/21 10:53	03/10/21 01:02	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/05/21 13:31	03/08/21 21:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/05/21 13:31	03/08/21 21:58	7440-38-2	
Barium	0.0094	mg/L	0.0050	0.00071	1	03/05/21 13:31	03/08/21 21:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/05/21 13:31	03/08/21 21:58	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	03/05/21 13:31	03/08/21 21:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/05/21 13:31	03/08/21 21:58	7440-43-9	
Chromium	0.0074	mg/L	0.0050	0.00055	1	03/05/21 13:31	03/08/21 21:58	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00038	1	03/05/21 13:31	03/08/21 21:58	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/05/21 13:31	03/08/21 21:58	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/05/21 13:31	03/08/21 21:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/05/21 13:31	03/08/21 21:58	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/05/21 13:31	03/08/21 21:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/05/21 13:31	03/08/21 21:58	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 14:59	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	43.0	mg/L	10.0	10.0	1		03/05/21 11:06		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		03/12/21 04:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/12/21 04:02	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/12/21 04:02	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

QC Batch: 603832

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524840001, 92524840002

METHOD BLANK: 3180960

Matrix: Water

Associated Lab Samples: 92524840001, 92524840002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/03/21 17:08	

LABORATORY CONTROL SAMPLE: 3180961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3180962 3180963

Parameter	Units	3180962		3180963		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	23.3	1	1	25.2	25.9	190	266	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

QC Batch:	604550	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524840003, 92524840004, 92524840005

METHOD BLANK: 3184771 Matrix: Water

Associated Lab Samples: 92524840003, 92524840004, 92524840005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/09/21 23:35	

LABORATORY CONTROL SAMPLE: 3184772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.98J	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3184773 3184774

Parameter	Units	3184773		3184774		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	44.0	1	43.9	44.6	-5	63	75-125	2	20	M1

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

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

QC Batch: 603841 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524840001, 92524840002

METHOD BLANK: 3181014 Matrix: Water  
Associated Lab Samples: 92524840001, 92524840002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/03/21 16:48	
Arsenic	mg/L	ND	0.0050	0.00078	03/03/21 16:48	
Barium	mg/L	ND	0.0050	0.00071	03/03/21 16:48	
Beryllium	mg/L	ND	0.00050	0.000046	03/03/21 16:48	
Boron	mg/L	ND	0.040	0.0052	03/03/21 16:48	
Cadmium	mg/L	ND	0.00050	0.00012	03/03/21 16:48	
Chromium	mg/L	ND	0.0050	0.00055	03/03/21 16:48	
Cobalt	mg/L	ND	0.0050	0.00038	03/03/21 16:48	
Lead	mg/L	ND	0.0010	0.000036	03/03/21 16:48	
Lithium	mg/L	ND	0.030	0.00081	03/03/21 16:48	
Molybdenum	mg/L	ND	0.010	0.00069	03/03/21 16:48	
Selenium	mg/L	ND	0.0050	0.0016	03/04/21 13:23	
Thallium	mg/L	ND	0.0010	0.00014	03/03/21 16:48	

LABORATORY CONTROL SAMPLE: 3181015

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3181016 3181017

Parameter	Units	92524830001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	106	105	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	3	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

Parameter	Units	3181016		3181017		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524830001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.042	0.1	0.1	0.15	0.14	104	100	75-125	3	20		
Beryllium	mg/L	0.00012J	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Boron	mg/L	ND	1	1	0.96	0.96	96	96	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	103	99	75-125	3	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.098	102	98	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.095	0.092	95	92	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.099	0.098	99	97	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.091	98	91	75-125	7	20		
Thallium	mg/L	ND	0.1	0.1	0.093	0.090	93	90	75-125	3	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

QC Batch: 604612 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524840003, 92524840004, 92524840005

METHOD BLANK: 3185232 Matrix: Water  
Associated Lab Samples: 92524840003, 92524840004, 92524840005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/08/21 19:41	
Arsenic	mg/L	ND	0.0050	0.00078	03/08/21 19:41	
Barium	mg/L	ND	0.0050	0.00071	03/08/21 19:41	
Beryllium	mg/L	ND	0.00050	0.000046	03/08/21 19:41	
Boron	mg/L	ND	0.040	0.0052	03/08/21 19:41	
Cadmium	mg/L	ND	0.00050	0.00012	03/08/21 19:41	
Chromium	mg/L	ND	0.0050	0.00055	03/08/21 19:41	
Cobalt	mg/L	ND	0.0050	0.00038	03/08/21 19:41	
Lead	mg/L	ND	0.0010	0.000036	03/08/21 19:41	
Lithium	mg/L	ND	0.030	0.00081	03/08/21 19:41	
Molybdenum	mg/L	ND	0.010	0.00069	03/08/21 19:41	
Selenium	mg/L	ND	0.0050	0.0016	03/08/21 19:41	
Thallium	mg/L	ND	0.0010	0.00014	03/08/21 19:41	

LABORATORY CONTROL SAMPLE: 3185233

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.093	93	80-120	
Boron	mg/L	1	0.92	92	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.098	98	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185234 3185235

Parameter	Units	92524831002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	103	105	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	2	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

Parameter	Units	3185234		3185235		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524831002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.023	0.1	0.1	0.12	0.12	93	96	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.084	0.085	84	85	75-125	1	20		
Boron	mg/L	0.52	1	1	1.4	1.4	88	85	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Chromium	mg/L	0.00064J	0.1	0.1	0.094	0.098	94	97	75-125	4	20		
Cobalt	mg/L	0.0055	0.1	0.1	0.095	0.099	90	94	75-125	4	20		
Lead	mg/L	0.00014J	0.1	0.1	0.092	0.094	92	94	75-125	2	20		
Lithium	mg/L	0.023J	0.1	0.1	0.11	0.11	85	88	75-125	2	20		
Molybdenum	mg/L	0.0021J	0.1	0.1	0.096	0.099	93	97	75-125	4	20		
Selenium	mg/L	0.0037J	0.1	0.1	0.093	0.096	90	93	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.090	0.093	90	92	75-125	3	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

QC Batch: 604596 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524840001, 92524840002

METHOD BLANK: 3185122 Matrix: Water  
Associated Lab Samples: 92524840001, 92524840002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/08/21 13:02	

LABORATORY CONTROL SAMPLE: 3185123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185124 3185125

Parameter	Units	3185124		3185125		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0021	87	81	75-125	7	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

QC Batch: 604663 Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524840003, 92524840004, 92524840005

METHOD BLANK: 3185603 Matrix: Water  
Associated Lab Samples: 92524840003, 92524840004, 92524840005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/08/21 14:27	

LABORATORY CONTROL SAMPLE: 3185604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185605 3185606

Parameter	Units	3185605		3185606		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0022	95	88	75-125	7	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

QC Batch: 603554 Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524840001, 92524840002

METHOD BLANK: 3179650 Matrix: Water  
Associated Lab Samples: 92524840001, 92524840002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/02/21 15:40	

LABORATORY CONTROL SAMPLE: 3179651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	393	98	90-111	

SAMPLE DUPLICATE: 3179652

Parameter	Units	92524632011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	194	196	1	10	

SAMPLE DUPLICATE: 3179653

Parameter	Units	92524632016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	128	129	1	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

QC Batch: 604527

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524840003, 92524840004, 92524840005

METHOD BLANK: 3184654

Matrix: Water

Associated Lab Samples: 92524840003, 92524840004, 92524840005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/05/21 11:03	

LABORATORY CONTROL SAMPLE: 3184655

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	375	94	90-111	

SAMPLE DUPLICATE: 3184656

Parameter	Units	92525799001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2090	1960	6	10	

SAMPLE DUPLICATE: 3184657

Parameter	Units	92525341004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	167	152	9	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

QC Batch: 604543 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524840001, 92524840002

METHOD BLANK: 3184704 Matrix: Water

Associated Lab Samples: 92524840001, 92524840002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/06/21 12:54	
Fluoride	mg/L	ND	0.10	0.050	03/06/21 12:54	
Sulfate	mg/L	ND	1.0	0.50	03/06/21 12:54	

LABORATORY CONTROL SAMPLE: 3184705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.2	96	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	50	48.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3184706 3184707

Parameter	Units	92523440025		3184706		3184707		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	2.6	2.6	50	50	50.5	51.7	96	98	90-110	2	10	
Fluoride	mg/L	0.13	0.13	2.5	2.5	2.6	2.7	100	102	90-110	2	10	
Sulfate	mg/L	ND	ND	50	50	48.5	49.7	96	99	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3184708 3184709

Parameter	Units	92524853002		3184708		3184709		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	8.3	8.3	50	50	57.2	57.0	98	97	90-110	0	10	
Fluoride	mg/L	0.26	0.26	2.5	2.5	2.8	2.8	101	101	90-110	0	10	
Sulfate	mg/L	42.4	42.4	50	50	91.1	90.9	97	97	90-110	0	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

QC Batch: 606038 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92524840003, 92524840004, 92524840005

METHOD BLANK: 3192959 Matrix: Water  
Associated Lab Samples: 92524840003, 92524840004, 92524840005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/12/21 00:26	
Fluoride	mg/L	ND	0.10	0.050	03/12/21 00:26	
Sulfate	mg/L	ND	1.0	0.50	03/12/21 00:26	

LABORATORY CONTROL SAMPLE: 3192960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.8	106	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	54.5	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192961 3192962

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526606002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	68.3	50	50	100	102	64	67	90-110	2	10	M1	
Fluoride	mg/L	0.34	2.5	2.5	2.5	2.5	85	87	90-110	2	10	M1	
Sulfate	mg/L	95.3	50	50	128	130	65	68	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192963 3192964

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525375001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.7	50	50	47.1	46.1	87	85	90-110	2	10	M1	
Fluoride	mg/L	ND	2.5	2.5	2.2	2.2	89	87	90-110	2	10	M1	
Sulfate	mg/L	0.51J	50	50	45.8	44.7	91	88	90-110	2	10	M1	

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND

Pace Project No.: 92524840

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD/E BACKGROUND  
Pace Project No.: 92524840

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92524840001	BRGWA-6S				
92524840002	BRGWA-2I				
92524840003	BRGWA-5S				
92524840004	BRGWA-5I				
92524840005	BRGWA-2S				
92524840001	BRGWA-6S	EPA 3010A	603832	EPA 6010D	603942
92524840002	BRGWA-2I	EPA 3010A	603832	EPA 6010D	603942
92524840003	BRGWA-5S	EPA 3010A	604550	EPA 6010D	604640
92524840004	BRGWA-5I	EPA 3010A	604550	EPA 6010D	604640
92524840005	BRGWA-2S	EPA 3010A	604550	EPA 6010D	604640
92524840001	BRGWA-6S	EPA 3005A	603841	EPA 6020B	603947
92524840002	BRGWA-2I	EPA 3005A	603841	EPA 6020B	603947
92524840003	BRGWA-5S	EPA 3005A	604612	EPA 6020B	604686
92524840004	BRGWA-5I	EPA 3005A	604612	EPA 6020B	604686
92524840005	BRGWA-2S	EPA 3005A	604612	EPA 6020B	604686
92524840001	BRGWA-6S	EPA 7470A	604596	EPA 7470A	604882
92524840002	BRGWA-2I	EPA 7470A	604596	EPA 7470A	604882
92524840003	BRGWA-5S	EPA 7470A	604663	EPA 7470A	604884
92524840004	BRGWA-5I	EPA 7470A	604663	EPA 7470A	604884
92524840005	BRGWA-2S	EPA 7470A	604663	EPA 7470A	604884
92524840001	BRGWA-6S	SM 2540C-2011	603554		
92524840002	BRGWA-2I	SM 2540C-2011	603554		
92524840003	BRGWA-5S	SM 2540C-2011	604527		
92524840004	BRGWA-5I	SM 2540C-2011	604527		
92524840005	BRGWA-2S	SM 2540C-2011	604527		
92524840001	BRGWA-6S	EPA 300.0 Rev 2.1 1993	604543		
92524840002	BRGWA-2I	EPA 300.0 Rev 2.1 1993	604543		
92524840003	BRGWA-5S	EPA 300.0 Rev 2.1 1993	606038		
92524840004	BRGWA-5I	EPA 300.0 Rev 2.1 1993	606038		
92524840005	BRGWA-2S	EPA 300.0 Rev 2.1 1993	606038		

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

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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition:  
Upon Receipt

Client Name:

Project #:

WO#: 92524840

Carrier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other:



92524840

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: MT 3/2/21

Packing Material:  Bubble Wrap  Bubble Sags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID: 230

Type of Ice:

Wet  Blue  None

Cooler Temp:

4.4

Correction Factor:

Add/Subtract (°C) ± 0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

4.4

USDA Regulated Soil (  N/A, water sample)

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

Yes  No

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

Comments/Discrepancy:

Chain of Custody Present?	Yes	No	N/A	1.
Chain of Custody Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Short Hold Time Analysis (<22 hr.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
-Includes Date/Time/ID/Analysis Matrix: GW				
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



# CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY - ADD WORKORDER/LAB# (Add Here if List Price Workorder Number or MET# Log-In Number Here)

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Waver Road  
 Atlanta, GA 30339  
 Report To: Joji Abraham  
 Copy To: Goldier  
 Email: jo.abraham@southemco.com  
 State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET  
 Project Name: Plant Branch BIDDYE Background  
 Project # ODR 4th Semi-Annual  
 Face Profiled  
 Collected By (print): Travis Martinez, Andrea McClure  
 Purchase Order #  
 Quote #  
 Turnaround Date Required:  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)  
 Face Project Manager: bevin.herring@pacelabs.com  
 Immediately Packed on Ice: [X] Yes [ ] No  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis: \_\_\_\_\_

## ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) 50/50 HNO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub>, (5) 20% Arsenate, (6) methanes L (7) and/or bisulfate, (8) sodium thiosulfate, (9) borate, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (O) Other

Customer Sample ID	Matrix *	Comp / Grab	Collect of (or Composite Start)		Composite End		pH	# of Cans	Analyses				Lab Profile/Lines:
			Date	Time	Date	Time			Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226.228	
BRGWA-6S	GW	G	3-1-21	1630			6.70	5	X	X	X	X	Lab Sample Receipt Checklist: Custody Seals Present/Intact Y/N/NA Custody Signatures Present Y/N/NA Collector Signatures Present Y/N/NA Berdes Intact Y/N/NA Correct Bottles Y/N/NA Sublabel Volume Y/N/NA Samples Received on Ice Y/N/NA WDA - Headpace Acceptable Y/N/NA USDA Regulated Solts Y/N/NA Samples in Holding Time Y/N/NA Residual Chloride Present Y/N/NA C-Strips: Sample pH Acceptable Y/N/NA pH Strip: Sulfide Present Y/N/NA Rapid Arsenic Strip: LAB USE ONLY: Lab Sample # / Comments:
BRGWA-2F	GW	G	3-1-21	1639			6.66	5	X	X	X	X	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Soil/Solid (SL), Of (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (BL), Water (WT), Other (OT)

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg  
 Type of Ice Used:  Wet  Blue  Dry  None  
 Packing Material Used: other  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOURS PRESENT (<72 hours):  Y  N  N/A  
 Lab Tracking #:  
 Samples received via: FEDX UPS Client  Courier Pace Courier  
 Lab Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID# 230  
 Cooler 3 Temp Upon Receipt: Y N NA  
 Cooler 3 Therm Corr Factor: 0.0  
 Cooler 3 Corrected Temp: 5.8  
 Comments:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non-Conformance(s):  
 YES / NO  
 Page 1 of 1

Relinquished by/Company: (Signature) Goldier Date/Time: 3-2-21/0815  
 Received by/Company: (Signature) Travis Martinez Date/Time: 3/2/21 10:05  
 Relinquished by/Company: (Signature) Date/Time:  
 Received by/Company: (Signature) Date/Time:  
 Relinquished by/Company: (Signature) Date/Time:  
 Received by/Company: (Signature) Date/Time:

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: John Abraham  
 Email To: scsvoices@southernco.com  
 Copy To: Golder  
 Site Collection info/Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected: [PT] [MT] [CT] [X]ET  
 Phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 Project Name: Plant Branch BCDE Background  
 Project # CCR 4th Semi-Annual  
 Purchase Order #  
 Quote #  
 Collected By (Print): Travis Martinez, Andrea McClure  
 Collected By (Signature): *[Signature]*  
 Turnaround Date Required  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Leadtime Charges Apply)  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis: \_\_\_\_\_

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) fuming acetic acid, (6) methanol, (7) sodium borate, (8) sodium phosphate, (9) benzene, (A) ascorbic acid, (B) arsenic acid, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (F) Other

Analyses  
 Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Relaxed Y/N/NA  
 Custody Signatures Present Y/N/NA  
 Collector Signature Present Y/N/NA  
 Bottles Labeled Y/N/NA  
 Corvet Bottles Y/N/NA  
 Sufficient Volume Y/N/NA  
 Samples Recooled on Ice Y/N/NA  
 VOA - Headspace Acceptable Y/N/NA  
 VOA - Rinsed Seals Y/N/NA  
 Samples in Holding Time Y/N/NA  
 Residual Chlorine Present Y/N/NA  
 Cl Strips:  
 Sample pH Acceptable Y/N/NA  
 pH Strips:  
 Sulfide Present Y/N/NA  
 Lead Acetate Strips:  
 LAB USE ONLY:  
 Lab Sample # / Comments:

\* Matrix Codes (insert in Matrix box below) Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Soil/Solid (S), Oil (OL), Wipe (WPL), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Dns
			Date	Time	Date	Time		
BRGWA-5S	GW	G	3-2-21	0929			6.42	5
BRGWA-5S	GW	G	3-2-21	1011			6.47	5
BRGWA-2S	GW	G	3-2-21	1205			6.20	5

Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226,228
X	X	X	X
X	X	X	X
X	X	X	X

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y # N/A  
 Lab Tracking #:  
 Samples received via: FEDEX UPS Other Courier Page Courier  
 Lab Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Thermo ID#:  
 Cooler 1 Temp Upon Receipt: \_\_\_ °C  
 Cooler 1 Thermo Corr Factor: \_\_\_ °C  
 Cooler 1 Controlled Temp: \_\_\_ °C  
 Comments:

Requisitioned by/Company: (Signature) *[Signature]* Date/Time: 3-3-21 10815  
 Received by/Company: (Signature) *[Signature]* Date/Time: 3/3/21 1001  
 Requisitioned by/Company: (Signature) Date/Time:  
 Received by/Company: (Signature) Date/Time:  
 Requisitioned by/Company: (Signature) Date/Time:  
 Received by/Company: (Signature) Date/Time:  
 MTL LAB USE ONLY  
 Table #:  
 Accrual:  
 Template:  
 Presig:  
 PM:  
 PB:  
 Trip Blank Received: Y N NA  
 ICL MeOH TSP Other:  
 Non Conformance(s): YES / NO  
 Page: 1 of: 1

May 03, 2021

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

RE: Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 03, 2021 and March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

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### **Pace Analytical Services Pennsylvania**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525363001	BRGWA-12S	Water	03/02/21 11:50	03/03/21 10:03
92525363002	BRGWA-12I	Water	03/02/21 08:56	03/03/21 10:03
92525363003	BRGWA-23S	Water	03/02/21 15:55	03/03/21 10:03
92525363004	BRGWC-45	Water	03/02/21 13:40	03/03/21 10:03
92525363005	BRGWC-47	Water	03/02/21 15:48	03/03/21 10:03
92525363006	BRGWC-25I	Water	03/02/21 17:08	03/03/21 10:03
92525363007	BRGWC-27I	Water	03/03/21 14:14	03/04/21 08:15
92525363008	BRGWC-29I	Water	03/03/21 16:12	03/04/21 08:15
92525363009	BRGWC-30I	Water	03/03/21 13:06	03/04/21 08:15
92525363010	DUP-1	Water	03/03/21 00:00	03/04/21 08:15
92525363011	BRGWC-32S	Water	03/04/21 11:11	03/05/21 11:30
92525363012	BRGWC-52I	Water	03/04/21 12:20	03/05/21 11:30
92525363013	FB-2	Water	03/04/21 12:40	03/05/21 11:30
92525363014	BRGWC-50	Water	03/04/21 17:07	03/05/21 11:30
92525363015	EB-1	Water	03/05/21 07:31	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525363001	BRGWA-12S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363002	BRGWA-12I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363003	BRGWA-23S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363004	BRGWC-45	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363005	BRGWC-47	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363006	BRGWC-25I	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363007	BRGWC-27I	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363008	BRGWC-29I	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363009	BRGWC-30I	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363010	DUP-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363011	BRGWC-32S	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363012	BRGWC-52I	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525363013	FB-2	EPA 9315	LAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525363014	BRGWC-50	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92525363015	EB-1	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525363001</b>	<b>BRGWA-12S</b>					
EPA 9315	Radium-226	0.0846 ± 0.0915 (0.171)	pCi/L		03/22/21 09:10	
EPA 9320	Radium-228	C:72% T:NA 0.840 ± 0.379 (0.630)	pCi/L		03/18/21 12:47	
Total Radium Calculation	Total Radium	C:77% T:90% 0.925 ± 0.471 (0.801)	pCi/L		03/26/21 14:37	
<b>92525363002</b>	<b>BRGWA-12I</b>					
EPA 9315	Radium-226	0.187 ± 0.118 (0.173)	pCi/L		03/22/21 09:10	
EPA 9320	Radium-228	C:82% T:NA 0.714 ± 0.379 (0.682)	pCi/L		03/18/21 12:47	
Total Radium Calculation	Total Radium	C:78% T:90% 0.901 ± 0.497 (0.855)	pCi/L		03/26/21 14:37	
<b>92525363003</b>	<b>BRGWA-23S</b>					
EPA 9315	Radium-226	0.382 ± 0.174 (0.214)	pCi/L		03/22/21 09:10	
EPA 9320	Radium-228	C:76% T:NA 0.734 ± 0.378 (0.661)	pCi/L		03/18/21 12:49	
Total Radium Calculation	Total Radium	C:75% T:89% 1.12 ± 0.552 (0.875)	pCi/L		03/26/21 15:12	
<b>92525363004</b>	<b>BRGWC-45</b>					
EPA 9315	Radium-226	0.107 ± 0.125 (0.250)	pCi/L		03/16/21 08:04	
EPA 9320	Radium-228	C:84% T:NA -0.163 ± 0.345 (0.856)	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	C:63% T:78% 0.107 ± 0.470 (1.11)	pCi/L		03/26/21 15:12	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525363005</b>	<b>BRGWC-47</b>					
EPA 9315	Radium-226	0.357 ± 0.208 (0.323) C:83% T:NA	pCi/L		03/16/21 08:04	
EPA 9320	Radium-228	0.214 ± 0.367 (0.801) C:63% T:88%	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	0.571 ± 0.575 (1.12)	pCi/L		03/26/21 15:12	
<b>92525363006</b>	<b>BRGWC-25I</b>					
EPA 9315	Radium-226	0.161 ± 0.149 (0.276) C:82% T:NA	pCi/L		03/16/21 08:04	
EPA 9320	Radium-228	-0.305 ± 0.383 (0.964) C:61% T:85%	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	0.161 ± 0.532 (1.24)	pCi/L		03/26/21 15:12	
<b>92525363007</b>	<b>BRGWC-27I</b>					
EPA 9315	Radium-226	0.213 ± 0.165 (0.283) C:81% T:NA	pCi/L		03/16/21 08:04	
EPA 9320	Radium-228	0.616 ± 0.536 (1.09) C:65% T:79%	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	0.829 ± 0.701 (1.37)	pCi/L		03/26/21 15:12	
<b>92525363008</b>	<b>BRGWC-29I</b>					
EPA 9315	Radium-226	0.418 ± 0.204 (0.248) C:82% T:NA	pCi/L		03/16/21 08:04	
EPA 9320	Radium-228	0.887 ± 0.583 (1.12) C:61% T:80%	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	1.31 ± 0.787 (1.37)	pCi/L		03/26/21 15:12	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525363009</b>	<b>BRGWC-30I</b>					
EPA 9315	Radium-226	0.209 ± 0.188 (0.371)	pCi/L		03/16/21 09:11	
EPA 9320	Radium-228	C:90% T:NA 0.206 ± 0.464 (1.03)	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	C:64% T:78% 0.415 ± 0.652 (1.40)	pCi/L		03/26/21 15:12	
<b>92525363010</b>	<b>DUP-1</b>					
EPA 9315	Radium-226	0.128 ± 0.148 (0.307)	pCi/L		03/16/21 09:12	
EPA 9320	Radium-228	C:89% T:NA -0.106 ± 0.400 (0.963)	pCi/L		03/19/21 15:12	
Total Radium Calculation	Total Radium	C:65% T:77% 0.128 ± 0.548 (1.27)	pCi/L		03/26/21 15:12	
<b>92525363011</b>	<b>BRGWC-32S</b>					
EPA 9315	Radium-226	0.103 ± 0.138 (0.301)	pCi/L		03/22/21 08:27	
EPA 9320	Radium-228	C:83% T:NA 0.217 ± 0.320 (0.688)	pCi/L		03/19/21 15:13	
Total Radium Calculation	Total Radium	C:77% T:85% 0.320 ± 0.458 (0.989)	pCi/L		03/26/21 13:42	
<b>92525363012</b>	<b>BRGWC-52I</b>					
EPA 9315	Radium-226	0.336 ± 0.172 (0.245)	pCi/L		03/22/21 08:28	
EPA 9320	Radium-228	C:78% T:NA 1.70 ± 0.565 (0.773)	pCi/L		03/19/21 15:13	
Total Radium Calculation	Total Radium	C:81% T:82% 2.04 ± 0.737 (1.02)	pCi/L		03/26/21 13:42	

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525363013</b>	<b>FB-2</b>					
EPA 9315	Radium-226	0.0533 ± 0.145 (0.347) C:69% T:NA	pCi/L		03/22/21 08:28	
EPA 9320	Radium-228	0.348 ± 0.415 (0.875) C:70% T:78%	pCi/L		03/19/21 15:13	
Total Radium Calculation	Total Radium	0.401 ± 0.560 (1.22)	pCi/L		03/26/21 13:42	
<b>92525363014</b>	<b>BRGWC-50</b>					
EPA 9315	Radium-226	0.338 ± 0.150 (0.174) C:89% T:NA	pCi/L		03/22/21 08:30	
EPA 9320	Radium-228	0.884 ± 0.475 (0.853) C:75% T:79%	pCi/L		03/19/21 15:13	
Total Radium Calculation	Total Radium	1.22 ± 0.625 (1.03)	pCi/L		03/26/21 13:42	
<b>92525363015</b>	<b>EB-1</b>					
EPA 9315	Radium-226	0.0638 ± 0.0941 (0.203) C:75% T:NA	pCi/L		03/22/21 08:30	
EPA 9320	Radium-228	0.0596 ± 0.300 (0.687) C:81% T:87%	pCi/L		03/19/21 15:13	
Total Radium Calculation	Total Radium	0.123 ± 0.394 (0.890)	pCi/L		03/26/21 13:42	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-12S</b> <b>Lab ID: 92525363001</b> Collected: 03/02/21 11:50      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0846 ± 0.0915 (0.171)</b> <b>C:72% T:NA</b>	pCi/L	03/22/21 09:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.840 ± 0.379 (0.630)</b> <b>C:77% T:90%</b>	pCi/L	03/18/21 12:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.925 ± 0.471 (0.801)</b>	pCi/L	03/26/21 14:37	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-12I</b> <b>Lab ID: 92525363002</b> Collected: 03/02/21 08:56      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.187 ± 0.118 (0.173)</b> <b>C:82% T:NA</b>	pCi/L	03/22/21 09:10	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.714 ± 0.379 (0.682)</b> <b>C:78% T:90%</b>	pCi/L	03/18/21 12:47	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.901 ± 0.497 (0.855)</b>	pCi/L	03/26/21 14:37	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWA-23S</b> <b>Lab ID: 92525363003</b> Collected: 03/02/21 15:55      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.382 ± 0.174 (0.214)</b> <b>C:76% T:NA</b>	pCi/L	03/22/21 09:10	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.734 ± 0.378 (0.661)</b> <b>C:75% T:89%</b>	pCi/L	03/18/21 12:49	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.12 ± 0.552 (0.875)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

**Sample: BRGWC-45**      **Lab ID: 92525363004**      Collected: 03/02/21 13:40      Received: 03/03/21 10:03      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.107 ± 0.125 (0.250)</b> <b>C:84% T:NA</b>	pCi/L	03/16/21 08:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.163 ± 0.345 (0.856)</b> <b>C:63% T:78%</b>	pCi/L	03/19/21 15:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.107 ± 0.470 (1.11)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

**Sample: BRGWC-47**      **Lab ID: 92525363005**      Collected: 03/02/21 15:48      Received: 03/03/21 10:03      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.357 ± 0.208 (0.323)</b> <b>C:83% T:NA</b>	pCi/L	03/16/21 08:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.214 ± 0.367 (0.801)</b> <b>C:63% T:88%</b>	pCi/L	03/19/21 15:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.571 ± 0.575 (1.12)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-25I</b> <b>Lab ID: 92525363006</b> Collected: 03/02/21 17:08      Received: 03/03/21 10:03      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.161 ± 0.149 (0.276)</b> <b>C:82% T:NA</b>	pCi/L	03/16/21 08:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.305 ± 0.383 (0.964)</b> <b>C:61% T:85%</b>	pCi/L	03/19/21 15:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.161 ± 0.532 (1.24)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-271</b> <b>Lab ID: 92525363007</b> Collected: 03/03/21 14:14      Received: 03/04/21 08:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.213 ± 0.165 (0.283)</b> <b>C:81% T:NA</b>	pCi/L	03/16/21 08:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.616 ± 0.536 (1.09)</b> <b>C:65% T:79%</b>	pCi/L	03/19/21 15:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.829 ± 0.701 (1.37)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-29I</b> <b>Lab ID: 92525363008</b> Collected: 03/03/21 16:12      Received: 03/04/21 08:15      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.418 ± 0.204 (0.248)</b> <b>C:82% T:NA</b>	pCi/L	03/16/21 08:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.887 ± 0.583 (1.12)</b> <b>C:61% T:80%</b>	pCi/L	03/19/21 15:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.31 ± 0.787 (1.37)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-30I</b> <b>Lab ID: 92525363009</b> Collected: 03/03/21 13:06      Received: 03/04/21 08:15      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.209 ± 0.188 (0.371)</b> <b>C:90% T:NA</b>	pCi/L	03/16/21 09:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.206 ± 0.464 (1.03)</b> <b>C:64% T:78%</b>	pCi/L	03/19/21 15:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.415 ± 0.652 (1.40)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

**Sample: DUP-1**      **Lab ID: 92525363010**      Collected: 03/03/21 00:00      Received: 03/04/21 08:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.128 ± 0.148 (0.307)</b> <b>C:89% T:NA</b>	pCi/L	03/16/21 09:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>-0.106 ± 0.400 (0.963)</b> <b>C:65% T:77%</b>	pCi/L	03/19/21 15:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.128 ± 0.548 (1.27)</b>	pCi/L	03/26/21 15:12	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-32S</b> <b>Lab ID: 92525363011</b> Collected: 03/04/21 11:11      Received: 03/05/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.103 ± 0.138 (0.301)</b> <b>C:83% T:NA</b>	pCi/L	03/22/21 08:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.217 ± 0.320 (0.688)</b> <b>C:77% T:85%</b>	pCi/L	03/19/21 15:13	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.320 ± 0.458 (0.989)</b>	pCi/L	03/26/21 13:42	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BRGWC-52I</b> <b>Lab ID: 92525363012</b> Collected: 03/04/21 12:20      Received: 03/05/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.336 ± 0.172 (0.245)</b> <b>C:78% T:NA</b>	pCi/L	03/22/21 08:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.70 ± 0.565 (0.773)</b> <b>C:81% T:82%</b>	pCi/L	03/19/21 15:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.04 ± 0.737 (1.02)</b>	pCi/L	03/26/21 13:42	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

**Sample: FB-2**      **Lab ID: 92525363013**      Collected: 03/04/21 12:40      Received: 03/05/21 11:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.0533 ± 0.145 (0.347)</b> <b>C:69% T:NA</b>	pCi/L	03/22/21 08:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.348 ± 0.415 (0.875)</b> <b>C:70% T:78%</b>	pCi/L	03/19/21 15:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.401 ± 0.560 (1.22)</b>	pCi/L	03/26/21 13:42	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

**Sample: BRGWC-50**      **Lab ID: 92525363014**      Collected: 03/04/21 17:07      Received: 03/05/21 11:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.338 ± 0.150 (0.174)</b> <b>C:89% T:NA</b>	pCi/L	03/22/21 08:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.884 ± 0.475 (0.853)</b> <b>C:75% T:79%</b>	pCi/L	03/19/21 15:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.22 ± 0.625 (1.03)</b>	pCi/L	03/26/21 13:42	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: EB-1</b> <b>Lab ID: 92525363015</b> Collected: 03/05/21 07:31      Received: 03/05/21 11:30      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0638 ± 0.0941 (0.203)</b> <b>C:75% T:NA</b>	pCi/L	03/22/21 08:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.0596 ± 0.300 (0.687)</b> <b>C:81% T:87%</b>	pCi/L	03/19/21 15:13	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.123 ± 0.394 (0.890)</b>	pCi/L	03/26/21 13:42	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

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QC Batch:	437953	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92525363004, 92525363005, 92525363006, 92525363007, 92525363008, 92525363009, 92525363010

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METHOD BLANK: 2114136 Matrix: Water

Associated Lab Samples: 92525363004, 92525363005, 92525363006, 92525363007, 92525363008, 92525363009, 92525363010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.856 ± 0.495 (0.916) C:71% T:73%	pCi/L	03/19/21 11:52	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

QC Batch: 437937

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92525363004, 92525363005, 92525363006, 92525363007, 92525363008, 92525363009, 92525363010

METHOD BLANK: 2114109

Matrix: Water

Associated Lab Samples: 92525363004, 92525363005, 92525363006, 92525363007, 92525363008, 92525363009, 92525363010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0804 ± 0.198 (0.468) C:67% T:NA	pCi/L	03/16/21 08:04	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

QC Batch: 437643

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92525363001, 92525363002, 92525363003

METHOD BLANK: 2112540

Matrix: Water

Associated Lab Samples: 92525363001, 92525363002, 92525363003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.387 ± 0.316 (0.633) C:83% T:90%	pCi/L	03/18/21 12:44	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

QC Batch: 437642

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92525363011, 92525363012, 92525363013, 92525363014, 92525363015

METHOD BLANK: 2112539

Matrix: Water

Associated Lab Samples: 92525363011, 92525363012, 92525363013, 92525363014, 92525363015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.219 ± 0.271 (0.570) C:75% T:92%	pCi/L	03/19/21 15:12	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

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QC Batch:	437601	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92525363011, 92525363012, 92525363013, 92525363014, 92525363015

---

METHOD BLANK: 2112394 Matrix: Water

Associated Lab Samples: 92525363011, 92525363012, 92525363013, 92525363014, 92525363015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0425 ± 0.110 (0.264) C:81% T:NA	pCi/L	03/22/21 08:26	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

QC Batch: 437602

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92525363001, 92525363002, 92525363003

METHOD BLANK: 2112395

Matrix: Water

Associated Lab Samples: 92525363001, 92525363002, 92525363003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0514 ± 0.104 (0.242) C:82% T:NA	pCi/L	03/22/21 08:37	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD NETWORK RADS

Pace Project No.: 92525363

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525363001	BRGWA-12S	EPA 9315	437602		
92525363002	BRGWA-12I	EPA 9315	437602		
92525363003	BRGWA-23S	EPA 9315	437602		
92525363004	BRGWC-45	EPA 9315	437937		
92525363005	BRGWC-47	EPA 9315	437937		
92525363006	BRGWC-25I	EPA 9315	437937		
92525363007	BRGWC-27I	EPA 9315	437937		
92525363008	BRGWC-29I	EPA 9315	437937		
92525363009	BRGWC-30I	EPA 9315	437937		
92525363010	DUP-1	EPA 9315	437937		
92525363011	BRGWC-32S	EPA 9315	437601		
92525363012	BRGWC-52I	EPA 9315	437601		
92525363013	FB-2	EPA 9315	437601		
92525363014	BRGWC-50	EPA 9315	437601		
92525363015	EB-1	EPA 9315	437601		
92525363001	BRGWA-12S	EPA 9320	437643		
92525363002	BRGWA-12I	EPA 9320	437643		
92525363003	BRGWA-23S	EPA 9320	437643		
92525363004	BRGWC-45	EPA 9320	437953		
92525363005	BRGWC-47	EPA 9320	437953		
92525363006	BRGWC-25I	EPA 9320	437953		
92525363007	BRGWC-27I	EPA 9320	437953		
92525363008	BRGWC-29I	EPA 9320	437953		
92525363009	BRGWC-30I	EPA 9320	437953		
92525363010	DUP-1	EPA 9320	437953		
92525363011	BRGWC-32S	EPA 9320	437642		
92525363012	BRGWC-52I	EPA 9320	437642		
92525363013	FB-2	EPA 9320	437642		
92525363014	BRGWC-50	EPA 9320	437642		
92525363015	EB-1	EPA 9320	437642		
92525363001	BRGWA-12S	Total Radium Calculation	440668		
92525363002	BRGWA-12I	Total Radium Calculation	440668		
92525363003	BRGWA-23S	Total Radium Calculation	440686		
92525363004	BRGWC-45	Total Radium Calculation	440686		
92525363005	BRGWC-47	Total Radium Calculation	440686		
92525363006	BRGWC-25I	Total Radium Calculation	440686		
92525363007	BRGWC-27I	Total Radium Calculation	440686		
92525363008	BRGWC-29I	Total Radium Calculation	440686		
92525363009	BRGWC-30I	Total Radium Calculation	440686		
92525363010	DUP-1	Total Radium Calculation	440686		
92525363011	BRGWC-32S	Total Radium Calculation	440644		
92525363012	BRGWC-52I	Total Radium Calculation	440644		
92525363013	FB-2	Total Radium Calculation	440644		
92525363014	BRGWC-50	Total Radium Calculation	440644		
92525363015	EB-1	Total Radium Calculation	440644		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK RADS  
Pace Project No.: 92525363

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
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### REPORT OF LABORATORY ANALYSIS


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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt	Client Name: <u>GA Power</u>	Project #: <b>WO# : 92525375</b>
Courier: <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Pace <input type="checkbox"/> Other:	 92525375	
Custody Seal Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date/Initials Person Examining Contents: <u>3/3/20</u>
Packing Material: <input type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input type="checkbox"/> Other	Thermometer: <input checked="" type="checkbox"/> IR Gun ID: <u>230</u> <input type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None	Biological Tissue Frozen? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Cooler Temp: <u>3.3</u> Correction Factor: Add/Subtract (°C) <u>0.0</u>	Cooler Temp Corrected (°C): <u>3.3</u>	Temp should be above freezing to 6°C <input type="checkbox"/> Samples out of temp criteria. Samples on ice, cooling process has begun
USDA Regulated Soil ( <input type="checkbox"/> N/A, water sample)	Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? <input type="checkbox"/> Yes <input type="checkbox"/> No	Did samples originate from a foreign source (Internationally, including Hawaii and Puerto Rico)? <input type="checkbox"/> Yes <input type="checkbox"/> No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



**CHAIN-OF-CUSTODY Analytical Request Document**

Lab Use ONLY: Attach Workorder/Log In Label Here or Last Page Workorder Number or METL Log-In Number Here

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339  
 Report To: Kiju Abraham  
 Email To: scs@voicelab@southernco.com

Copy To: Golder  
 Site Collection Info/Address: Plant Branch

Phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 State: Georgia City: Milledgeville Time Zone Collected:  
 Project Name: Plant Branch BCO Network  
 Project #: COR 4th Semi-Annual  
 Pace Project Manager: Iorvin Perring@pace.com  
 Turnaround Date Required:  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day  
 [ ] Expedite Charges Apply

\* Matrix Codes: (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Biossary (B), Water (WT), Other (OT)

**ALL SHADED AREAS are for LAB USE ONLY**

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Type: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) trace acid, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) arsenicium pallate, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (O) Other

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Cans
			Date	Time	Date	Time		
BRGWA-12S	GW	G	3-2-21	1150			5.92	5
BRGWA-12I	GW	G	3-2-21	0836			6.11	5
BRGWA-23S	GW	G	3-2-21	1555			5.75	5
BRGWC-45	GW	G	3-2-21	1340			6.17	5
BRGWC-47	GW	G	3-2-21	1548			5.59	5
BRGWC-25Z	GW	G	3-2-21	1708			6.10	5

Analyses	Lab Profile/Line:			
	Metal 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226.228
Lab Sample Receipt Checklist:				
Custody Seals Present/Correct Y/N/NA				
Custody Signatures Present Y/N/NA				
Collector Signatures Present Y/N/NA				
Bottles Intact Y/N/NA				
Correct Bottles Y/N/NA				
Sufficient Volume Y/N/NA				
Samples Received on Ice Y/N/NA				
VQA - Headspace Acceptable Y/N/NA				
USDA Regulated Soils Y/N/NA				
Samples in Holding Time Y/N/NA				
Residual Chlorine Present Y/N/NA				
Cl Strips:				
Sample pH Acceptable Y/N/NA				
pH Strips:				
Sulfide Present Y/N/NA				
Lead Acetate Strips:				

Metals: As, B, Ba, Be, Ca, Cd, Co, Cr, K, Mn, Pb, Sb, Se, U, Ti, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 3-3-21/0815  
 Received by/Company: (Signature) *[Signature]* Date/Time: 3-3-21 (100)  
 Relinquished by/Company: (Signature) Date/Time:  
 Received by/Company: (Signature) Date/Time:  
 Relinquished by/Company: (Signature) Date/Time:  
 Received by/Company: (Signature) Date/Time:

LAB USE ONLY  
 Table #:  
 Recharge:  
 Template:  
 Prelogin:  
 P&E:  
 PS:

LAB USE ONLY:  
 Lab Sample # / Comments:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s): Page: 1  
 YES / NO of: 1



CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY - Area Workorder/Log# Label # of LST/Pack Workorder Number or MY/L Log-in Number Here

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Jojo Abraham  
 Email: To: jojo.abraham@southernco.com

Billing information:  
 State: Georgia City: Milledgeville Time Zone: Collected:  
 [ ] SPT [ ] NAT [ ] CT [ ] EX [ ] ET

Copy To: Go/der  
 See Collection Info/Address: Plant Branch

ALL SHADED AREAS are for LAB USE ONLY

Container Preservative Type \*\*  
 Lab Project Manager:  
 Preservative Types: (1) none acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) nitric acid, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) \*M, (E) Unpreserved, (O) Other

Phone: (404) 506-7239  
 Email: jojo.abraham@southernco.com  
 Project Name: Plant Branch BCD Network  
 Project #: OCR 4th Semi-Annual  
 Purchase Order #  
 Order #  
 Turnaround Date Required:  
 Rush:  
 Same Day  Next Day  
 2 Day  3 Day  4 Day  5 Day  
 (Expedite Charges Apply)

Pace Profile:  
 Pace Project Manager  
 Kevin Fleming@pacelabs.com  
 Immediately Packed on ice:  
 Yes  No  
 Field Filtered (if applicable):  
 Yes  No  
 Analyzed: \_\_\_\_\_

Analyses	Lab Profile/Line:	
	Lab Sample Receipt Checklist:	Lab Sample # / Comments:
Metals 6010/6030/7470 - see comments	Custody Seal Present/Retact: Y N NA	
TDS	Custody Signature Present: Y N NA	
Chloride/Fluoride/Sulfate	Collector Signature Present: Y N NA	
Radium 226.228	Bottle Intact: Y N NA	
	Correct Bottles: Y N NA	
	Sufficient Volume: Y N NA	
	Samples Received on Ice: Y N NA	
	Yield - Headspace Acceptable: Y N NA	
	USDA Regulated Soils: Y N NA	
	Samples in Holding Time: Y N NA	
	Residual Chlorine Present: Y N NA	
	OT Scripts:	
	Sample pH Acceptable: Y N NA	
	Oil Strips:	
	Outside Present: Y N NA	
	Lead Acceptable Script: _____	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Biossary (BS), Water (WT), Other (OS)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of CUS
			Date	Time	Date	Time		
BRGWC-27I	GW	G	3-3-21	1414			5.90	5
BRGWC-29I	GW	G	3-3-21	1612			4.46	3
BRGWC-30I	GW	G	3-3-21	1306			6.29	5
DUP-1	GW	G	3-3-21	-			-	5

Analyses	Metals 6010/6030/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226.228
Metals 6010/6030/7470 - see comments	X	X	X	X
TDS	X	X	X	X
Chloride/Fluoride/Sulfate	X	X	X	X
Radium 226.228	X	X	X	X

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mn, Pb, Sb, Se, Si, Ti, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radionuclide sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #: \_\_\_\_\_  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier

Requested by/Company (Signature): *[Signature]* Date/Time: 3-4-21/0815  
 Relinquished by/Company (Signature): \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by/Company (Signature): *[Signature]* Date/Time: 3-4-21/815  
 Received by/Company (Signature): \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by/Company (Signature): \_\_\_\_\_ Date/Time: \_\_\_\_\_

MTA LAB USE ONLY  
 Table #: \_\_\_\_\_  
 Account: \_\_\_\_\_  
 Template: \_\_\_\_\_  
 Prelogic: \_\_\_\_\_  
 Part: \_\_\_\_\_  
 Job: \_\_\_\_\_

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_\_°C  
 Cooler 1 Therm Corr. Factor: \_\_\_\_°C  
 Cooler 1 Corrected Temp: \_\_\_\_°C  
 Comments: \_\_\_\_\_

Trip Blank Received: Y N NA  
 HCL MeSH TSP Other

Non-Conformance(s): \_\_\_\_\_ Page: 1 of 1  
 YES / NO



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power Coal Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Email To: jojuvoices@southemco.com  
 Copy To: Gabler  
 Site Collection Info: Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected: [ ] ET [ ] MT [ ] CT [ ] ET  
 Phone: (404) 506-7237  
 Email: j.abraham@southemco.com  
 Project Name: Plant Branch BCD Network  
 Project # CCR Ash Semi-Annual  
 Collected By (print): Travis Martinez, Andrea McClure  
 Purchase Order #  
 Quote #  
 Turnaround Date Required:  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day  
 Expedite Charges Apply: [ ]  
 Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Waste (WP), Air (AR), Tissue (TS), Biosay (BS), Water (WT), Other (OT)

Container Preservative Type: [ ]  
 Lab Project Manager: [ ]  
 Preservative Types: (1) Nitric acid, (2) Sulfuric acid, (3) Hydrochloric acid, (4) Sodium hydroxide, (5) Free acetate, (6) methanol, (7) Sodium borofluoride, (8) Sodium molybdate, (9) hexane, (A) ascorbic acid, (B) zinc molybdate, (C) ammonium hydroxide, (D) TSP, (U) Untreated, (O) Other

Analyses: [ ] Metals 6010/6020/7470 - see comments [ ] TDS [ ] Chloride/Fluoride/Sulfate [ ] Radium 226, 228  
 Lab Profile/Lists:  
 Lab Sample Receipt Checklist:  
 Custody Seal Present/Intact Y/N/NA  
 Custody Signatures Present Y/N/NA  
 Collector Signatures Present Y/N/NA  
 Bottles Intact Y/N/NA  
 Correct Bottles Y/N/NA  
 Sufficient Volume Y/N/NA  
 Samples Received on Ice Y/N/NA  
 VOC - Headspace Acceptable Y/N/NA  
 USDA Regulated Soil Y/N/NA  
 Samples in Holding Time Y/N/NA  
 Residual Chlorine Present Y/N/NA  
 pH Strips:  
 Sample pH Accessible Y/N/NA  
 pH Strips:  
 Outside Present Y/N/NA  
 Lead Acetate Strips:  
 Lab USE ONLY:  
 Lab Sample # / Comments:

Customer Sample ID	Matrix*	Comp / Grab	Collected for Composite Start		Composite End		PH	# of Cans
			Date	Time	Date	Time		
BRGWC-325	GW	G	3-4-21	1111			5.88	5
BRGWC-522	GW	G	3-4-21	1220			5.87	5
EB-2	W	G	3-4-21	1240			-	5
BRGWC-50	GW	G	3-4-21	1707			4.34	5
EB-1	W	G	3-5-21	0731			-	5

Metals: As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Si, Tl, Hg  
 Type of Ice Used: Wet [ ] Mix [ ] Dry [ ] None [ ]  
 Packing Material Used: [ ]  
 Radchem sample(s) screened (<500 cpm): Y [ ] N [ ] NA [ ]  
 SHORT HOURS PRESENT (<22 hours): Y [ ] N [ ] S/A [ ]  
 Lab Tracking #: [ ]  
 Samples received via: FEDEX [ ] UPS [ ] Client [ ] Courier [ ] Pace Courier [ ]  
 Relinquished by/Company: (Signature) [ ] Date/Time: 3-5-21 / 1000  
 Received by/Company: (Signature) [ ] Date/Time: 3/5/21 / 1130  
 Relinquished by/Company: (Signature) [ ] Date/Time: [ ]  
 Received by/Company: (Signature) [ ] Date/Time: [ ]  
 Relinquished by/Company: (Signature) [ ] Date/Time: [ ]  
 Received by/Company: (Signature) [ ] Date/Time: [ ]  
 Lab Sample Temperature Info:  
 Temp Blank Received: Y [ ] N [ ] NA [ ]  
 Therm ID: [ ]  
 Cooler 1 Temp Upon Receipt: [ ] °C  
 Cooler 2 Therm Corr. Factor: [ ] °C  
 Cooler 3 Corrected Temp: [ ] °C  
 Comments: [ ]  
 Trip Blank Received: Y [ ] N [ ] NA [ ]  
 HCL MeCH TSP Other [ ]  
 Non Conformance(s): [ ] Page: 1 of 1  
 YES / NO [ ]



### Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 3/10/2021  
Worklist: 59153  
Matrix: DW

Method Blank Assessment		
MB Sample ID		2112394
MB Concentration		0.043
MB Counting Uncertainty		0.133
MB MDC		0.264
MB Numerical Performance Indicator		0.76
MB Status vs Numerical Indicator		N/A
MB Status vs MDC		Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	N
		LCS59153
Count Date:	3/22/2021	
Spike I.D.:	19-093	
Decay Corrected Spike Concentration (pCi/mL):	24.00E	
Volume Used (mL):	3.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.756	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.078	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.538	
Numerical Performance Indicator:	1.21	
Percent Recovery:	106.78%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92525363011	Enter Duplicate sample ID if other than LCS/LCSD in the space below
Duplicate Sample I.D.:	92525363011DUP	
Sample Result (pCi/L, g, F):	0.103	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.137	
Sample Duplicate Result (pCi/L, g, F):	0.063	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.101	
Are sample and/or duplicate results below RL?:	See Below	
Duplicate Numerical Performance Indicator:	0.575	
Duplicate RPD:	64.02%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail	
% RPD Limit:	25%	

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

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

Comments:

## Recob must be re-logged due to unacceptable precision N/A LAM 3/22/21

OK

LAL 3/22/21

LAL 3/22/21

LAM 3/22/21



## Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Pa-228  
Analyst: LAL  
Date: 3/10/2021  
Worklist: 59153  
Matrix: CV

Method Blank Assessment	
MB Sample ID	2112204
MB concentration:	0.043
MB Counting Uncertainty:	3.110
MB MDC:	0.264
MB Numerical Performance Indicator:	0.76
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS# (Y or N)?	
	LCS#9153	LCS#69153
Count Date:	3/22/2021	3/22/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.525	0.506
Target Conc. (pCi/L, g, F):	4.766	4.749
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	5.078	4.938
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.518	0.506
Numerical Performance Indicator:	1.21	0.73
Percent Recovery:	106.78%	104.01%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	125%	125%
Lower % Recovery Limit:	75%	75%

Duplicate Sample Assessment		Enter Duplicate sample as if other than LCS/LCSD in the space below.
Sample I.D.:	LCS#9153	
Duplicate Sample I.D.:	LCS#9153	
Sample Result (pCi/L, g, F):	5.078	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.518	
Sample Duplicate Result (pCi/L, g, F):	4.938	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.506	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.375	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.62%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

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

Comments:

*CAL*  
3/22/21

LAM 3/22/21



## Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: LAL  
Date: 3/10/2021  
Worklist: 58154  
Method: D/W

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment	
MB Sample ID	2112795
MB Concentration:	0.351
MB Counting Uncertainty:	0.104
MB MDC:	0.242
MB Numerical Performance Indicator:	0.97
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	LCS# (Y or N)?	
	LCS#9154	LCS#9154
Count Date:	3/22/2021	3/22/2021
Spike I.D.:	19-030	19-030
Decay Corrected Spike Concentration (pCi/mL):	24.029	24.029
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.508	0.508
Target Conc. (pCi/L, g, F):	4.755	4.756
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	5.732	4.926
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.549	0.532
Numerical Performance Indicator:	3.45	0.55
Percent Recovery:	120.45%	103.59%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	125%	125%
Lower % Recovery Limit:	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS#9154	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCS#9154	
Sample Result (pCi/L, g, F):	5.732	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.549	
Sample Duplicate Result (pCi/L, g, F):	4.926	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.532	
Are sample and/or duplicate results below PRL?	NO	
Duplicate Numerical Performance Indicator:	2.122	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	15.00%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

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

Comments:

*Handwritten signature and date: LAL 3/22/21*



## Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226  
Analyst: LAL  
Date: 3/10/2021  
Worklist: 59154  
Matrix: D/W

Method Blank Assessment		
MB Sample ID	2112086	
MB Concentration	0.051	
MB Counting Uncertainty	0.104	
MB MDC	0.242	
MB Numerical Performance Indicator	0.97	
MB Status vs Numerical Indicator	N/A	
MB Status vs. MDC	Pass	

Laboratory Control Sample Assessment	LCS0 (Y or N)?	
	LCS09154	LCS059154
Count Date:	3/22/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL)	24.039	
Volume Used (mL)	0.10	
Aliquot Volume (L g. Fx)	0.565	
Target Conc. (pCi/L g. F)	4.739	
Uncertainty (Calculated)	0.057	
Result (pCi/L g. F)	5.732	
LCS/LCSD Counting Uncertainty (pCi/L g. F)	0.549	
Numerical Performance Indicator	3.45	
Percent Recovery	120.45%	
Status vs Numerical Indicator	N/A	
Status vs Recovery	Pass	
Upper % Recovery Limit	125%	
Lower % Recovery Limit	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92525214001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92525214001 DUP	
Sample Result (pCi/L g. F)	0.114	
Sample Result Counting Uncertainty (pCi/L g. F)	0.189	
Sample Duplicate Result (pCi/L g. F)	0.134	
Sample Duplicate Result Counting Uncertainty (pCi/L g. F)	0.113	
Are sample and/or duplicate results below MDC?	See Below	
Duplicate Numerical Performance Indicator	-0.180	
Duplicate RPD:	15.34%	
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	MS/MSD 1	MS/MSD 2
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L g. F)		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L g. F)		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD:		
% RPD Limit:		

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

Comments:

*Handwritten signature and date:*  
LAL 3/22/21





### Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: VA  
Date: 3/15/2021  
Worklist: 59158  
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2112538
MB Concentration:	0.219
MB 2 Sigma CSU:	0.271
MB MDC:	0.370
MB Numerical Performance Indicator:	1.59
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment:	LCS (Y or N)?	
	LCS59158	LCS056158
Count Date:	3/15/2021	3/15/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/L):	38.405	38.405
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, Fl):	0.804	0.813
Target Conc. (pCi/L, g, Fl):	4.777	4.724
Uncertainty (calculated):	0.234	0.237
Result (pCi/L, g, Fl):	3.857	3.047
LCS/LCSD 2 Sigma CSU (pCi/L, g, Fl):	0.900	0.756
Numerical Performance Indicator:	-1.94	-4.15
Percent Recovery:	80.76%	64.39%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	135%	135%
Lower % Recovery Limit:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS05158	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCS056158	
Sample Result (pCi/L, g, Fl):	3.857	
Sample Result 2 Sigma CSU (pCi/L, g, Fl):	0.900	
Sample Duplicate Result (pCi/L, g, Fl):	3.041	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, Fl):	0.755	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	1.362	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.55%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

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*Handwritten signature and date: 3/15/2021*



### Quality Control Sample Performance Assessment

Test: Ra-228  
 Analyst: VAL  
 Date: 3/15/2021  
 Worksheet: 59159  
 Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2112540
MB Concentration	0.387
MB 2 Sigma CSU	0.218
MB MCC	0.633
MB Numerical Performance Indicator	2.48
MB Status vs Numerical Indicator	Warning
MB Status vs MCC	Pass

Laboratory Control Sample Assessment	LCS? (Y or N)?	Y
	LCS59159	LCS099159
Count Date	3/15/2021	3/18/2021
Spike ID	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL)	39.419	38.419
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, F)	0.810	0.801
Target Conc. (pCi, g, F)	4.741	4.794
Uncertainty (Calculated)	0.252	0.235
Result (pCi, g, F)	4.345	4.001
LCS/LCSD 2 Sigma CSU (pCi, g, F)	0.651	0.694
Numerical Performance Indicator	-0.79	-1.70
Percent Recovery	91.66%	83.47%
Status vs Numerical Indicator	Fail	Pass
Status vs Recovery	Pass	Pass
Upper % Recovery Limits	135%	135%
Lower % Recovery Limits	60%	60%

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

Duplicate Sample Assessment		
Sample ID:	LCS59159	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample ID:	LCS099159	
Sample Result (pCi, g, F):	4.345	
Sample Result 2 Sigma CSU (pCi, g, F):	0.651	
Sample Duplicate Result (pCi, g, F):	4.001	
Sample Duplicate Result 2 Sigma CSU (pCi, g, F):	0.694	
Are sample and/or duplicate results below RLD?	NO	
Duplicate Numerical Performance Indicator:	0.219	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	9.34%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	35%	

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

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

Comments:

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## Quality Control Sample Performance Assessment

Test: Ra-226  
 Analyst: VAL  
 Date: 3/15/2021  
 Work'st: 59235  
 Matrix: WT

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Method Blank Assessment	
MB Sample ID	2114136
MB Concentration:	0.565
MB 2 Sigma CSU:	0.485
MB MDC:	0.915
MB Numerical Performance Indicator:	3.39
MB Status vs Numerical Indicator:	Fail
MB Status vs MDC:	Pass

	LCS# (Y or N)?	
	LCS59205	LCS059206
Count Date:	3/15/2021	3/15/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.437	38.437
Volume Used (mL):	0.13	0.13
Aliquot Volume (L g. F):	0.219	0.206
Target Conc. (pCi/L g. F):	4.689	4.764
Uncertainty (Calculated):	0.230	0.233
Result (pCi/L g. F):	3.975	4.856
LCS/LCS0 2 Sigma CSU (pCi/L g. F):	0.994	1.085
Numerical Performance Indicator:	-1.27	0.17
Percent Recovery:	84.78%	132.30%
Status vs Numerical Indicator:	Fail	Pass
Status vs Recovery:	Fail	Pass
Upper % Recovery Limit:	135%	135%
Lower % Recovery Limit:	60%	60%

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

Duplicate Sample Assessment:		Enter Duplicate sample ID's if other than LCS#, CSC in the space below.
Sample I.D.:	LCS59205	
Duplicate Sample ID:	LCS059206	
Sample Result (pCi/L g. F):	3.575	
Sample Result 2 Sigma CSU (pCi/L g. F):	0.994	
Sample Duplicate Result (pCi/L g. F):	4.859	
Sample Duplicate Result 2 Sigma CSU (pCi/L g. F):	1.085	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.175	
(Based on the LCS/LCS0 Percent Recoveries); Duplicate RPD:	15.44%	
Duplicate Status vs Numerical Indicator:	Fail	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

**Comments:**

\* If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped

*VAL*  
 3/15/2021

May 03, 2021

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

RE: Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Dear Joju Abraham:

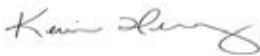
Enclosed are the analytical results for sample(s) received by the laboratory between March 03, 2021 and March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525375001	BRGWA-12S	Water	03/02/21 11:50	03/03/21 10:03
92525375002	BRGWA-12I	Water	03/02/21 08:56	03/03/21 10:03
92525375003	BRGWA-23S	Water	03/02/21 15:55	03/03/21 10:03
92525375004	BRGWC-45	Water	03/02/21 13:40	03/03/21 10:03
92525375005	BRGWC-47	Water	03/02/21 15:48	03/03/21 10:03
92525375006	BRGWC-25I	Water	03/02/21 17:08	03/03/21 10:03
92525375007	BRGWC-27I	Water	03/03/21 14:14	03/04/21 08:15
92525375008	BRGWC-29I	Water	03/03/21 16:12	03/04/21 08:15
92525375009	BRGWC-30I	Water	03/03/21 13:06	03/04/21 08:15
92525375010	DUP-1	Water	03/03/21 13:06	03/04/21 08:15
92525375011	BRGWC-32S	Water	03/04/21 11:11	03/05/21 11:30
92525375012	BRGWC-52I	Water	03/04/21 12:20	03/05/21 11:30
92525375013	EB-2	Water	03/04/21 12:40	03/05/21 11:30
92525375014	BRGWC-50	Water	03/04/21 17:07	03/05/21 11:30
92525375015	EB-1	Water	03/05/21 07:31	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92525375001	BRGWA-12S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	JRS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92525375002	BRGWA-12I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92525375003	BRGWA-23S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92525375004	BRGWC-45	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92525375005	BRGWC-47	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92525375006	BRGWC-25I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92525375007	BRGWC-27I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375008	BRGWC-29I	EPA 6010D	KH	1
		EPA 6020B	CW1	13

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375009	BRGWC-30I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375010	DUP-1	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375011	BRGWC-32S	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375012	BRGWC-52I	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375013	EB-2	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375014	BRGWC-50	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525375015	EB-1	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Method</b>	<b>Analysts</b>	<b>Analytes Reported</b>
		EPA 300.0 Rev 2.1 1993	JLH	3

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PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525375001</b>	<b>BRGWA-12S</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	5.92	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	5.4	mg/L	1.0	03/10/21 01:21	M1
EPA 6020B	Barium	0.063	mg/L	0.0050	03/10/21 10:18	
EPA 6020B	Chromium	0.0021J	mg/L	0.0050	03/10/21 10:18	
SM 2540C-2011	Total Dissolved Solids	43.0	mg/L	10.0	03/05/21 11:06	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	03/12/21 04:17	M1
EPA 300.0 Rev 2.1 1993	Sulfate	0.51J	mg/L	1.0	03/12/21 04:17	M1
<b>92525375002</b>	<b>BRGWA-12I</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	6.11	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	11.7	mg/L	1.0	03/10/21 01:41	
EPA 6020B	Antimony	0.0095	mg/L	0.0030	03/10/21 10:41	
EPA 6020B	Barium	0.053	mg/L	0.0050	03/10/21 10:41	
EPA 6020B	Boron	0.0057J	mg/L	0.040	03/10/21 10:41	
EPA 6020B	Chromium	0.0020J	mg/L	0.0050	03/10/21 10:41	
EPA 6020B	Lithium	0.0045J	mg/L	0.030	03/10/21 10:41	
SM 2540C-2011	Total Dissolved Solids	93.0	mg/L	10.0	03/05/21 15:33	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	03/12/21 05:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	03/12/21 05:00	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	03/12/21 05:00	
<b>92525375003</b>	<b>BRGWA-23S</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	5.75	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	11.6	mg/L	1.0	03/10/21 01:55	
EPA 6020B	Barium	0.097	mg/L	0.0050	03/10/21 10:47	
EPA 6020B	Boron	0.042	mg/L	0.040	03/10/21 10:47	
EPA 6020B	Chromium	0.0020J	mg/L	0.0050	03/10/21 10:47	
EPA 6020B	Lithium	0.0093J	mg/L	0.030	03/10/21 10:47	
EPA 6020B	Selenium	0.0060	mg/L	0.0050	03/10/21 10:47	
SM 2540C-2011	Total Dissolved Solids	105	mg/L	10.0	03/05/21 15:34	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	03/12/21 05:14	
EPA 300.0 Rev 2.1 1993	Sulfate	54.0	mg/L	1.0	03/12/21 05:14	
<b>92525375004</b>	<b>BRGWC-45</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	6.17	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	33.9	mg/L	1.0	03/10/21 02:00	
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	03/10/21 10:53	
EPA 6020B	Barium	0.061	mg/L	0.0050	03/10/21 10:53	
EPA 6020B	Boron	0.044	mg/L	0.040	03/10/21 10:53	
EPA 6020B	Cadmium	0.00020J	mg/L	0.00050	03/10/21 10:53	
EPA 6020B	Cobalt	0.0057	mg/L	0.0050	03/10/21 10:53	
EPA 6020B	Lithium	0.0043J	mg/L	0.030	03/10/21 10:53	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525375004</b>	<b>BRGWC-45</b>					
SM 2540C-2011	Total Dissolved Solids	264	mg/L	10.0	03/05/21 15:34	
EPA 300.0 Rev 2.1 1993	Chloride	25.8	mg/L	1.0	03/12/21 05:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	03/12/21 05:58	
EPA 300.0 Rev 2.1 1993	Sulfate	98.3	mg/L	2.0	03/12/21 09:54	
<b>92525375005</b>	<b>BRGWC-47</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	5.59	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	353	mg/L	10.0	03/11/21 17:30	
EPA 6020B	Barium	0.036	mg/L	0.0050	03/10/21 10:58	
EPA 6020B	Boron	0.58	mg/L	0.040	03/10/21 10:58	
EPA 6020B	Cobalt	0.00050J	mg/L	0.0050	03/10/21 10:58	
EPA 6020B	Lithium	0.044	mg/L	0.030	03/10/21 10:58	
EPA 6020B	Selenium	0.0028J	mg/L	0.0050	03/10/21 10:58	
SM 2540C-2011	Total Dissolved Solids	1680	mg/L	100	03/05/21 15:34	
EPA 300.0 Rev 2.1 1993	Chloride	4.8	mg/L	1.0	03/12/21 06:12	
EPA 300.0 Rev 2.1 1993	Sulfate	1360	mg/L	29.0	03/12/21 10:08	
<b>92525375006</b>	<b>BRGWC-25I</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	6.10	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	44.1	mg/L	1.0	03/10/21 02:10	
EPA 6020B	Barium	0.026	mg/L	0.0050	03/10/21 11:28	
EPA 6020B	Boron	1.1	mg/L	0.040	03/10/21 11:28	
EPA 6020B	Cobalt	0.0030J	mg/L	0.0050	03/10/21 11:28	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	03/10/21 11:28	
EPA 6020B	Selenium	0.0021J	mg/L	0.0050	03/10/21 11:28	
SM 2540C-2011	Total Dissolved Solids	280	mg/L	10.0	03/05/21 15:34	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	03/12/21 06:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	03/12/21 06:27	
EPA 300.0 Rev 2.1 1993	Sulfate	139	mg/L	3.0	03/12/21 10:23	
<b>92525375007</b>	<b>BRGWC-27I</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	5.90	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	58.2	mg/L	1.0	03/10/21 02:15	
EPA 6020B	Barium	0.016	mg/L	0.0050	03/10/21 11:33	
EPA 6020B	Beryllium	0.000071J	mg/L	0.00050	03/10/21 11:33	
EPA 6020B	Boron	0.91	mg/L	0.040	03/10/21 11:33	
EPA 6020B	Cobalt	0.0062	mg/L	0.0050	03/10/21 11:33	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	03/10/21 11:33	
EPA 6020B	Selenium	0.0031J	mg/L	0.0050	03/10/21 11:33	
SM 2540C-2011	Total Dissolved Solids	288	mg/L	10.0	03/06/21 09:43	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	03/13/21 16:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	03/13/21 16:11	
EPA 300.0 Rev 2.1 1993	Sulfate	172	mg/L	4.0	03/14/21 10:46	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525375008</b>	<b>BRGWC-29I</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	4.46	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	73.3	mg/L	1.0	03/10/21 02:20	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	03/10/21 11:39	
EPA 6020B	Barium	0.021	mg/L	0.0050	03/10/21 11:39	
EPA 6020B	Beryllium	0.00094	mg/L	0.00050	03/10/21 11:39	
EPA 6020B	Boron	1.0	mg/L	0.040	03/10/21 11:39	
EPA 6020B	Cobalt	0.0095	mg/L	0.0050	03/10/21 11:39	
EPA 6020B	Lead	0.00033J	mg/L	0.0010	03/10/21 11:39	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	03/10/21 11:39	
EPA 6020B	Selenium	0.0042J	mg/L	0.0050	03/10/21 11:39	
EPA 6020B	Thallium	0.00018J	mg/L	0.0010	03/10/21 11:39	
SM 2540C-2011	Total Dissolved Solids	515	mg/L	10.0	03/06/21 09:43	
EPA 300.0 Rev 2.1 1993	Chloride	5.6	mg/L	1.0	03/13/21 16:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	03/13/21 16:26	
EPA 300.0 Rev 2.1 1993	Sulfate	341	mg/L	7.0	03/14/21 11:00	
<b>92525375009</b>	<b>BRGWC-30I</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	6.29	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	122	mg/L	1.0	03/10/21 02:24	
EPA 6020B	Barium	0.028	mg/L	0.0050	03/10/21 11:45	
EPA 6020B	Boron	1.4	mg/L	0.040	03/10/21 11:45	
EPA 6020B	Cobalt	0.0015J	mg/L	0.0050	03/10/21 11:45	
EPA 6020B	Lithium	0.014J	mg/L	0.030	03/10/21 11:45	
SM 2540C-2011	Total Dissolved Solids	690	mg/L	10.0	03/06/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	03/13/21 17:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	03/13/21 17:23	
EPA 300.0 Rev 2.1 1993	Sulfate	371	mg/L	8.0	03/14/21 11:58	
<b>92525375010</b>	<b>DUP-1</b>					
EPA 6010D	Calcium	57.0	mg/L	1.0	03/10/21 02:29	
EPA 6020B	Barium	0.016	mg/L	0.0050	03/10/21 11:50	
EPA 6020B	Beryllium	0.000067J	mg/L	0.00050	03/10/21 11:50	
EPA 6020B	Boron	0.93	mg/L	0.040	03/10/21 11:50	
EPA 6020B	Cobalt	0.0062	mg/L	0.0050	03/10/21 11:50	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	03/10/21 11:50	
EPA 6020B	Selenium	0.0027J	mg/L	0.0050	03/10/21 11:50	
SM 2540C-2011	Total Dissolved Solids	297	mg/L	10.0	03/06/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	4.6	mg/L	1.0	03/13/21 17:38	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	03/13/21 17:38	
EPA 300.0 Rev 2.1 1993	Sulfate	172	mg/L	4.0	03/14/21 12:12	
<b>92525375011</b>	<b>BRGWC-32S</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	5.98	Std. Units		03/18/21 07:49	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525375011</b>	<b>BRGWC-32S</b>					
EPA 6010D	Calcium	35.7	mg/L	1.0	03/10/21 07:25	M1
EPA 6020B	Barium	0.024	mg/L	0.0050	03/10/21 11:56	
EPA 6020B	Boron	1.1	mg/L	0.040	03/10/21 11:56	
EPA 6020B	Chromium	0.0020J	mg/L	0.0050	03/10/21 11:56	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	03/10/21 11:56	
EPA 6020B	Selenium	0.14	mg/L	0.0050	03/10/21 11:56	
SM 2540C-2011	Total Dissolved Solids	350	mg/L	10.0	03/08/21 11:08	
EPA 300.0 Rev 2.1 1993	Chloride	4.6	mg/L	1.0	03/15/21 08:34	
EPA 300.0 Rev 2.1 1993	Sulfate	185	mg/L	4.0	03/15/21 17:30	
<b>92525375012</b>	<b>BRGWC-52I</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	5.87	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	47.5	mg/L	1.0	03/10/21 07:55	
EPA 6020B	Antimony	0.00091J	mg/L	0.0030	03/10/21 16:23	
EPA 6020B	Arsenic	0.0030J	mg/L	0.0050	03/10/21 16:23	
EPA 6020B	Barium	0.019	mg/L	0.0050	03/10/21 16:23	
EPA 6020B	Boron	1.4	mg/L	0.040	03/10/21 16:23	
EPA 6020B	Lead	0.000042J	mg/L	0.0010	03/10/21 16:23	
EPA 6020B	Lithium	0.0030J	mg/L	0.030	03/10/21 16:23	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	03/10/21 16:23	
SM 2540C-2011	Total Dissolved Solids	383	mg/L	10.0	03/08/21 11:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.6	mg/L	1.0	03/15/21 08:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.28	mg/L	0.10	03/15/21 08:49	
EPA 300.0 Rev 2.1 1993	Sulfate	114	mg/L	2.0	03/15/21 17:45	
<b>92525375013</b>	<b>EB-2</b>					
EPA 6020B	Antimony	0.00029J	mg/L	0.0030	03/10/21 16:29	
<b>92525375014</b>	<b>BRGWC-50</b>					
	Performed by	CUSTOME			03/18/21 07:49	
		R				
	pH	4.34	Std. Units		03/18/21 07:49	
EPA 6010D	Calcium	214	mg/L	1.0	03/10/21 08:05	
EPA 6020B	Antimony	0.00092J	mg/L	0.0030	03/10/21 16:35	
EPA 6020B	Barium	0.025	mg/L	0.0050	03/10/21 16:35	
EPA 6020B	Beryllium	0.0059	mg/L	0.00050	03/10/21 16:35	
EPA 6020B	Boron	0.31	mg/L	0.040	03/10/21 16:35	
EPA 6020B	Cadmium	0.019	mg/L	0.00050	03/10/21 16:35	
EPA 6020B	Chromium	0.0010J	mg/L	0.0050	03/10/21 16:35	
EPA 6020B	Cobalt	1.4	mg/L	0.025	03/10/21 16:40	
EPA 6020B	Lead	0.00016J	mg/L	0.0010	03/10/21 16:35	
EPA 6020B	Lithium	0.050	mg/L	0.030	03/10/21 16:35	
EPA 6020B	Selenium	0.0039J	mg/L	0.0050	03/10/21 16:35	
SM 2540C-2011	Total Dissolved Solids	1520	mg/L	100	03/09/21 16:19	
EPA 300.0 Rev 2.1 1993	Chloride	18.9	mg/L	1.0	03/15/21 09:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.60	mg/L	0.10	03/15/21 09:48	
EPA 300.0 Rev 2.1 1993	Sulfate	1250	mg/L	26.0	03/15/21 18:00	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWA-12S		Lab ID: 92525375001		Collected: 03/02/21 11:50		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	5.92	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	5.4	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 01:21	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 10:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 10:18	7440-38-2	
Barium	0.063	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 10:18	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 10:18	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 10:18	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 10:18	7440-43-9	
Chromium	0.0021J	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 10:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 10:18	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 10:18	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 10:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 10:18	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 10:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 10:18	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 15:01	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	43.0	mg/L	10.0	10.0	1		03/05/21 11:06		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.7	mg/L	1.0	0.60	1		03/12/21 04:17	16887-00-6	M1
Fluoride	ND	mg/L	0.10	0.050	1		03/12/21 04:17	16984-48-8	M1
Sulfate	0.51J	mg/L	1.0	0.50	1		03/12/21 04:17	14808-79-8	M1

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWA-12I		Lab ID: 92525375002		Collected: 03/02/21 08:56		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:49		
pH	<b>6.11</b>	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>11.7</b>	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 01:41	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.0095</b>	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 10:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 10:41	7440-38-2	
Barium	<b>0.053</b>	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 10:41	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 10:41	7440-41-7	
Boron	<b>0.0057J</b>	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 10:41	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 10:41	7440-43-9	
Chromium	<b>0.0020J</b>	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 10:41	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 10:41	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 10:41	7439-92-1	
Lithium	<b>0.0045J</b>	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 10:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 10:41	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 10:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 10:41	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 15:04	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>93.0</b>	mg/L	10.0	10.0	1		03/05/21 15:33		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>2.6</b>	mg/L	1.0	0.60	1		03/12/21 05:00	16887-00-6	
Fluoride	<b>0.061J</b>	mg/L	0.10	0.050	1		03/12/21 05:00	16984-48-8	
Sulfate	<b>1.7</b>	mg/L	1.0	0.50	1		03/12/21 05:00	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWA-23S		Lab ID: 92525375003		Collected: 03/02/21 15:55		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	5.75	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	11.6	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 01:55	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 10:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 10:47	7440-38-2	
Barium	0.097	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 10:47	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 10:47	7440-41-7	
Boron	0.042	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 10:47	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 10:47	7440-43-9	
Chromium	0.0020J	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 10:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 10:47	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 10:47	7439-92-1	
Lithium	0.0093J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 10:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 10:47	7439-98-7	
Selenium	0.0060	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 10:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 10:47	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 15:06	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	105	mg/L	10.0	10.0	1		03/05/21 15:34		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.5	mg/L	1.0	0.60	1		03/12/21 05:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/12/21 05:14	16984-48-8	
Sulfate	54.0	mg/L	1.0	0.50	1		03/12/21 05:14	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-45		Lab ID: 92525375004		Collected: 03/02/21 13:40		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	6.17	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	33.9	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 02:00	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0014J	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 10:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 10:53	7440-38-2	
Barium	0.061	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 10:53	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 10:53	7440-41-7	
Boron	0.044	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 10:53	7440-42-8	
Cadmium	0.00020J	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 10:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 10:53	7440-47-3	
Cobalt	0.0057	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 10:53	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 10:53	7439-92-1	
Lithium	0.0043J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 10:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 10:53	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 10:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 10:53	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 15:08	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	264	mg/L	10.0	10.0	1		03/05/21 15:34		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	25.8	mg/L	1.0	0.60	1		03/12/21 05:58	16887-00-6	
Fluoride	0.067J	mg/L	0.10	0.050	1		03/12/21 05:58	16984-48-8	
Sulfate	98.3	mg/L	2.0	1.0	2		03/12/21 09:54	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-47		Lab ID: 92525375005		Collected: 03/02/21 15:48		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:49		
pH	<b>5.59</b>	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>353</b>	mg/L	10.0	0.70	10	03/09/21 11:14	03/11/21 17:30	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 10:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 10:58	7440-38-2	
Barium	<b>0.036</b>	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 10:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 10:58	7440-41-7	
Boron	<b>0.58</b>	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 10:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 10:58	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 10:58	7440-47-3	
Cobalt	<b>0.00050J</b>	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 10:58	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 10:58	7439-92-1	
Lithium	<b>0.044</b>	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 10:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 10:58	7439-98-7	
Selenium	<b>0.0028J</b>	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 10:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 10:58	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 15:18	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1680</b>	mg/L	100	100	1		03/05/21 15:34		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.8</b>	mg/L	1.0	0.60	1		03/12/21 06:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/12/21 06:12	16984-48-8	
Sulfate	<b>1360</b>	mg/L	29.0	14.5	29		03/12/21 10:08	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-25I		Lab ID: 92525375006		Collected: 03/02/21 17:08		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:49		
pH	<b>6.10</b>	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>44.1</b>	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 02:10	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 11:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 11:28	7440-38-2	
Barium	<b>0.026</b>	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 11:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 11:28	7440-41-7	
Boron	<b>1.1</b>	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 11:28	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 11:28	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 11:28	7440-47-3	
Cobalt	<b>0.0030J</b>	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 11:28	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 11:28	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 11:28	7439-93-2	
Molybdenum	<b>0.0010J</b>	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 11:28	7439-98-7	
Selenium	<b>0.0021J</b>	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 11:28	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 11:28	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 08:45	03/08/21 15:21	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>280</b>	mg/L	10.0	10.0	1		03/05/21 15:34		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.5</b>	mg/L	1.0	0.60	1		03/12/21 06:27	16887-00-6	
Fluoride	<b>0.15</b>	mg/L	0.10	0.050	1		03/12/21 06:27	16984-48-8	
Sulfate	<b>139</b>	mg/L	3.0	1.5	3		03/12/21 10:23	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-271		Lab ID: 92525375007		Collected: 03/03/21 14:14		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	5.90	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	58.2	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 02:15	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 11:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 11:33	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 11:33	7440-39-3	
Beryllium	0.000071J	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 11:33	7440-41-7	
Boron	0.91	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 11:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 11:33	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 11:33	7440-47-3	
Cobalt	0.0062	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 11:33	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 11:33	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 11:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 11:33	7439-98-7	
Selenium	0.0031J	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 11:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 11:33	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 09:00	03/08/21 16:11	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	288	mg/L	10.0	10.0	1		03/06/21 09:43		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.5	mg/L	1.0	0.60	1		03/13/21 16:11	16887-00-6	
Fluoride	0.24	mg/L	0.10	0.050	1		03/13/21 16:11	16984-48-8	
Sulfate	172	mg/L	4.0	2.0	4		03/14/21 10:46	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-29I		Lab ID: 92525375008		Collected: 03/03/21 16:12		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	4.46	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	73.3	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 02:20	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 11:39	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 11:39	7440-38-2	
Barium	0.021	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 11:39	7440-39-3	
Beryllium	0.00094	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 11:39	7440-41-7	
Boron	1.0	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 11:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 11:39	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 11:39	7440-47-3	
Cobalt	0.0095	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 11:39	7440-48-4	
Lead	0.00033J	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 11:39	7439-92-1	
Lithium	0.0032J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 11:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 11:39	7439-98-7	
Selenium	0.0042J	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 11:39	7782-49-2	
Thallium	0.00018J	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 11:39	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 09:00	03/08/21 16:13	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	515	mg/L	10.0	10.0	1		03/06/21 09:43		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.6	mg/L	1.0	0.60	1		03/13/21 16:26	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		03/13/21 16:26	16984-48-8	
Sulfate	341	mg/L	7.0	3.5	7		03/14/21 11:00	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-30I		Lab ID: 92525375009		Collected: 03/03/21 13:06		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	6.29	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	122	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 02:24	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 11:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 11:45	7440-38-2	
Barium	0.028	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 11:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 11:45	7440-41-7	
Boron	1.4	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 11:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 11:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 11:45	7440-47-3	
Cobalt	0.0015J	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 11:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 11:45	7439-92-1	
Lithium	0.014J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 11:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 11:45	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 11:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 11:45	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 09:00	03/08/21 16:23	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	690	mg/L	10.0	10.0	1		03/06/21 09:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.0	mg/L	1.0	0.60	1		03/13/21 17:23	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		03/13/21 17:23	16984-48-8	
Sulfate	371	mg/L	8.0	4.0	8		03/14/21 11:58	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: DUP-1		Lab ID: 92525375010		Collected: 03/03/21 13:06	Received: 03/04/21 08:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	<b>57.0</b>	mg/L	1.0	0.070	1	03/09/21 11:14	03/10/21 02:29	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 11:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 11:50	7440-38-2	
Barium	<b>0.016</b>	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 11:50	7440-39-3	
Beryllium	<b>0.000067J</b>	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 11:50	7440-41-7	
Boron	<b>0.93</b>	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 11:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 11:50	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 11:50	7440-47-3	
Cobalt	<b>0.0062</b>	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 11:50	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 11:50	7439-92-1	
Lithium	<b>0.0012J</b>	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 11:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 11:50	7439-98-7	
Selenium	<b>0.0027J</b>	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 11:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 11:50	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 09:00	03/08/21 16:26	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	<b>297</b>	mg/L	10.0	10.0	1		03/06/21 09:44		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	<b>4.6</b>	mg/L	1.0	0.60	1		03/13/21 17:38	16887-00-6	
Fluoride	<b>0.18</b>	mg/L	0.10	0.050	1		03/13/21 17:38	16984-48-8	
Sulfate	<b>172</b>	mg/L	4.0	2.0	4		03/14/21 12:12	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-32S		Lab ID: 92525375011		Collected: 03/04/21 11:11		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	5.98	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	35.7	mg/L	1.0	0.070	1	03/09/21 13:33	03/10/21 07:25	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 11:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 11:56	7440-38-2	
Barium	0.024	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 11:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 11:56	7440-41-7	
Boron	1.1	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 11:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 11:56	7440-43-9	
Chromium	0.0020J	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 11:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 11:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 11:56	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 11:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 11:56	7439-98-7	
Selenium	0.14	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 11:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 11:56	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 13:30	03/09/21 11:20	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	350	mg/L	10.0	10.0	1		03/08/21 11:08		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.6	mg/L	1.0	0.60	1		03/15/21 08:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/15/21 08:34	16984-48-8	
Sulfate	185	mg/L	4.0	2.0	4		03/15/21 17:30	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-52I		Lab ID: 92525375012		Collected: 03/04/21 12:20		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	5.87	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	47.5	mg/L	1.0	0.070	1	03/09/21 13:33	03/10/21 07:55	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00091J	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 16:23	7440-36-0	
Arsenic	0.0030J	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 16:23	7440-38-2	
Barium	0.019	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 16:23	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 16:23	7440-41-7	
Boron	1.4	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 16:23	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 16:23	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 16:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 16:23	7440-48-4	
Lead	0.000042J	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 16:23	7439-92-1	
Lithium	0.0030J	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 16:23	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 16:23	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 16:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 16:23	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 13:30	03/09/21 11:23	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	383	mg/L	10.0	10.0	1		03/08/21 11:08		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.6	mg/L	1.0	0.60	1		03/15/21 08:49	16887-00-6	
Fluoride	0.28	mg/L	0.10	0.050	1		03/15/21 08:49	16984-48-8	
Sulfate	114	mg/L	2.0	1.0	2		03/15/21 17:45	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: EB-2		Lab ID: 92525375013		Collected: 03/04/21 12:40	Received: 03/05/21 11:30	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.070	1	03/09/21 13:33	03/10/21 08:00	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	<b>0.00029J</b>	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 16:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 16:29	7440-38-2	
Barium	ND	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 16:29	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 16:29	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 16:29	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 16:29	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 16:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 16:29	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 16:29	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 16:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 16:29	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 16:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 16:29	7440-28-0	
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 13:30	03/09/21 11:25	7439-97-6	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/09/21 16:18		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		03/15/21 09:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/15/21 09:04	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/15/21 09:04	14808-79-8	

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Sample: BRGWC-50		Lab ID: 92525375014		Collected: 03/04/21 17:07		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/18/21 07:49		
pH	4.34	Std. Units			1		03/18/21 07:49		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	214	mg/L	1.0	0.070	1	03/09/21 13:33	03/10/21 08:05	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00092J	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 16:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 16:35	7440-38-2	
Barium	0.025	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 16:35	7440-39-3	
Beryllium	0.0059	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 16:35	7440-41-7	
Boron	0.31	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 16:35	7440-42-8	
Cadmium	0.019	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 16:35	7440-43-9	
Chromium	0.0010J	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 16:35	7440-47-3	
Cobalt	1.4	mg/L	0.025	0.0019	5	03/09/21 13:19	03/10/21 16:40	7440-48-4	
Lead	0.00016J	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 16:35	7439-92-1	
Lithium	0.050	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 16:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 16:35	7439-98-7	
Selenium	0.0039J	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 16:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 16:35	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 13:30	03/09/21 11:39	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1520	mg/L	100	100	1		03/09/21 16:19		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	18.9	mg/L	1.0	0.60	1		03/15/21 09:48	16887-00-6	
Fluoride	0.60	mg/L	0.10	0.050	1		03/15/21 09:48	16984-48-8	
Sulfate	1250	mg/L	26.0	13.0	26		03/15/21 18:00	14808-79-8	

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK  
 Pace Project No.: 92525375

Sample: EB-1		Lab ID: 92525375015		Collected: 03/05/21 07:31	Received: 03/05/21 11:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/09/21 13:33	03/10/21 08:10	7440-70-2		
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/09/21 13:19	03/10/21 16:58	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 13:19	03/10/21 16:58	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/09/21 13:19	03/10/21 16:58	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 13:19	03/10/21 16:58	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/09/21 13:19	03/10/21 16:58	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 13:19	03/10/21 16:58	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 13:19	03/10/21 16:58	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/09/21 13:19	03/10/21 16:58	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 13:19	03/10/21 16:58	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/09/21 13:19	03/10/21 16:58	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 13:19	03/10/21 16:58	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 13:19	03/10/21 16:58	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 13:19	03/10/21 16:58	7440-28-0		
<b>7470 Mercury</b>		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 13:30	03/09/21 11:42	7439-97-6		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/10/21 09:43			
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/15/21 10:03	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/15/21 10:03	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/15/21 10:03	14808-79-8		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 605192 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006, 92525375007, 92525375008, 92525375009, 92525375010

METHOD BLANK: 3188292 Matrix: Water  
Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006, 92525375007, 92525375008, 92525375009, 92525375010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/10/21 01:11	

LABORATORY CONTROL SAMPLE: 3188293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0J	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188294 3188295

Parameter	Units	92525375001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	5.4	1	1	6.6	7.2	113	176	75-125	9	20	M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

QC Batch:	605231	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

METHOD BLANK: 3188482 Matrix: Water  
Associated Lab Samples: 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/10/21 07:16	

LABORATORY CONTROL SAMPLE: 3188483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.96J	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188484 3188485

Parameter	Units	3188484		3188485		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	35.7	1	1	36.7	36.0	100	30	75-125	2	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 605225 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006, 92525375007, 92525375008, 92525375009, 92525375010, 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

METHOD BLANK: 3188456 Matrix: Water  
Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006, 92525375007, 92525375008, 92525375009, 92525375010, 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/10/21 10:07	
Arsenic	mg/L	ND	0.0050	0.00078	03/10/21 10:07	
Barium	mg/L	ND	0.0050	0.00071	03/10/21 10:07	
Beryllium	mg/L	ND	0.00050	0.000046	03/10/21 10:07	
Boron	mg/L	ND	0.040	0.0052	03/10/21 10:07	
Cadmium	mg/L	ND	0.00050	0.00012	03/10/21 10:07	
Chromium	mg/L	ND	0.0050	0.00055	03/10/21 10:07	
Cobalt	mg/L	ND	0.0050	0.00038	03/10/21 10:07	
Lead	mg/L	ND	0.0010	0.000036	03/10/21 10:07	
Lithium	mg/L	ND	0.030	0.00081	03/10/21 10:07	
Molybdenum	mg/L	ND	0.010	0.00069	03/10/21 10:07	
Selenium	mg/L	ND	0.0050	0.0016	03/10/21 10:07	
Thallium	mg/L	ND	0.0010	0.00014	03/10/21 10:07	

LABORATORY CONTROL SAMPLE: 3188457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.091	91	80-120	
Boron	mg/L	1	0.94	94	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.092	92	80-120	
Thallium	mg/L	0.1	0.092	92	80-120	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Parameter	Units	3188458		3188459		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525375001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	105	108	75-125	3	20		
Arsenic	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	1	20		
Barium	mg/L	0.063	0.1	0.1	0.17	0.17	104	109	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.089	0.092	89	92	75-125	4	20		
Boron	mg/L	ND	1	1	0.91	0.95	91	95	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20		
Chromium	mg/L	0.0021J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.092	0.096	92	96	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.095	0.098	94	98	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.088	0.092	88	92	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.091	0.093	91	93	75-125	3	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

QC Batch:	604663	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006

METHOD BLANK: 3185603 Matrix: Water

Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/08/21 14:27	

LABORATORY CONTROL SAMPLE: 3185604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185605 3185606

Parameter	Units	3185605		3185606		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0022	95	88	75-125	7	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 604664      Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A      Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375007, 92525375008, 92525375009, 92525375010

METHOD BLANK: 3185623      Matrix: Water  
Associated Lab Samples: 92525375007, 92525375008, 92525375009, 92525375010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/08/21 15:49	

LABORATORY CONTROL SAMPLE: 3185624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185625      3185626

Parameter	Units	3185625		3185626		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0019	86	78	75-125	10	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 604928      Analysis Method: EPA 7470A  
QC Batch Method: EPA 7470A      Analysis Description: 7470 Mercury  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

METHOD BLANK: 3187260      Matrix: Water  
Associated Lab Samples: 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/09/21 10:42	

LABORATORY CONTROL SAMPLE: 3187261

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3187262      3187263

Parameter	Units	3187262		3187263		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0023	0.0019	93	78	75-125	18	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 604527      Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375001

METHOD BLANK: 3184654      Matrix: Water  
Associated Lab Samples: 92525375001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/05/21 11:03	

LABORATORY CONTROL SAMPLE: 3184655

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	375	94	90-111	

SAMPLE DUPLICATE: 3184656

Parameter	Units	92525799001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2090	1960	6	10	

SAMPLE DUPLICATE: 3184657

Parameter	Units	92525341004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	167	152	9	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

QC Batch:	604626	Analysis Method:	SM 2540C-2011
QC Batch Method:	SM 2540C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525375002, 92525375003, 92525375004, 92525375005, 92525375006

METHOD BLANK: 3185317 Matrix: Water

Associated Lab Samples: 92525375002, 92525375003, 92525375004, 92525375005, 92525375006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/05/21 15:33	

LABORATORY CONTROL SAMPLE: 3185318

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	390	98	90-111	

SAMPLE DUPLICATE: 3185319

Parameter	Units	92525822001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	274	290	6	10	

SAMPLE DUPLICATE: 3185328

Parameter	Units	92524831016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	325	354	9	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 604754 Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375007, 92525375008, 92525375009, 92525375010

METHOD BLANK: 3186276 Matrix: Water  
Associated Lab Samples: 92525375007, 92525375008, 92525375009, 92525375010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/06/21 09:43	

LABORATORY CONTROL SAMPLE: 3186277

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	90-111	

SAMPLE DUPLICATE: 3186278

Parameter	Units	92525375007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	288	277	4	10	

SAMPLE DUPLICATE: 3186279

Parameter	Units	92525662002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1050	1010	4	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 604895      Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375011, 92525375012

METHOD BLANK: 3186921      Matrix: Water  
Associated Lab Samples: 92525375011, 92525375012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/08/21 11:05	

LABORATORY CONTROL SAMPLE: 3186922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	387	97	90-111	

SAMPLE DUPLICATE: 3186923

Parameter	Units	92526103001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	154	311	68	10	D6

SAMPLE DUPLICATE: 3186924

Parameter	Units	92525936007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	856	878	3	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 605136 Analysis Method: SM 2540C-2011  
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525375013, 92525375014

METHOD BLANK: 3187989 Matrix: Water  
Associated Lab Samples: 92525375013, 92525375014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/09/21 16:18	

LABORATORY CONTROL SAMPLE: 3187990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	90-111	

SAMPLE DUPLICATE: 3187991

Parameter	Units	92525375013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3187992

Parameter	Units	92524831030 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	234	232	1	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

QC Batch: 605445

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525375015

METHOD BLANK: 3189630

Matrix: Water

Associated Lab Samples: 92525375015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/10/21 09:39	

LABORATORY CONTROL SAMPLE: 3189631

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	391	98	90-111	

SAMPLE DUPLICATE: 3189632

Parameter	Units	92526563001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1350	1390	3	10	

SAMPLE DUPLICATE: 3189633

Parameter	Units	92526568008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	45.0	46.0	2	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

QC Batch: 606038 Analysis Method: EPA 300.0 Rev 2.1 1993  
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
 Laboratory: Pace Analytical Services - Asheville  
 Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006

METHOD BLANK: 3192959 Matrix: Water  
 Associated Lab Samples: 92525375001, 92525375002, 92525375003, 92525375004, 92525375005, 92525375006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/12/21 00:26	
Fluoride	mg/L	ND	0.10	0.050	03/12/21 00:26	
Sulfate	mg/L	ND	1.0	0.50	03/12/21 00:26	

LABORATORY CONTROL SAMPLE: 3192960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.8	106	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	54.5	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192961 3192962

Parameter	Units	92526606002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	68.3	50	50	100	102	64	67	90-110	2	10	M1
Fluoride	mg/L	0.34	2.5	2.5	2.5	2.5	85	87	90-110	2	10	M1
Sulfate	mg/L	95.3	50	50	128	130	65	68	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192963 3192964

Parameter	Units	92525375001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.7	50	50	47.1	46.1	87	85	90-110	2	10	M1
Fluoride	mg/L	ND	2.5	2.5	2.2	2.2	89	87	90-110	2	10	M1
Sulfate	mg/L	0.51J	50	50	45.8	44.7	91	88	90-110	2	10	M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 606452 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525375007, 92525375008, 92525375009, 92525375010

METHOD BLANK: 3195118 Matrix: Water  
Associated Lab Samples: 92525375007, 92525375008, 92525375009, 92525375010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/13/21 11:23	
Fluoride	mg/L	ND	0.10	0.050	03/13/21 11:23	
Sulfate	mg/L	ND	1.0	0.50	03/13/21 11:23	

LABORATORY CONTROL SAMPLE: 3195119

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.4	103	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	53.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195120 3195121

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524831015 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	8.3	50	50	61.2	62.7	106	109	90-110	2	10		
Fluoride	mg/L	0.34	2.5	2.5	4.0	4.0	148	147	90-110	1	10	M1	
Sulfate	mg/L	225	50	50	267	269	84	87	90-110	1	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195122 3195123

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524831022 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	2.9	50	50	56.8	57.0	108	108	90-110	0	10		
Fluoride	mg/L	0.71	2.5	2.5	4.6	4.7	154	158	90-110	2	10	M1	
Sulfate	mg/L	143	50	50	193	193	100	100	90-110	0	10		

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

QC Batch: 606497 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

METHOD BLANK: 3195321 Matrix: Water  
Associated Lab Samples: 92525375011, 92525375012, 92525375013, 92525375014, 92525375015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/15/21 05:49	
Fluoride	mg/L	ND	0.10	0.050	03/15/21 05:49	
Sulfate	mg/L	ND	1.0	0.50	03/15/21 05:49	

LABORATORY CONTROL SAMPLE: 3195322

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	46.1	92	90-110	
Fluoride	mg/L	2.5	2.4	94	90-110	
Sulfate	mg/L	50	45.3	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195323 3195324

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525919013 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	5.9	50	50	56.7	55.0	102	98	90-110	3	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.4	99	97	90-110	3	10		
Sulfate	mg/L	38.9	50	50	90.2	88.6	103	99	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195325 3195326

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525657006 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	5.8	50	50	55.5	56.0	100	100	90-110	1	10		
Fluoride	mg/L	0.076J	2.5	2.5	2.6	2.7	103	103	90-110	0	10		
Sulfate	mg/L	251	50	50	293	305	83	108	90-110	4	10 M6		

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## QUALIFIERS

Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK  
Pace Project No.: 92525375

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525375001	BRGWA-12S				
92525375002	BRGWA-12I				
92525375003	BRGWA-23S				
92525375004	BRGWC-45				
92525375005	BRGWC-47				
92525375006	BRGWC-25I				
92525375007	BRGWC-27I				
92525375008	BRGWC-29I				
92525375009	BRGWC-30I				
92525375011	BRGWC-32S				
92525375012	BRGWC-52I				
92525375014	BRGWC-50				
92525375001	BRGWA-12S	EPA 3010A	605192	EPA 6010D	605250
92525375002	BRGWA-12I	EPA 3010A	605192	EPA 6010D	605250
92525375003	BRGWA-23S	EPA 3010A	605192	EPA 6010D	605250
92525375004	BRGWC-45	EPA 3010A	605192	EPA 6010D	605250
92525375005	BRGWC-47	EPA 3010A	605192	EPA 6010D	605250
92525375006	BRGWC-25I	EPA 3010A	605192	EPA 6010D	605250
92525375007	BRGWC-27I	EPA 3010A	605192	EPA 6010D	605250
92525375008	BRGWC-29I	EPA 3010A	605192	EPA 6010D	605250
92525375009	BRGWC-30I	EPA 3010A	605192	EPA 6010D	605250
92525375010	DUP-1	EPA 3010A	605192	EPA 6010D	605250
92525375011	BRGWC-32S	EPA 3010A	605231	EPA 6010D	605319
92525375012	BRGWC-52I	EPA 3010A	605231	EPA 6010D	605319
92525375013	EB-2	EPA 3010A	605231	EPA 6010D	605319
92525375014	BRGWC-50	EPA 3010A	605231	EPA 6010D	605319
92525375015	EB-1	EPA 3010A	605231	EPA 6010D	605319
92525375001	BRGWA-12S	EPA 3005A	605225	EPA 6020B	605314
92525375002	BRGWA-12I	EPA 3005A	605225	EPA 6020B	605314
92525375003	BRGWA-23S	EPA 3005A	605225	EPA 6020B	605314
92525375004	BRGWC-45	EPA 3005A	605225	EPA 6020B	605314
92525375005	BRGWC-47	EPA 3005A	605225	EPA 6020B	605314
92525375006	BRGWC-25I	EPA 3005A	605225	EPA 6020B	605314
92525375007	BRGWC-27I	EPA 3005A	605225	EPA 6020B	605314
92525375008	BRGWC-29I	EPA 3005A	605225	EPA 6020B	605314
92525375009	BRGWC-30I	EPA 3005A	605225	EPA 6020B	605314
92525375010	DUP-1	EPA 3005A	605225	EPA 6020B	605314
92525375011	BRGWC-32S	EPA 3005A	605225	EPA 6020B	605314
92525375012	BRGWC-52I	EPA 3005A	605225	EPA 6020B	605314
92525375013	EB-2	EPA 3005A	605225	EPA 6020B	605314
92525375014	BRGWC-50	EPA 3005A	605225	EPA 6020B	605314
92525375015	EB-1	EPA 3005A	605225	EPA 6020B	605314
92525375001	BRGWA-12S	EPA 7470A	604663	EPA 7470A	604884
92525375002	BRGWA-12I	EPA 7470A	604663	EPA 7470A	604884
92525375003	BRGWA-23S	EPA 7470A	604663	EPA 7470A	604884
92525375004	BRGWC-45	EPA 7470A	604663	EPA 7470A	604884
92525375005	BRGWC-47	EPA 7470A	604663	EPA 7470A	604884

### REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: BRANCH BCD NETWORK

Pace Project No.: 92525375

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525375006	BRGWC-25I	EPA 7470A	604663	EPA 7470A	604884
92525375007	BRGWC-27I	EPA 7470A	604664	EPA 7470A	604885
92525375008	BRGWC-29I	EPA 7470A	604664	EPA 7470A	604885
92525375009	BRGWC-30I	EPA 7470A	604664	EPA 7470A	604885
92525375010	DUP-1	EPA 7470A	604664	EPA 7470A	604885
92525375011	BRGWC-32S	EPA 7470A	604928	EPA 7470A	605029
92525375012	BRGWC-52I	EPA 7470A	604928	EPA 7470A	605029
92525375013	EB-2	EPA 7470A	604928	EPA 7470A	605029
92525375014	BRGWC-50	EPA 7470A	604928	EPA 7470A	605029
92525375015	EB-1	EPA 7470A	604928	EPA 7470A	605029
92525375001	BRGWA-12S	SM 2540C-2011	604527		
92525375002	BRGWA-12I	SM 2540C-2011	604626		
92525375003	BRGWA-23S	SM 2540C-2011	604626		
92525375004	BRGWC-45	SM 2540C-2011	604626		
92525375005	BRGWC-47	SM 2540C-2011	604626		
92525375006	BRGWC-25I	SM 2540C-2011	604626		
92525375007	BRGWC-27I	SM 2540C-2011	604754		
92525375008	BRGWC-29I	SM 2540C-2011	604754		
92525375009	BRGWC-30I	SM 2540C-2011	604754		
92525375010	DUP-1	SM 2540C-2011	604754		
92525375011	BRGWC-32S	SM 2540C-2011	604895		
92525375012	BRGWC-52I	SM 2540C-2011	604895		
92525375013	EB-2	SM 2540C-2011	605136		
92525375014	BRGWC-50	SM 2540C-2011	605136		
92525375015	EB-1	SM 2540C-2011	605445		
92525375001	BRGWA-12S	EPA 300.0 Rev 2.1 1993	606038		
92525375002	BRGWA-12I	EPA 300.0 Rev 2.1 1993	606038		
92525375003	BRGWA-23S	EPA 300.0 Rev 2.1 1993	606038		
92525375004	BRGWC-45	EPA 300.0 Rev 2.1 1993	606038		
92525375005	BRGWC-47	EPA 300.0 Rev 2.1 1993	606038		
92525375006	BRGWC-25I	EPA 300.0 Rev 2.1 1993	606038		
92525375007	BRGWC-27I	EPA 300.0 Rev 2.1 1993	606452		
92525375008	BRGWC-29I	EPA 300.0 Rev 2.1 1993	606452		
92525375009	BRGWC-30I	EPA 300.0 Rev 2.1 1993	606452		
92525375010	DUP-1	EPA 300.0 Rev 2.1 1993	606452		
92525375011	BRGWC-32S	EPA 300.0 Rev 2.1 1993	606497		
92525375012	BRGWC-52I	EPA 300.0 Rev 2.1 1993	606497		
92525375013	EB-2	EPA 300.0 Rev 2.1 1993	606497		
92525375014	BRGWC-50	EPA 300.0 Rev 2.1 1993	606497		
92525375015	EB-1	EPA 300.0 Rev 2.1 1993	606497		


## REPORT OF LABORATORY ANALYSIS

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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt	Client Name: <u>GA Power</u>	Project #: <b>WO# : 92525375</b>
Courier: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____		 92525375
Custody Seal Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Packing Material: <input type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input type="checkbox"/> Other		Date/Initials Person Examining Contents: <u>3/3/26</u>
Thermometer: <input checked="" type="checkbox"/> IR Gun ID: <u>230</u> Type of Ice: <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None		Biological Tissue Frozen? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Cooler Temp: <u>3.3</u> Correction Factor: Add/Subtract (°C) <u>0.0</u> <u>3.3</u>		Temp should be above freezing to 6°C <input type="checkbox"/> Samples out of temp criteria. Samples on ice, cooling process has begun
Cooler Temp Corrected (°C): _____		
USDA Regulated Soil ( <input type="checkbox"/> N/A, water sample)		
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?		Did samples originate from a foreign source (Internationally, including Hawaii and Puerto Rico)? <input type="checkbox"/> Yes <input type="checkbox"/> No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_





**CHAIN-OF-CUSTODY Analytical Request Document**

Lab Use ONLY: Analytical Laboratory/Log In Label Here or Lab Pack Workorder Number or METL Log-In Number Here

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

**ALL SHADED AREAS are for LAB USE ONLY**

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339  
 Report To: Kiju Abraham  
 Email To: scs@voicelab@southernco.com

Copy To: Golder  
 Site Collection Info/Address: Plant Branch

Phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 State: Georgia City: Milledgeville Time Zone Collected:  
 Project Name: Plant Branch BCO Network  
 Project #: COR 4th Semi-Annual  
 Pace Project Manager:  
 Turnaround Date Required:  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day  
 [ ] Expedite Charges Apply

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Type: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) trace acid  
 (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) arsenicum pallate,  
 (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (O) Other

\* Matrix Codes: (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW),  
 Product (P), Soil/Solid (S), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Biossary (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Cans
			Date	Time	Date	Time		
BRGWA-12S	GW	G	3-2-21	1150			5.92	5
BRGWA-12I	GW	G	3-2-21	0836			6.11	5
BRGWA-23S	GW	G	3-2-21	1555			5.75	5
BRGWC-45	GW	G	3-2-21	1340			6.17	5
BRGWC-47	GW	G	3-2-21	1548			5.59	5
BRGWC-25Z	GW	G	3-2-21	1708			6.10	5

Analyses	Lab Profile/Line:			
	Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226/228

Metals: As, B, Ba, Be, Ca, Cd, Co, Cr, Ni, Pb, Sb, Se, U, TL, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:
 

Samples received via:	FEDEX	UPS	Client	Carrier	Pack Counter
-----------------------	-------	-----	--------	---------	--------------

Relinquished by/Company: (Signature) <i>[Signature]</i> / Golder	Date/Time: 3-3-21 / 0815	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 3-3-21 (100)	<b>LAB USE ONLY</b> Table #: _____ Recharge: _____ Template: _____ Prelogin: _____ P&E: _____ PS: _____	Lab Sample Temperature Info: Temp Blank Received: Y N NA Therm ID: _____ Cooler 1 Temp Upon Receipt: ___oC Cooler 1 Therm Corr. Factor: ___oC Cooler 1 Corrected Temp: ___oC Comments:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Trip Blank Received: Y N NA HCL MeOH TSP Other	Non Conformance(s): YES / NO
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of: 1	



**CHAIN-OF-CUSTODY Analytical Request Document**

LAB USE ONLY - Area Workorder/Log# Label # of LID/Pack Workorder Number or MYL Log-in Number Here

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

**ALL SHADED AREAS are for LAB USE ONLY**

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Jojo Abraham  
 Email: To: jojo.abraham@southernco.com

Billing information:  
 State: Georgia City: Milledgeville Time Zone: Collected:  
 [ ] SPT [ ] NAT [ ] CT [ ] EX [ ] ET

Copy To: Go/der  
 Site Collection Info/Address: Plant Branch

Container Preservative Type \*\*  
 Lab Project Manager:  
 Preservative Types: (1) none acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) nitric acid, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (O) Other

Phone: (404) 505-7239  
 Email: jojo.abraham@southernco.com  
 Project Name: Plant Branch BCD Network  
 Project #: CCR 4th Semi-Annual  
 Purchase Order #  
 Quote #  
 Turnaround Date Required:  
 Rush:  
 Same Day  Next Day  
 1-2 Day  3-4 Day  4-5 Day  
 (Expedite Charges Apply)

Pace Profile:  
 Pace Project Manager  
 Kevin Fleming@pacelabs.com  
 Immediately Packed on ice:  
 Yes  No  
 Field Filtered (if applicable):  
 Yes  No  
 Analyzed: \_\_\_\_\_

Analyses  
 Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seal Present/ intact Y/N/NA  
 Custody Signature Present Y/N/NA  
 Collector Signature Present Y/N/NA  
 Bottles Intact Y/N/NA  
 Correct Bottles Y/N/NA  
 Sufficient Volume Y/N/NA  
 Samples Received on Ice Y/N/NA  
 YOL - Headspace Acceptable Y/N/NA  
 USDA Regulated Soils Y/N/NA  
 Samples in Holding Time Y/N/NA  
 Residual Chlorine Present Y/N/NA  
 O/Solids:  
 Sample pH Acceptable Y/N/NA  
 pH Strips:  
 Outside Present Y/N/NA  
 Lead Acceptable Strip: \_\_\_\_\_

\* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Biossary (BS), Water (WT), Other (OS)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of CUS	Analyses			
			Date	Time	Date	Time			Metals 6010 (Cd, Cr, Pb, Hg)	TDS	Chloride/Fluoride/Sulfate	Radium 226,228
BRGWC-27I	GW	G	3-3-21	1414			5.90	5	X	X	X	X
BRGWC-29I	GW	G	3-3-21	1612			4.46	3	X	X	X	X
BRGWC-30I	GW	G	3-3-21	1306			6.29	5	X	X	X	X
DUP-1	GW	G	3-3-21	-			-	5	X	X	X	X

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Si, Ti, Hg  
 Type of Ice Used:  Wet  Blue  Dry  None  
 Packing Material Used:  
 Radium sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #: \_\_\_\_\_  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier  
 Lab Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID# \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_\_ °C  
 Cooler 1 Therm Corr. Factor: \_\_\_\_ °C  
 Cooler 1 Corrected Temp: \_\_\_\_ °C  
 Comments:  
 Trip Blank Received: Y N NA  
 HCL MeSH TSP Other  
 Non-Conformance(s): Page: 1  
 YES / NO of: 1

Requested by/Company: (Signature) *Go/der* Date/Time: 3-4-21/0815  
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: 3-4-21/815  
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power Coal/Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 Billing Information:  
 Email To: jojuvoices@southemco.com  
 Site Collection Info: Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected:  
 ET  MT  CT  ET  
 Project Name: Plant Branch BCD Network  
 Project # CCR 4th Semi-Annual  
 Date Profiled:  
 Face Project Manager:  
 Rev'n.herring@pacelabs.com  
 Immediately Packed on Ice:  
 Yes  No  
 Field Entered (if applicable):  
 Yes  No  
 Analysis:  
 Purchased Order #  
 Quote #  
 Turnaround Date Required:  
 Rush:  
 Same Day  Next Day  
 2 Day  3 Day  4 Day  5 Day  
 Expedite Charges Apply:  
 Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW),  
 Product (P), Soil/Solid (SL), Oil (OL), Waste (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) Nitric acid, (2) Sulfuric acid, (3) Hydrochloric acid, (4) Sodium hydroxide, (5) Free acetate,  
 (6) methanol, (7) Sodium borofluoride, (8) Sodium molybdate, (9) hexane, (A) ascorbic acid, (B) zinc molybdate,  
 (C) ammonium hydroxide, (D) TSP, (U) Untreated, (O) Other

Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226,228	Lab Profile/Lines:	
				Lab Sample Receipt Checklist	Lab Sample # / Comments
				Lab Sample Receipt Checklist	
				Custody Seal Present/Intact Y/N/NA	
				Custody Signatures Present Y/N/NA	
				Collector Signatures Present Y/N/NA	
				Bottles Intact Y/N/NA	
				Correct Bottles Y/N/NA	
				Sufficient Volume Y/N/NA	
				Samples Received on Ice Y/N/NA	
				WCA - Headspace Acceptable Y/N/NA	
				USDA Regulated Sub Y/N/NA	
				Samples in Holding Time Y/N/NA	
				Residual Chlorine Present Y/N/NA	
				Cl Strips:	
				Sample pH Acceptable Y/N/NA	
				pH Strips:	
				Leakage Present Y/N/NA	
				Lead Acetate Strips:	
				LAB USE ONLY:	
				Lab Sample # / Comments:	

Customer Sample ID	Matrix *	Comp / Grab	Collected for Composite Start		Composite End		pH	# of Cans
			Date	Time	Date	Time		
BRGWC-325	GW	G	3-4-21	1111			5.88	5
BRGWC-522	GW	G	3-4-21	1220			5.87	5
EB-2	W	G	3-4-21	1240			-	5
BRGWC-50	GW	G	3-4-21	1707			4.34	5
EB-1	W	G	3-5-21	0731			-	5

Metals: As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Si, Tl, Hg  
 Type of Ice Used: Wet  Mix  Dry  None   
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOURS PRESENT (<22 hours): Y N S/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 3-5-21 / 1000  
 Relinquished by/Company: (Signature) Date/Time: *[Signature]* 3/5/21 / 1130  
 Relinquished by/Company: (Signature) Date/Time: *[Signature]*  
 MTPL LAB USE ONLY  
 Table #:  
 Acoustic Template: Prelogic  
 PNE: PSE:  
 Trip Blank Received: Y N NA  
 HCL MeCH TSP Other  
 Non Conformance(s): YES / NO Page: 1 of 1

May 03, 2021

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

RE: Project: BRANCH BCD DELINEATION RADS  
Pace Project No.: 92525653

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD DELINEATION RADS  
Pace Project No.: 92525653

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### **Pace Analytical Services Pennsylvania**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525653001	PZ-51S	Water	03/03/21 09:23	03/04/21 08:15
92525653002	PZ-51D	Water	03/03/21 10:55	03/04/21 08:15

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525653001	PZ-51S	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92525653002	PZ-51D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

**REPORT OF LABORATORY ANALYSIS**

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### SUMMARY OF DETECTION

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525653001</b>	<b>PZ-51S</b>					
EPA 9315	Radium-226	0.181 ± 0.198 (0.414) C:67% T:NA	pCi/L		03/25/21 09:18	
EPA 9320	Radium-228	0.418 ± 0.423 (0.872) C:83% T:81%	pCi/L		03/24/21 19:00	
Total Radium Calculation	Total Radium	0.599 ± 0.621 (1.29)	pCi/L		03/26/21 13:42	
<b>92525653002</b>	<b>PZ-51D</b>					
EPA 9315	Radium-226	1.17 ± 0.336 (0.276) C:80% T:NA	pCi/L		03/25/21 09:18	
EPA 9320	Radium-228	1.37 ± 0.590 (0.938) C:81% T:78%	pCi/L		03/24/21 19:00	
Total Radium Calculation	Total Radium	2.54 ± 0.926 (1.21)	pCi/L		03/26/21 13:42	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

**Sample: PZ-51S**      **Lab ID: 92525653001**      Collected: 03/03/21 09:23      Received: 03/04/21 08:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.181 ± 0.198 (0.414)</b> <b>C:67% T:NA</b>	pCi/L	03/25/21 09:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.418 ± 0.423 (0.872)</b> <b>C:83% T:81%</b>	pCi/L	03/24/21 19:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.599 ± 0.621 (1.29)</b>	pCi/L	03/26/21 13:42	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

**Sample: PZ-51D**      **Lab ID: 92525653002**      Collected: 03/03/21 10:55      Received: 03/04/21 08:15      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>1.17 ± 0.336 (0.276)</b> <b>C:80% T:NA</b>	pCi/L	03/25/21 09:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.37 ± 0.590 (0.938)</b> <b>C:81% T:78%</b>	pCi/L	03/24/21 19:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.54 ± 0.926 (1.21)</b>	pCi/L	03/26/21 13:42	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

QC Batch: 438167

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92525653001, 92525653002

METHOD BLANK: 2115335

Matrix: Water

Associated Lab Samples: 92525653001, 92525653002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.199 ± 0.331 (0.720) C:83% T:85%	pCi/L	03/24/21 16:42	

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

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

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QC Batch: 438263	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92525653001, 92525653002

---

METHOD BLANK: 2115665 Matrix: Water

Associated Lab Samples: 92525653001, 92525653002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0782 ± 0.129 (0.288) C:88% T:NA	pCi/L	03/25/21 09:33	

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

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: BRANCH BCD DELINEATION RADS

Pace Project No.: 92525653

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD DELINEATION RAD5  
Pace Project No.: 92525653

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525653001	PZ-51S	EPA 9315	438263		
92525653002	PZ-51D	EPA 9315	438263		
92525653001	PZ-51S	EPA 9320	438167		
92525653002	PZ-51D	EPA 9320	438167		
92525653001	PZ-51S	Total Radium Calculation	440644		
92525653002	PZ-51D	Total Radium Calculation	440644		

**REPORT OF LABORATORY ANALYSIS**

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

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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

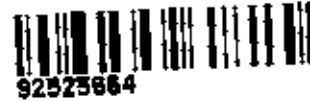
Client Name:

G-A Power

Project #:

WO#: **92525664**

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



92525664

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contain: 3/4/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Cooler Temp:

1.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 1.6

USDA Regulated Soil (  N/A, water sample)

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

Yes  No

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

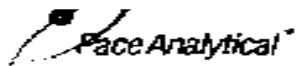
Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2450 Manor Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 Billing Information:  
 Email To: sco.mvoices@southernco.com  
 Site Collection Info/Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected:  
 FT  MT  CT  ET  
 Phone: (404) 506-7239  
 Email: j.abraham@southernco.com  
 Project Name: Plant Branch BCD Delineation  
 Project #: CCR 4th Sem. Annus  
 Pace Project Manager  
 keven.henning@paceabs.com  
 Collected By (Print): Travis Martinez, Andrea McClure  
 Purchase Order #  
 Quote #  
 Collected By (Signature):

Container: Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) acetic acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) nitric acid, (6) methanol, (7) sodium chloride, (8) sodium nitrate, (9) acetone, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (F) Other

Rush:  
 Same Day  Next Day  
 12 Day  13 Day  14 Day  15 Day  
 (Expedite Charges Apply)  
 Field Filtered (if applicable):  
 Yes  No  
 Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Necessary (N), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Cons
			Date	Time	Date	Time		
PZ-515	GW	G	3-3-21	0923			5.41	5
PZ-51D	GW	G	3-3-21	1055			7.10	5

Analyses

Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226-228
X	X	X	X
X	X	X	X

Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Match Y/N/NA  
 Custody Signatures Present Y/N/NA  
 Collector Signatures Present Y/N/NA  
 Bottles Intact Y/N/NA  
 Corrod Bottles Y/N/NA  
 Sufficient Volume Y/N/NA  
 Samples Recashed on Ice Y/N/NA  
 WDA - Headspace Acceptable Y/N/NA  
 USDA Registered Soil Y/N/NA  
 Samples in Holding Time Y/N/NA  
 Residual Chlorine Present Y/N/NA  
 Cl Strips:  
 Sample pH Acceptable Y/N/NA  
 pH Strips:  
 Sulfide Present Y/N/NA  
 Total Acetate Strips:  
 LAB USE ONLY:  
 Lab Sample # / Comments:

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Ti, Hg  
 Type of Ice Used: Wet Blue Dry None  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Packing Material Used:  
 Lab Tracking #:  
 Radon sample(s) screened (<500 cpm): Y N NA  
 Samples received via:  
 FEDEX UPS Other Courier Pace Courier  
 Relinquished by/Company: (Signature)   
 Date/Time: 3-4-21 / 0815  
 Received by/Company: (Signature)   
 Date/Time: 3-4-21 / 0815  
 MAT'L LAB USE ONLY  
 Table #:  
 Accthurs:  
 Templates:  
 Prelogin:  
 Trip Blank Received: Y N NA  
 HCL MeCRN TSP Other  
 Man Conformance(s):  
 YES / NO  
 Page: 1 of 1





## Quality Control Sample Performance Assessment

Test: Ra-226  
Analyst: CLA  
Date: 3/24/2021  
Worksheet: 59287  
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	21:5665
MB Concentration	0.078
MB Counting Uncertainty	0.128
MB MDC	0.258
MB Numerical Performance Indicator	1.20
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCSD59287	LCSD59287
Count Date	3/25/2021	3/25/2021
Spike I.D.	19-033	*9-033
Decay Corrected Spike Concentration (pCi/mL)	24.039	24.039
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, F)	0.501	0.502
Target Conc. (pCi/L, g, F)	4.800	4.787
Uncertainty (Calculated)	0.058	0.067
Result (pCi/L, g, F)	5.031	4.732
LCSD/LCSD Counting Uncertainty (pCi/L, g, F)	0.564	0.535
Numerical Performance Indicator	0.90	-0.20
Percent Recovery	104.82%	98.84%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limits	125%	125%
Lower % Recovery Limits	75%	75%

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

Duplicate Sample Assessment		
Sample I.D.	LCSD59287	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Duplicate Sample I.D.	LCSD59287	
Sample Result (pCi/L, g, F)	5.031	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.564	
Sample Duplicate Result (pCi/L, g, F)	4.732	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.535	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.758	92525653001
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	5.86%	92525653001DUP
Duplicate Status vs Numerical Indicator	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit	25%	

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

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

Comments:

*Handwritten signature: CLA 3/24/21*

## Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: CLA  
Date: 3/24/2021  
Worklist: 59267  
Matrix: DIW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID:	2115685	
MB Concentration:	0.072	
MB Counting Uncertainty:	0.128	
MB MDC:	9.288	
MB Numerical Performance Indicator:	1.20	
MB Status vs Numerical Indicator:	N/A	
MB Status vs MDC:	Pass	

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCSD58257	LCSD58257
Count Date:	3/25/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.036	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.501	
Target Conc. (pCi/L, g, F):	4.800	
Uncertainty (Calculated):	0.568	
Result (pCi/L, g, F):	5.031	
LCSD, CSD Counting Uncertainty (pCi/L, g, F):	0.364	
Numerical Performance Indicator:	0.80	
Percent Recovery:	104.82%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

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

Duplicate Sample Assessment		
Sample I.D.:	92525653001	Enter Duplicate sample IDs if other than LCSD, CSD on the Apical Label.
Duplicate Sample I.D.:	92525653001 DUP	
Sample Result (pCi/L, g, F):	0.181	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.197	
Sample Duplicate Result (pCi/L, g, F):	0.244	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.147	
Are sample and/or duplicate results yellow RL?	See Below <b>##</b>	
Duplicate Numerical Performance Indicator:	-0.503	
Duplicate RPD:	29.70%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail	
% RPD Limit:	25%	

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

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

Comments:

Batch must be re-prepped due to unacceptable precision.

*CLA*  
*3/24/21*



### Quality Control Sample Performance Assessment

Test: Ra-228  
Analyst: VAL  
Date: 3/22/2021  
Worklist: 59272  
Matrix: WWT

*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Method Blank Assessment	
MB Sample ID	2115335
MB Concentration:	3.199
MB 2 Sigma CSU:	0.001
MB MDC:	0.720
MB Numerical Performance Indicator:	1.18
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	LCS0 (Y or N)?	
	LCS59272	LCS059272
Count Date:	3/24/2021	3/24/2021
Spike ID:	21-003	21-003
Decay Corrected Spike Concentration (pCi/L):	38.341	38.341
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.817
Target Conc. (pCi/L, g, F):	4.763	4.691
Uncertainty (Calculated):	0.233	0.230
Result (pCi/L, g, F):	4.418	4.967
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.059	1.008
Numerical Performance Indicator:	-0.62	-1.13
Percent Recovery:	92.78%	96.70%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	135%	135%
Lower % Recovery Limit:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS059272	Enter Duplicate sample ID if other than LCS/LCSD in the space below
Duplicate Sample I.D.:	LCS059272	
Sample Result (pCi/L, g, F):	4.418	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.059	
Sample Duplicate Result (pCi/L, g, F):	4.067	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.008	
Are sample and/or duplicate results below MDC?	NO	
Duplicate Numerical Performance Indicator:	0.470	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	6.75%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

*VAL*  
3/22/2021

May 03, 2021

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

RE: Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525664001	PZ-51S	Water	03/03/21 09:23	03/04/21 08:15
92525664002	PZ-51D	Water	03/03/21 10:55	03/04/21 08:15

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92525664001	PZ-51S	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525664002	PZ-51D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525664001</b>	<b>PZ-51S</b>					
	Performed by	CUSTOME			03/04/21 13:05	
		R				
	pH	5.41	Std. Units		03/04/21 13:05	
EPA 6010D	Calcium	7.9	mg/L	1.0	03/09/21 20:24	
EPA 6020B	Antimony	0.0018J	mg/L	0.0030	03/11/21 15:08	B
EPA 6020B	Barium	0.037	mg/L	0.0050	03/11/21 15:08	
EPA 6020B	Boron	0.0096J	mg/L	0.040	03/11/21 15:08	
EPA 6020B	Cobalt	0.0050	mg/L	0.0050	03/11/21 15:08	
SM 2540C-2011	Total Dissolved Solids	76.0	mg/L	10.0	03/06/21 09:45	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	03/13/21 21:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.083J	mg/L	0.10	03/13/21 21:00	
EPA 300.0 Rev 2.1 1993	Sulfate	0.66J	mg/L	1.0	03/13/21 21:00	
<b>92525664002</b>	<b>PZ-51D</b>					
	Performed by	CUSTOME			03/04/21 13:05	
		R				
	pH	7.10	Std. Units		03/04/21 13:05	
EPA 6010D	Calcium	119	mg/L	1.0	03/09/21 20:29	
EPA 6020B	Antimony	0.0013J	mg/L	0.0030	03/11/21 15:14	B
EPA 6020B	Arsenic	0.0014J	mg/L	0.0050	03/11/21 15:14	
EPA 6020B	Barium	0.080	mg/L	0.0050	03/11/21 15:14	
EPA 6020B	Boron	0.028J	mg/L	0.040	03/11/21 15:14	
EPA 6020B	Cobalt	0.00040J	mg/L	0.0050	03/11/21 15:14	
EPA 6020B	Lead	0.00013J	mg/L	0.0010	03/11/21 15:14	
EPA 6020B	Lithium	0.0093J	mg/L	0.030	03/11/21 15:14	
EPA 6020B	Molybdenum	0.0068J	mg/L	0.010	03/11/21 15:14	
SM 2540C-2011	Total Dissolved Solids	598	mg/L	20.0	03/06/21 09:45	
EPA 300.0 Rev 2.1 1993	Chloride	18.9	mg/L	1.0	03/13/21 21:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.28	mg/L	0.10	03/13/21 21:14	
EPA 300.0 Rev 2.1 1993	Sulfate	360	mg/L	8.0	03/14/21 13:41	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

Sample: PZ-51S		Lab ID: 92525664001		Collected: 03/03/21 09:23		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:05		
pH	<b>5.41</b>	Std. Units			1		03/04/21 13:05		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>7.9</b>	mg/L	1.0	0.070	1	03/09/21 11:12	03/09/21 20:24	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	<b>0.0018J</b>	mg/L	0.0030	0.00028	1	03/09/21 12:48	03/11/21 15:08	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/09/21 12:48	03/11/21 15:08	7440-38-2	
Barium	<b>0.037</b>	mg/L	0.0050	0.00071	1	03/09/21 12:48	03/11/21 15:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 12:48	03/11/21 15:08	7440-41-7	
Boron	<b>0.0096J</b>	mg/L	0.040	0.0052	1	03/09/21 12:48	03/11/21 15:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 12:48	03/11/21 15:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 12:48	03/11/21 15:08	7440-47-3	
Cobalt	<b>0.0050</b>	mg/L	0.0050	0.00038	1	03/09/21 12:48	03/11/21 15:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/09/21 12:48	03/11/21 15:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/09/21 12:48	03/11/21 15:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/09/21 12:48	03/11/21 15:08	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 12:48	03/11/21 15:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 12:48	03/11/21 15:08	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 09:00	03/08/21 16:40	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>76.0</b>	mg/L	10.0	10.0	1		03/06/21 09:45		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>4.5</b>	mg/L	1.0	0.60	1		03/13/21 21:00	16887-00-6	
Fluoride	<b>0.083J</b>	mg/L	0.10	0.050	1		03/13/21 21:00	16984-48-8	
Sulfate	<b>0.66J</b>	mg/L	1.0	0.50	1		03/13/21 21:00	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

Sample: PZ-51D		Lab ID: 92525664002		Collected: 03/03/21 10:55		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/04/21 13:05		
pH	7.10	Std. Units			1		03/04/21 13:05		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	119	mg/L	1.0	0.070	1	03/09/21 11:12	03/09/21 20:29	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0013J	mg/L	0.0030	0.00028	1	03/09/21 12:48	03/11/21 15:14	7440-36-0	B
Arsenic	0.0014J	mg/L	0.0050	0.00078	1	03/09/21 12:48	03/11/21 15:14	7440-38-2	
Barium	0.080	mg/L	0.0050	0.00071	1	03/09/21 12:48	03/11/21 15:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/09/21 12:48	03/11/21 15:14	7440-41-7	
Boron	0.028J	mg/L	0.040	0.0052	1	03/09/21 12:48	03/11/21 15:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/09/21 12:48	03/11/21 15:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/09/21 12:48	03/11/21 15:14	7440-47-3	
Cobalt	0.00040J	mg/L	0.0050	0.00038	1	03/09/21 12:48	03/11/21 15:14	7440-48-4	
Lead	0.00013J	mg/L	0.0010	0.000036	1	03/09/21 12:48	03/11/21 15:14	7439-92-1	
Lithium	0.0093J	mg/L	0.030	0.00081	1	03/09/21 12:48	03/11/21 15:14	7439-93-2	
Molybdenum	0.0068J	mg/L	0.010	0.00069	1	03/09/21 12:48	03/11/21 15:14	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/09/21 12:48	03/11/21 15:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/09/21 12:48	03/11/21 15:14	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/08/21 09:00	03/08/21 16:42	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	598	mg/L	20.0	20.0	1		03/06/21 09:45		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	18.9	mg/L	1.0	0.60	1		03/13/21 21:14	16887-00-6	
Fluoride	0.28	mg/L	0.10	0.050	1		03/13/21 21:14	16984-48-8	
Sulfate	360	mg/L	8.0	4.0	8		03/14/21 13:41	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

QC Batch: 605190      Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A      Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525664001, 92525664002

METHOD BLANK: 3188284      Matrix: Water  
Associated Lab Samples: 92525664001, 92525664002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/09/21 19:35	

LABORATORY CONTROL SAMPLE: 3188285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188286      3188287

Parameter	Units	3188286		3188287		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526065007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	395000 ug/L	1	1	382	390	-643	159	75-125	2	20

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

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

QC Batch: 605211 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525664001, 92525664002

METHOD BLANK: 3188368 Matrix: Water  
Associated Lab Samples: 92525664001, 92525664002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00043J	0.0030	0.00028	03/11/21 14:28	
Arsenic	mg/L	ND	0.0050	0.00078	03/11/21 14:28	
Barium	mg/L	ND	0.0050	0.00071	03/11/21 14:28	
Beryllium	mg/L	ND	0.00050	0.000046	03/11/21 14:28	
Boron	mg/L	ND	0.040	0.0052	03/11/21 14:28	
Cadmium	mg/L	ND	0.00050	0.00012	03/11/21 14:28	
Chromium	mg/L	ND	0.0050	0.00055	03/11/21 14:28	
Cobalt	mg/L	ND	0.0050	0.00038	03/11/21 14:28	
Lead	mg/L	ND	0.0010	0.000036	03/11/21 14:28	
Lithium	mg/L	ND	0.030	0.00081	03/11/21 14:28	
Molybdenum	mg/L	ND	0.010	0.00069	03/11/21 14:28	
Selenium	mg/L	ND	0.0050	0.0016	03/11/21 14:28	
Thallium	mg/L	ND	0.0010	0.00014	03/11/21 14:28	

LABORATORY CONTROL SAMPLE: 3188369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.093	93	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188370 3188371

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525662001	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	0.012	0.1	0.1	0.1	0.11	0.11	97	101	75-125	4	20	
Arsenic	mg/L	0.13	0.1	0.1	0.1	0.23	0.23	92	93	75-125	0	20	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

Parameter	Units	3188370		3188371		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525662001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.12	0.1	0.1	0.26	0.27	138	146	75-125	3	20	M1	
Beryllium	mg/L	ND	0.1	0.1	0.078	0.080	78	80	75-125	2	20		
Boron	mg/L	1.1	1	1	1.9	1.9	79	85	75-125	3	20		
Cadmium	mg/L	0.00021J	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.090	0.092	89	92	75-125	3	20		
Cobalt	mg/L	0.0030J	0.1	0.1	0.092	0.094	89	91	75-125	2	20		
Lead	mg/L	0.000081J	0.1	0.1	0.088	0.091	87	91	75-125	4	20		
Lithium	mg/L	0.19	0.1	0.1	0.26	0.27	73	77	75-125	2	20	M1	
Molybdenum	mg/L	0.035	0.1	0.1	0.12	0.13	89	91	75-125	2	20		
Selenium	mg/L	0.086	0.1	0.1	0.18	0.18	89	97	75-125	4	20		
Thallium	mg/L	0.0029	0.1	0.1	0.091	0.094	88	91	75-125	3	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

QC Batch: 604664

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525664001, 92525664002

METHOD BLANK: 3185623

Matrix: Water

Associated Lab Samples: 92525664001, 92525664002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/08/21 15:49	

LABORATORY CONTROL SAMPLE: 3185624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185625 3185626

Parameter	Units	3185625		3185626		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0019	86	78	75-125	10	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

QC Batch: 604754

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525664001, 92525664002

METHOD BLANK: 3186276

Matrix: Water

Associated Lab Samples: 92525664001, 92525664002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/06/21 09:43	

LABORATORY CONTROL SAMPLE: 3186277

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	90-111	

SAMPLE DUPLICATE: 3186278

Parameter	Units	92525375007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	288	277	4	10	

SAMPLE DUPLICATE: 3186279

Parameter	Units	92525662002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1050	1010	4	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION  
Pace Project No.: 92525664

QC Batch: 606453 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525664001, 92525664002

METHOD BLANK: 3195124 Matrix: Water  
Associated Lab Samples: 92525664001, 92525664002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/13/21 18:50	
Fluoride	mg/L	ND	0.10	0.050	03/13/21 18:50	
Sulfate	mg/L	ND	1.0	0.50	03/13/21 18:50	

LABORATORY CONTROL SAMPLE: 3195125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	54.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195126 3195127

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525657005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	53.3	53.5	106	107	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	112	113	90-110	0	10	M1	
Sulfate	mg/L	ND	50	50	55.5	55.9	111	112	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195128 3195129

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527275001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	6.2	50	50	59.3	60.2	106	108	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	3.6	3.6	141	143	90-110	1	10	M1	
Sulfate	mg/L	ND	50	50	55.7	56.6	111	113	90-110	1	10	M1	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD DELINEATION

Pace Project No.: 92525664

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525664001	PZ-51S				
92525664002	PZ-51D				
92525664001	PZ-51S	EPA 3010A	605190	EPA 6010D	605248
92525664002	PZ-51D	EPA 3010A	605190	EPA 6010D	605248
92525664001	PZ-51S	EPA 3005A	605211	EPA 6020B	605315
92525664002	PZ-51D	EPA 3005A	605211	EPA 6020B	605315
92525664001	PZ-51S	EPA 7470A	604664	EPA 7470A	604885
92525664002	PZ-51D	EPA 7470A	604664	EPA 7470A	604885
92525664001	PZ-51S	SM 2540C-2011	604754		
92525664002	PZ-51D	SM 2540C-2011	604754		
92525664001	PZ-51S	EPA 300.0 Rev 2.1 1993	606453		
92525664002	PZ-51D	EPA 300.0 Rev 2.1 1993	606453		

### REPORT OF LABORATORY ANALYSIS

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

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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

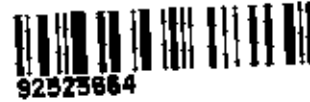
Client Name:

G-A Power

Project #:

**WO# : 92525664**

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



Date/Initials Person Examining Contain: 3/4/21

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Cooler Temp: 1.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 1.6

USDA Regulated Soil (  N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2450 Manor Road  
 Atlanta, GA 30339  
 Report To: Joey Abraham  
 Billing Information:  
 Email To: sscvoices@southernco.com

Container: Preservative Type: \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) sulfuric acid, (2) nitric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) perchloric acid, (6) methanol, (7) sodium chlorate, (8) sodium chlorate, (9) Acetone, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (E) Unpreserved, (F) Other

Copy To: Golder  
 Site Collection Info/Address: Plant Branch  
 phone: (404) 506-7239  
 Email: jbrahama@southernco.com  
 State: Georgia City: Milledgeville Time Zone Collected:  
 FT  MT  CT  ET

Analyses:  
 Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signatures Present Y N NA  
 Bottles Intact Y N NA  
 Corrod. Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 WDA - Headspace Acceptable Y N NA  
 USCA - Regulated Solts Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 Cl Strips:  
 Sample pH Acceptable Y N NA  
 pH Strips:  
 Sulfide Present Y N NA  
 Total Acetate Strips:

Project Name: Plant Branch BCD Delineation  
 Project #: CCR 4th Sem. Annus  
 Pace Project Manager: Kevin Henning  
 Collected By (Print): Travis Martinez, Andrea McClure  
 Purchase Order #:   
 Quote #:   
 Collected By (Signature):   
 Rush:  Same Day  Next Day  
 12 Day  13 Day  14 Day  15 Day  
 (Expedite Charges Apply)  
 Immediately Packed on Ice:  
 Yes  No  
 Field Filtered (if applicable):  
 Yes  No  
 Analysis:

Vertical text on left: Metals 6010/6020/7470 - see comments

Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226-228
X	X	X	X
X	X	X	X

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Biossary (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Cons
			Date	Time	Date	Time		
PZ-515	GW	G	3-3-21	0923			5.41	5
PZ-51D	GW	G	3-3-21	1055			7.10	5

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Ti, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radionuclide sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Other Courier Pace Courier  
 Lab Sample Temperature Info:  
 Temp Block Received: Y N NA  
 Therm ID#:  
 Cooler 1 Temp Upon Receipt: °C  
 Cooler 1 Therm Corr. Factor: °C  
 Cooler 1 Corrected Temp: °C  
 Comments:

Relinquished by/Company: (Signature)   
 Date/Time: 3-4-21 / 0815  
 Received by/Company: (Signature)   
 Date/Time:  
 Relinquished by/Company: (Signature)  
 Date/Time:  
 Received by/Company: (Signature)  
 Date/Time:  
 Relinquished by/Company: (Signature)  
 Date/Time:  
 Received by/Company: (Signature)  
 Date/Time:

MTL LAB USE ONLY  
 Table #:  
 AccThurs:  
 Template:  
 Prelogin:  
 PM:  
 PB:  
 Trip Blank Received: Y N NA  
 HCL MeCRN TSP Other  
 Man Conformance(s):  
 YES / NO  
 Page: 1 of 1

March 28, 2021

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

RE: Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92526026

Dear Joju Abraham:

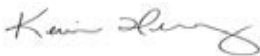
Enclosed are the analytical results for sample(s) received by the laboratory on March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92526026

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### **Pace Analytical Services Pennsylvania**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526026001	PZ-50D	Water	03/05/21 08:02	03/05/21 11:30
92526026002	PZ-51I	Water	03/04/21 09:35	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92526026

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526026001	PZ-50D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92526026002	PZ-51I	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92526026001</b>	<b>PZ-50D</b>					
EPA 9315	Radium-226	0.842 ± 0.278 (0.273)	pCi/L		03/25/21 09:54	
EPA 9320	Radium-228	C:82% T:NA 1.27 ± 0.599 (1.07)	pCi/L		03/25/21 15:46	
Total Radium Calculation	Total Radium	C:80% T:83% 2.11 ± 0.877 (1.34)	pCi/L		03/26/21 13:56	
<b>92526026002</b>	<b>PZ-51I</b>					
EPA 9315	Radium-226	0.222 ± 0.173 (0.332)	pCi/L		03/25/21 10:01	
EPA 9320	Radium-228	C:89% T:NA 0.744 ± 0.479 (0.925)	pCi/L		03/25/21 15:46	
Total Radium Calculation	Total Radium	C:81% T:84% 0.966 ± 0.652 (1.26)	pCi/L		03/26/21 13:56	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

**Sample: PZ-50D**      **Lab ID: 92526026001**      Collected: 03/05/21 08:02      Received: 03/05/21 11:30      Matrix: Water  
PWS:      Site ID:      Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.842 ± 0.278 (0.273)</b> <b>C:82% T:NA</b>	pCi/L	03/25/21 09:54	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.27 ± 0.599 (1.07)</b> <b>C:80% T:83%</b>	pCi/L	03/25/21 15:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.11 ± 0.877 (1.34)</b>	pCi/L	03/26/21 13:56	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

Sample: **PZ-511** Lab ID: **92526026002** Collected: 03/04/21 09:35 Received: 03/05/21 11:30 Matrix: Water  
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	<b>0.222 ± 0.173 (0.332)</b> <b>C:89% T:NA</b>	pCi/L	03/25/21 10:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.744 ± 0.479 (0.925)</b> <b>C:81% T:84%</b>	pCi/L	03/25/21 15:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.966 ± 0.652 (1.26)</b>	pCi/L	03/26/21 13:56	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

QC Batch: 438168

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92526026001, 92526026002

METHOD BLANK: 2115336

Matrix: Water

Associated Lab Samples: 92526026001, 92526026002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0301 ± 0.353 (0.815) C:79% T:75%	pCi/L	03/25/21 12:20	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

QC Batch: 438264

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92526026001, 92526026002

METHOD BLANK: 2115666

Matrix: Water

Associated Lab Samples: 92526026001, 92526026002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0177 ± 0.140 (0.349) C:93% T:NA	pCi/L	03/25/21 09:33	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT RADS

Pace Project No.: 92526026

---

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD ASSESSMENT RADS  
Pace Project No.: 92526026

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526026001	PZ-50D	EPA 9315	438264		
92526026002	PZ-51I	EPA 9315	438264		
92526026001	PZ-50D	EPA 9320	438168		
92526026002	PZ-51I	EPA 9320	438168		
92526026001	PZ-50D	Total Radium Calculation	440647		
92526026002	PZ-51I	Total Radium Calculation	440647		

**REPORT OF LABORATORY ANALYSIS**

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

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

laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name: GAPower

Project # **W0# : 92526026**

Carrier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



Study Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 3/5/21 log

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Biological Tissue Frozen?  Yes  No  N/A

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

Cooler Temp: 3.2 Correction Factor: Add/Subtract (°C) -0.2

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

Cooler Temp Corrected (°C): 3.0

ISDA Regulated Soil (  N/A, water sample)  
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

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

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

COMMENTS/SAMPLE DISCREPANCY \_\_\_\_\_ Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION \_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_  
Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_





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

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

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

Project #

**WO# : 92526026**

PM: KLH1

Due Date: 03/26/21

CLIENT: GA-GA Power

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

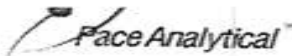
\*\*Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																	3									
2		2	1																	3									
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**pH Adjustment Log for Preserved Samples**

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

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



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road, Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 Project Name: Plant Branch BCD Assessment  
 Project # CCR 4th Semi-Annual  
 Collected By (print): Travis Martinez, Andrea McClure  
 Collected By (signature): *[Signature]*  
 State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET  
 Billing Information:  
 Email To: ccsinvoices@southernco.com  
 Site Collect on Info/Address: Plant Branch  
 Pace Profile#  
 Purchase Order #  
 Quote #  
 Pace Project Manager: kevin.herring@pacelabs.com  
 Immediately Packed on Ice: [X] Yes [ ] No  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)  
 Analysis: \_\_\_\_\_

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:			
	Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA WDA - Headspace Acceptable Y N NA USDA Regulated Solis Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA CI Strips: Sample pH Acceptable Y N NA pH Strips: Sulfide Present Y N NA Lead Acetate Strips: _____			
Metals 6010/6020/7470 - see comments				
TDS				
Chloride/Fluoride/Sulfate				
Radium 226.228				

\* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Sol/d (S.L), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite) Start:		Composite End		pH	# of Ctns
			Date	Time	Date	Time		
PZ-50D	GW	G	3-5-21	0802			7.06	5
PZ-511	GW	G	3-4-21	0935			4.57	5

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA  
 SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via: FEDEX UPS Client Courier Pace Courier  
 Relinquished by/Company: (Signature) *[Signature]* Date/Time: 3-5-21 / 1000  
 Received by/Company: (Signature) *[Signature]* Date/Time: 3/5/21 1130  
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:  
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:  
 MTJL LAB USE ONLY  
 Table #:  
 Accnum:  
 Template:  
 Prelogin:  
 PM:  
 PB:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s): YES / NO Page: 1 of 1

March 22, 2021

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

RE: Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526031001	PZ-50D	Water	03/05/21 08:02	03/05/21 11:30
92526031002	PZ-51I	Water	03/04/21 09:35	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92526031001	PZ-50D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92526031002	PZ-51I	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92526031001</b>	<b>PZ-50D</b>					
	Performed by	CUSTOME			03/05/21 15:22	
		R				
	pH	7.06	Std. Units		03/05/21 15:22	
EPA 6010D	Calcium	207	mg/L	1.0	03/19/21 03:20	M1
EPA 6020B	Antimony	0.00056J	mg/L	0.0030	03/16/21 14:50	B
EPA 6020B	Arsenic	0.00087J	mg/L	0.0050	03/16/21 14:50	
EPA 6020B	Barium	0.043	mg/L	0.0050	03/16/21 14:50	
EPA 6020B	Boron	0.20	mg/L	0.040	03/16/21 14:50	
EPA 6020B	Cobalt	0.0038J	mg/L	0.0050	03/16/21 14:50	
EPA 6020B	Lead	0.000056J	mg/L	0.0010	03/16/21 14:50	
EPA 6020B	Lithium	0.019J	mg/L	0.030	03/16/21 14:50	
EPA 6020B	Molybdenum	0.0017J	mg/L	0.010	03/16/21 14:50	
SM 2450C-2011	Total Dissolved Solids	1210	mg/L	20.0	03/10/21 09:43	
EPA 300.0 Rev 2.1 1993	Chloride	8.0	mg/L	1.0	03/15/21 11:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	03/15/21 11:48	
EPA 300.0 Rev 2.1 1993	Sulfate	698	mg/L	15.0	03/15/21 20:12	
<b>92526031002</b>	<b>PZ-51I</b>					
	Performed by	CUSTOME			03/05/21 15:23	
		R				
	pH	4.57	Std. Units		03/05/21 15:23	
EPA 6010D	Calcium	182	mg/L	1.0	03/19/21 03:54	
EPA 6020B	Antimony	0.00079J	mg/L	0.0030	03/16/21 14:56	B
EPA 6020B	Barium	0.016	mg/L	0.0050	03/16/21 14:56	
EPA 6020B	Beryllium	0.000097J	mg/L	0.00050	03/16/21 14:56	
EPA 6020B	Boron	0.36	mg/L	0.040	03/16/21 14:56	
EPA 6020B	Cadmium	0.017	mg/L	0.00050	03/16/21 14:56	
EPA 6020B	Chromium	0.00080J	mg/L	0.0050	03/16/21 14:56	
EPA 6020B	Cobalt	0.019	mg/L	0.0050	03/16/21 14:56	
EPA 6020B	Lead	0.00017J	mg/L	0.0010	03/16/21 14:56	
EPA 6020B	Lithium	0.026J	mg/L	0.030	03/16/21 14:56	
SM 2450C-2011	Total Dissolved Solids	830	mg/L	100	03/09/21 16:22	
EPA 300.0 Rev 2.1 1993	Chloride	12.2	mg/L	1.0	03/15/21 12:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	03/15/21 12:03	
EPA 300.0 Rev 2.1 1993	Sulfate	909	mg/L	19.0	03/15/21 20:27	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

Sample: PZ-50D		Lab ID: 92526031001		Collected: 03/05/21 08:02		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/05/21 15:22		
pH	7.06	Std. Units			1		03/05/21 15:22		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	207	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 03:20	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00056J	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 14:50	7440-36-0	B
Arsenic	0.00087J	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 14:50	7440-38-2	
Barium	0.043	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 14:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 14:50	7440-41-7	
Boron	0.20	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 14:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 14:50	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 14:50	7440-47-3	
Cobalt	0.0038J	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 14:50	7440-48-4	
Lead	0.000056J	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 14:50	7439-92-1	
Lithium	0.019J	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 14:50	7439-93-2	
Molybdenum	0.0017J	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 14:50	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 14:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 14:50	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/11/21 15:15	03/12/21 10:28	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	1210	mg/L	20.0	20.0	1		03/10/21 09:43		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.0	mg/L	1.0	0.60	1		03/15/21 11:48	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		03/15/21 11:48	16984-48-8	
Sulfate	698	mg/L	15.0	7.5	15		03/15/21 20:12	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

Sample: PZ-511		Lab ID: 92526031002		Collected: 03/04/21 09:35		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/05/21 15:23		
pH	4.57	Std. Units			1		03/05/21 15:23		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	182	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 03:54	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00079J	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 14:56	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 14:56	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 14:56	7440-39-3	
Beryllium	0.000097J	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 14:56	7440-41-7	
Boron	0.36	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 14:56	7440-42-8	
Cadmium	0.017	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 14:56	7440-43-9	
Chromium	0.00080J	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 14:56	7440-47-3	
Cobalt	0.019	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 14:56	7440-48-4	
Lead	0.00017J	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 14:56	7439-92-1	
Lithium	0.026J	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 14:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 14:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 14:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 14:56	7440-28-0	
<b>7470 Mercury</b>									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.000078	1	03/11/21 15:15	03/12/21 10:30	7439-97-6	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	830	mg/L	100	100	1		03/09/21 16:22		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	12.2	mg/L	1.0	0.60	1		03/15/21 12:03	16887-00-6	
Fluoride	0.061J	mg/L	0.10	0.050	1		03/15/21 12:03	16984-48-8	
Sulfate	909	mg/L	19.0	9.5	19		03/15/21 20:27	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

QC Batch: 606634

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526031001, 92526031002

METHOD BLANK: 3196175

Matrix: Water

Associated Lab Samples: 92526031001, 92526031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	3196177		3196178		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	207	1	1	209	202	181	-447	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

QC Batch: 606644 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526031001, 92526031002

METHOD BLANK: 3196234 Matrix: Water

Associated Lab Samples: 92526031001, 92526031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00035J	0.0030	0.00028	03/16/21 14:38	
Arsenic	mg/L	ND	0.0050	0.00078	03/16/21 14:38	
Barium	mg/L	ND	0.0050	0.00071	03/16/21 14:38	
Beryllium	mg/L	ND	0.00050	0.000046	03/16/21 14:38	
Boron	mg/L	ND	0.040	0.0052	03/16/21 14:38	
Cadmium	mg/L	ND	0.00050	0.00012	03/16/21 14:38	
Chromium	mg/L	ND	0.0050	0.00055	03/16/21 14:38	
Cobalt	mg/L	ND	0.0050	0.00038	03/16/21 14:38	
Lead	mg/L	ND	0.0010	0.000036	03/16/21 14:38	
Lithium	mg/L	ND	0.030	0.00081	03/16/21 14:38	
Molybdenum	mg/L	ND	0.010	0.00069	03/16/21 14:38	
Selenium	mg/L	ND	0.0050	0.0016	03/16/21 14:38	
Thallium	mg/L	ND	0.0010	0.00014	03/16/21 14:38	

LABORATORY CONTROL SAMPLE: 3196235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.096	96	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.090	90	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196236 3196237

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031002	Result	Conc.	Conc.								
Antimony	mg/L	0.00079J	0.1	0.1	0.098	0.099	98	98	75-125	0	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

Parameter	Units	3196236		3196237		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.016	0.1	0.1	0.11	0.11	96	95	75-125	1	20		
Beryllium	mg/L	0.000097J	0.1	0.1	0.083	0.080	82	80	75-125	3	20		
Boron	mg/L	0.36	1	1	1.2	1.2	84	83	75-125	1	20		
Cadmium	mg/L	0.017	0.1	0.1	0.11	0.11	96	95	75-125	1	20		
Chromium	mg/L	0.00080J	0.1	0.1	0.092	0.092	92	91	75-125	0	20		
Cobalt	mg/L	0.019	0.1	0.1	0.11	0.11	93	92	75-125	1	20		
Lead	mg/L	0.00017J	0.1	0.1	0.088	0.087	88	86	75-125	2	20		
Lithium	mg/L	0.026J	0.1	0.1	0.11	0.11	82	81	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.093	0.092	93	91	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.097	100	96	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.089	0.087	89	86	75-125	3	20		

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

QC Batch: 605942

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526031001, 92526031002

METHOD BLANK: 3192294

Matrix: Water

Associated Lab Samples: 92526031001, 92526031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000078	03/12/21 09:24	

LABORATORY CONTROL SAMPLE: 3192295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192296 3192297

Parameter	Units	3192296		3192297		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0024	97	97	75-125	0	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

QC Batch: 605136

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526031002

METHOD BLANK: 3187989

Matrix: Water

Associated Lab Samples: 92526031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/09/21 16:18	

LABORATORY CONTROL SAMPLE: 3187990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	90-111	

SAMPLE DUPLICATE: 3187991

Parameter	Units	92525375013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3187992

Parameter	Units	92524831030 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	234	232	1	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

QC Batch: 605445      Analysis Method: SM 2450C-2011  
QC Batch Method: SM 2450C-2011      Analysis Description: 2540C Total Dissolved Solids  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92526031001

METHOD BLANK: 3189630      Matrix: Water  
Associated Lab Samples: 92526031001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/10/21 09:39	

LABORATORY CONTROL SAMPLE: 3189631

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	391	98	90-111	

SAMPLE DUPLICATE: 3189632

Parameter	Units	92526563001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1350	1390	3	10	

SAMPLE DUPLICATE: 3189633

Parameter	Units	92526568008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	45.0	46.0	2	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT  
Pace Project No.: 92526031

QC Batch: 606497 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92526031001, 92526031002

METHOD BLANK: 3195321 Matrix: Water  
Associated Lab Samples: 92526031001, 92526031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/15/21 05:49	
Fluoride	mg/L	ND	0.10	0.050	03/15/21 05:49	
Sulfate	mg/L	ND	1.0	0.50	03/15/21 05:49	

LABORATORY CONTROL SAMPLE: 3195322

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	46.1	92	90-110	
Fluoride	mg/L	2.5	2.4	94	90-110	
Sulfate	mg/L	50	45.3	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195323 3195324

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525919013 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	5.9	50	50	56.7	55.0	102	98	90-110	3	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.4	99	97	90-110	3	10		
Sulfate	mg/L	38.9	50	50	90.2	88.6	103	99	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195325 3195326

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525657006 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	5.8	50	50	55.5	56.0	100	100	90-110	1	10		
Fluoride	mg/L	0.076J	2.5	2.5	2.6	2.7	103	103	90-110	0	10		
Sulfate	mg/L	251	50	50	293	305	83	108	90-110	4	10 M6		

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD ASSESSMENT

Pace Project No.: 92526031

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526031001	PZ-50D				
92526031002	PZ-51I				
92526031001	PZ-50D	EPA 3010A	606634	EPA 6010D	606723
92526031002	PZ-51I	EPA 3010A	606634	EPA 6010D	606723
92526031001	PZ-50D	EPA 3005A	606644	EPA 6020B	606712
92526031002	PZ-51I	EPA 3005A	606644	EPA 6020B	606712
92526031001	PZ-50D	EPA 7470A	605942	EPA 7470A	606185
92526031002	PZ-51I	EPA 7470A	605942	EPA 7470A	606185
92526031001	PZ-50D	SM 2450C-2011	605445		
92526031002	PZ-51I	SM 2450C-2011	605136		
92526031001	PZ-50D	EPA 300.0 Rev 2.1 1993	606497		
92526031002	PZ-51I	EPA 300.0 Rev 2.1 1993	606497		

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Document Name:  
Sample Condition Upon Receipt(SCUR)

Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2

Issuing Authority:  
Pace Carolinas Quality Office

laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

G-A Power

Project #

WO#: **92526031**

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



92526031

Study Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 3/5/21/108

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

TR Gun ID: 233

Type of Ice:

Wet  Blue  None

Cooler Temp:

3.2

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

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 3.0

ISDA Regulated Soil (  N/A, water sample)

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

Yes  No

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



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

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

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

Project #

**WO# : 92526031**

PM: KLH1

Due Date: 03/19/21

CLIENT: GA-GA Power

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		21																		3									
2		21																		3									
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**pH Adjustment Log for Preserved Samples**

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

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



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

MTJL Log-in Number Here

**ALL SHADED AREAS are for LAB USE ONLY**

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Copy To: Golder  
 Billing Information:  
 Email To: scmvoices@southernco.com  
 Site Collect on Info/Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected:  
 [ ] PT [ ] MT [ ] CT [X] ET  
 Project Name: Plant Branch BCD Assessment  
 Project # CCR 4th Semi-Annual  
 Pace Profile#  
 Purchase Order #  
 Quote #  
 Pace Project Manager:  
 kevin.herring@pacelabs.com  
 Immediately Packed on Ice:  
 [X] Yes [ ] No  
 Fed Filtered (# applicable):  
 [ ] Yes [ ] No  
 Rush  
 [ ] Same Day [ ] Next Day  
 [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day  
 (Expedite Charges Apply)  
 Analysis:

Container Preservative Type \*\*  
 Lab Project Manager:  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctrs	Analyses			
			Date	Time	Date	Time			Metals 6010/6020/7470 - see comments	TDS	Chloride/Fluoride/Sulfate	Radium 226.228
PZ-50D	GW	G	3-5-21	0802			7.06	5	X	X	X	X
PZ-511	GW	G	3-4-21	0935			4.57	5	X	X	X	X

Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Solids Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 Cl Strips:  
 Sample pH Acceptable Y N NA  
 pH Strips:  
 Sulfide Present Y N NA  
 Lead Acetate Strips:

\* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (S), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Ctrs
			Date	Time	Date	Time		
PZ-50D	GW	G	3-5-21	0802			7.06	5
PZ-511	GW	G	3-4-21	0935			4.57	5

(Metals): As, B, Ba, Be, Ca, Cd, Co, Cr, Mo, Pb, Sb, Se, Li, Tl, Hg  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature)  
 Date/Time: 3-5-21 / 1000  
 Relinquished by/Company: (Signature)  
 Date/Time:  
 Relinquished by/Company: (Signature)  
 Date/Time:

MTJL LAB USE ONLY  
 Table #:  
 Acctnum:  
 Template:  
 Prelogin:  
 PM:  
 PB:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s):  
 YES / NO  
 Page: 1 of 1

April 21, 2021

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

RE: Project: BRANCH PZ-611 III&IV  
Pace Project No.: 92532953

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH PZ-61I III&IV

Pace Project No.: 92532953

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH PZ-61I III&IV

Pace Project No.: 92532953

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92532953001	PZ-61I	Water	04/12/21 10:20	04/13/21 16:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH PZ-61I III&IV

Pace Project No.: 92532953

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92532953001	PZ-61I	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

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### SUMMARY OF DETECTION

Project: BRANCH PZ-61I III&IV

Pace Project No.: 92532953

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92532953001</b>	<b>PZ-61I</b>					
	Performed by	CUSTOME			04/14/21 08:28	
		R				
	pH	5.40	Std. Units		04/14/21 08:28	
EPA 6010D	Calcium	228	mg/L	1.0	04/15/21 18:52	M1
EPA 6020B	Boron	0.26	mg/L	0.040	04/19/21 14:01	
EPA 6020B	Cobalt	0.42	mg/L	0.0050	04/19/21 14:01	
SM 2540C-2011	Total Dissolved Solids	2110	mg/L	100	04/17/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	21.9	mg/L	1.0	04/18/21 00:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.055J	mg/L	0.10	04/18/21 00:32	
EPA 300.0 Rev 2.1 1993	Sulfate	1550	mg/L	33.0	04/20/21 09:53	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BRANCH PZ-61I III&IV

Pace Project No.: 92532953

**Sample: PZ-61I**      **Lab ID: 92532953001**      Collected: 04/12/21 10:20      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/14/21 08:28		
pH	<b>5.40</b>	Std. Units			1		04/14/21 08:28		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>228</b>	mg/L	1.0	0.070	1	04/15/21 11:15	04/15/21 18:52	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.26</b>	mg/L	0.040	0.0052	1	04/15/21 13:24	04/19/21 14:01	7440-42-8	
Cadmium	<b>ND</b>	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 14:01	7440-43-9	
Cobalt	<b>0.42</b>	mg/L	0.0050	0.00038	1	04/15/21 13:24	04/19/21 14:01	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2110</b>	mg/L	100	100	1		04/17/21 09:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>21.9</b>	mg/L	1.0	0.60	1		04/18/21 00:32	16887-00-6	
Fluoride	<b>0.055J</b>	mg/L	0.10	0.050	1		04/18/21 00:32	16984-48-8	
Sulfate	<b>1550</b>	mg/L	33.0	16.5	33		04/20/21 09:53	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-611 III&IV

Pace Project No.: 92532953

QC Batch: 613959	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D ATL
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92532953001

METHOD BLANK: 3231144 Matrix: Water

Associated Lab Samples: 92532953001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	04/15/21 18:38	

LABORATORY CONTROL SAMPLE: 3231145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231146 3231147

Parameter	Units	3231146		3231147		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92532953001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	228	1	1	227	224	-42	-345	75-125	1	20 M1

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-611 III&IV  
Pace Project No.: 92532953

QC Batch: 613997 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92532953001

METHOD BLANK: 3231540 Matrix: Water  
Associated Lab Samples: 92532953001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0052	04/19/21 12:50	
Cadmium	mg/L	ND	0.00050	0.00012	04/19/21 12:50	
Cobalt	mg/L	ND	0.0050	0.00038	04/19/21 12:50	

LABORATORY CONTROL SAMPLE: 3231541

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231542 3231543

Parameter	Units	92532953001		3231542		3231543		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Boron	mg/L	0.26	0.26	1	1	1.1	1.1	85	85	75-125	0	20
Cadmium	mg/L	ND	ND	0.1	0.1	0.11	0.11	105	105	75-125	0	20
Cobalt	mg/L	0.42	0.42	0.1	0.1	0.54	0.54	119	119	75-125	0	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I III&IV  
Pace Project No.: 92532953

QC Batch: 613879	Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92532953001

METHOD BLANK: 3230812 Matrix: Water  
Associated Lab Samples: 92532953001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	04/17/21 09:43	

LABORATORY CONTROL SAMPLE: 3230813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	90-111	

SAMPLE DUPLICATE: 3230814

Parameter	Units	92532611001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	27500	26200	5	10	

SAMPLE DUPLICATE: 3230815

Parameter	Units	92533049003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	227	233	3	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-611 III&IV

Pace Project No.: 92532953

QC Batch: 614053

Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92532953001

METHOD BLANK: 3231883

Matrix: Water

Associated Lab Samples: 92532953001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/17/21 18:51	
Fluoride	mg/L	ND	0.10	0.050	04/17/21 18:51	
Sulfate	mg/L	ND	1.0	0.50	04/17/21 18:51	

LABORATORY CONTROL SAMPLE: 3231884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.0	96	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	51.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231885 3231886

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92533082001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	27.9	50	50	50	81.7	83.2	108	111	90-110	2	10	M1
Fluoride	mg/L	0.42	2.5	2.5	2.5	3.3	3.3	114	117	90-110	2	10	M1
Sulfate	mg/L	36.8	50	50	50	94.8	96.6	116	120	90-110	2	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231887 3231888

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92532913001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	10.3	50	50	50	64.1	62.2	108	104	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.8	2.7	109	105	90-110	4	10	
Sulfate	mg/L	37.4	50	50	50	95.5	93.6	116	112	90-110	2	10	M1

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH PZ-61I III&IV

Pace Project No.: 92532953

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

## REPORT OF LABORATORY ANALYSIS

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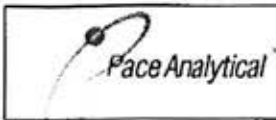
**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH PZ-61I III&IV  
Pace Project No.: 92532953

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92532953001	PZ-61I				
92532953001	PZ-61I	EPA 3010A	613959	EPA 6010D	614020
92532953001	PZ-61I	EPA 3005A	613997	EPA 6020B	614066
92532953001	PZ-61I	SM 2540C-2011	613879		
92532953001	PZ-61I	EPA 300.0 Rev 2.1 1993	614053		

**REPORT OF LABORATORY ANALYSIS**

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

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

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: G A Power

Project #:

**WO# : 92532953**



Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/13/24  
CD

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  
 Yes  No  N/A

Thermometer:  TR Gun ID: 233  Wet  Blue  None

Cooler Temp: 2.4 Type of Ice: \_\_\_\_\_  
 Correction Factor: Add/Subtract (°C) -0.2

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

Cooler Temp Corrected (°C): 2.2

USDA Regulated Soil (  N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



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

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

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

Project #

**WO# : 92532953**

PM: KLH1

Due Date: 04/27/21

CLIENT: GA-GA Power

Item#	BP4U-1.25 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-1.25 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-1.25 mL Plastic 2N Acetate & NaOH (>9)	BP4C-1.25 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2VO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber Ni(NO3)2 (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpr (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5075 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-1.25 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9, 3, 9, 7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**pH Adjustment Log for Preserved Samples**

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

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

# CHAIN-OF-CUSTODY / Analytical Request Document

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

**Section A**
**Required Client Information:**

 Company: Georgia Power- Coal Combustion Residuals  
 Address: 2480 Maner Road  
 Atlanta, GA 30339  
 Email To: jabraham@southernco.com  
 Phone: (404) 506-7239 Fax:  
 Requested Due Date: Standard

**Section B**
**Required Project Information:**

 Report To: Joju Abraham  
 Copy To: Brian Steele - Golder  
 bsteele@golder.com  
 Purchase Order #:  
 Project Name: Branch-BCD  
 Project Number: 166625421

**Section C**
**Invoice Information:**

 Attention:  
 Company Name:  
 Address:  
 Pace Quoter:  
 Pace Project Manager: Kevin Herring  
 Pace Profile #: 10838

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , - ) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives									Y/N	Requested Analysis Filtered (Y/N)						Residual Chlorine (Y/N)				
					START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2SO3	Methanol	Other	Analytes Test		10100207470 - Cadmium	Cobalt, Boron, Calcium	FDS	Chloride, Fluoride, Sulfate							
					DATE	TIME	DATE	TIME																							
1	PZ-611	WT	G	G	4/12/2021	10:20	-	-	3	2	1										X	X	X							pH= 5.40	
2																															
3																															
4																															
6																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Chris Towell / Golder	4/12/21	10:55	P. WELLS / GOLDER	4/13/21	11:55	

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Chris Towell		TEMP in C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
SIGNATURE OF SAMPLER:	DATE Signed: 4-13-21	

April 26, 2021

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

RE: Project: BRANCH III&IV  
Pace Project No.: 92532954

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH III&IV

Pace Project No.: 92532954

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH III&IV  
Pace Project No.: 92532954

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92532954001	PZ-57I	Water	04/12/21 14:20	04/13/21 16:55
92532954002	PZ-58I	Water	04/12/21 14:55	04/13/21 16:55
92532954003	PZ-60I	Water	04/12/21 12:30	04/13/21 16:55
92532954004	EB-1	Water	04/12/21 14:45	04/13/21 16:55
92532954005	FB-1	Water	04/12/21 10:30	04/13/21 16:55
92532954006	DUP-1	Water	04/12/21 00:00	04/13/21 16:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH III&IV

Pace Project No.: 92532954

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92532954001	PZ-57I	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92532954002	PZ-58I	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92532954003	PZ-60I	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92532954004	EB-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92532954005	FB-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92532954006	DUP-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH III&IV

Pace Project No.: 92532954

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92532954001</b>	<b>PZ-57I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.35	Std. Units		04/26/21 08:30	
EPA 6010D	Calcium	52.0	mg/L	1.0	04/15/21 19:37	M1
EPA 6020B	Boron	0.49	mg/L	0.040	04/19/21 14:24	
EPA 6020B	Cobalt	0.037	mg/L	0.0050	04/19/21 14:24	
SM 2540C-2011	Total Dissolved Solids	500	mg/L	10.0	04/17/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	7.2	mg/L	1.0	04/18/21 00:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.085J	mg/L	0.10	04/18/21 00:48	
EPA 300.0 Rev 2.1 1993	Sulfate	272	mg/L	6.0	04/20/21 10:08	
<b>92532954002</b>	<b>PZ-58I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.15	Std. Units		04/26/21 08:30	
EPA 6010D	Calcium	94.6	mg/L	1.0	04/15/21 19:56	
EPA 6020B	Boron	0.33	mg/L	0.040	04/19/21 14:29	
EPA 6020B	Cadmium	0.0024	mg/L	0.00050	04/19/21 14:29	
EPA 6020B	Cobalt	0.33	mg/L	0.0050	04/19/21 14:29	
SM 2540C-2011	Total Dissolved Solids	890	mg/L	20.0	04/17/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	11.0	mg/L	1.0	04/18/21 01:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.56	mg/L	0.10	04/18/21 01:03	
EPA 300.0 Rev 2.1 1993	Sulfate	559	mg/L	12.0	04/20/21 10:23	
<b>92532954003</b>	<b>PZ-60I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.05	Std. Units		04/26/21 08:30	
EPA 6010D	Calcium	262	mg/L	1.0	04/15/21 20:01	
EPA 6020B	Boron	0.25	mg/L	0.040	04/19/21 14:35	
EPA 6020B	Cadmium	0.017	mg/L	0.00050	04/19/21 14:35	
EPA 6020B	Cobalt	3.2	mg/L	0.050	04/21/21 12:34	
SM 2540C-2011	Total Dissolved Solids	2550	mg/L	100	04/17/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	29.6	mg/L	1.0	04/18/21 01:19	
EPA 300.0 Rev 2.1 1993	Fluoride	1.3	mg/L	0.10	04/18/21 01:19	
EPA 300.0 Rev 2.1 1993	Sulfate	1740	mg/L	37.0	04/20/21 10:37	
<b>92532954006</b>	<b>DUP-1</b>					
EPA 6010D	Calcium	266	mg/L	1.0	04/15/21 20:31	
EPA 6020B	Boron	0.32J	mg/L	0.40	04/21/21 12:40	D3
EPA 6020B	Cadmium	0.015	mg/L	0.00050	04/19/21 15:52	
EPA 6020B	Cobalt	3.2	mg/L	0.050	04/21/21 12:40	
SM 2540C-2011	Total Dissolved Solids	2230	mg/L	100	04/17/21 09:45	
EPA 300.0 Rev 2.1 1993	Chloride	30.0	mg/L	1.0	04/18/21 02:36	
EPA 300.0 Rev 2.1 1993	Fluoride	1.4	mg/L	0.10	04/18/21 02:36	
EPA 300.0 Rev 2.1 1993	Sulfate	1770	mg/L	37.0	04/20/21 10:52	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BRANCH III&IV

Pace Project No.: 92532954

**Sample: PZ-571**      **Lab ID: 92532954001**      Collected: 04/12/21 14:20      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.35</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>52.0</b>	mg/L	1.0	0.070	1	04/15/21 13:03	04/15/21 19:37	7440-70-2	M1
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.49</b>	mg/L	0.040	0.0052	1	04/15/21 13:24	04/19/21 14:24	7440-42-8	
Cadmium	<b>ND</b>	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 14:24	7440-43-9	
Cobalt	<b>0.037</b>	mg/L	0.0050	0.00038	1	04/15/21 13:24	04/19/21 14:24	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>500</b>	mg/L	10.0	10.0	1		04/17/21 09:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>7.2</b>	mg/L	1.0	0.60	1		04/18/21 00:48	16887-00-6	
Fluoride	<b>0.085J</b>	mg/L	0.10	0.050	1		04/18/21 00:48	16984-48-8	
Sulfate	<b>272</b>	mg/L	6.0	3.0	6		04/20/21 10:08	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH III&IV

Pace Project No.: 92532954

**Sample: PZ-58I**      **Lab ID: 92532954002**      Collected: 04/12/21 14:55      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.15</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>94.6</b>	mg/L	1.0	0.070	1	04/15/21 13:03	04/15/21 19:56	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.33</b>	mg/L	0.040	0.0052	1	04/15/21 13:24	04/19/21 14:29	7440-42-8	
Cadmium	<b>0.0024</b>	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 14:29	7440-43-9	
Cobalt	<b>0.33</b>	mg/L	0.0050	0.00038	1	04/15/21 13:24	04/19/21 14:29	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>890</b>	mg/L	20.0	20.0	1		04/17/21 09:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>11.0</b>	mg/L	1.0	0.60	1		04/18/21 01:03	16887-00-6	
Fluoride	<b>0.56</b>	mg/L	0.10	0.050	1		04/18/21 01:03	16984-48-8	
Sulfate	<b>559</b>	mg/L	12.0	6.0	12		04/20/21 10:23	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH III&IV

Pace Project No.: 92532954

**Sample: PZ-60I**      **Lab ID: 92532954003**      Collected: 04/12/21 12:30      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.05</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>262</b>	mg/L	1.0	0.070	1	04/15/21 13:03	04/15/21 20:01	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.25</b>	mg/L	0.040	0.0052	1	04/15/21 13:24	04/19/21 14:35	7440-42-8	
Cadmium	<b>0.017</b>	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 14:35	7440-43-9	
Cobalt	<b>3.2</b>	mg/L	0.050	0.0038	10	04/15/21 13:24	04/21/21 12:34	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2550</b>	mg/L	100	100	1		04/17/21 09:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>29.6</b>	mg/L	1.0	0.60	1		04/18/21 01:19	16887-00-6	
Fluoride	<b>1.3</b>	mg/L	0.10	0.050	1		04/18/21 01:19	16984-48-8	
Sulfate	<b>1740</b>	mg/L	37.0	18.5	37		04/20/21 10:37	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH III&IV

Pace Project No.: 92532954

Sample: EB-1		Lab ID: 92532954004		Collected: 04/12/21 14:45	Received: 04/13/21 16:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.070	1	04/15/21 13:03	04/15/21 20:11	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	0.0052	1	04/15/21 13:24	04/19/21 14:47	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 14:47	7440-43-9	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/15/21 13:24	04/19/21 14:47	7440-48-4	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		04/17/21 09:45		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		04/18/21 01:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		04/18/21 01:34	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		04/18/21 01:34	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH III&IV

Pace Project No.: 92532954

Sample: FB-1		Lab ID: 92532954005		Collected: 04/12/21 10:30		Received: 04/13/21 16:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Calcium	ND	mg/L	1.0	0.070	1	04/15/21 13:03	04/15/21 20:26	7440-70-2	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Boron	ND	mg/L	0.040	0.0052	1	04/15/21 13:24	04/19/21 14:52	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 14:52	7440-43-9	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/15/21 13:24	04/19/21 14:52	7440-48-4	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		04/17/21 09:45		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		04/18/21 01:50	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		04/18/21 01:50	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		04/18/21 01:50	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH III&IV

Pace Project No.: 92532954

**Sample: DUP-1**      **Lab ID: 92532954006**      Collected: 04/12/21 00:00      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>266</b>	mg/L	1.0	0.070	1	04/15/21 13:03	04/15/21 20:31	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.32J</b>	mg/L	0.40	0.052	10	04/15/21 13:24	04/21/21 12:40	7440-42-8	D3
Cadmium	<b>0.015</b>	mg/L	0.00050	0.00012	1	04/15/21 13:24	04/19/21 15:52	7440-43-9	
Cobalt	<b>3.2</b>	mg/L	0.050	0.0038	10	04/15/21 13:24	04/21/21 12:40	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>2230</b>	mg/L	100	100	1		04/17/21 09:45		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>30.0</b>	mg/L	1.0	0.60	1		04/18/21 02:36	16887-00-6	
Fluoride	<b>1.4</b>	mg/L	0.10	0.050	1		04/18/21 02:36	16984-48-8	
Sulfate	<b>1770</b>	mg/L	37.0	18.5	37		04/20/21 10:52	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH III&IV

Pace Project No.: 92532954

QC Batch: 613990

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

METHOD BLANK: 3231497

Matrix: Water

Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	04/15/21 19:27	

LABORATORY CONTROL SAMPLE: 3231498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231499 3231500

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Calcium	mg/L	92532954001	52.0	1	1	52.3	51.6	29	-35	75-125	1	20	M1

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH III&IV  
Pace Project No.: 92532954

QC Batch: 613997 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

METHOD BLANK: 3231540 Matrix: Water  
Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0052	04/19/21 12:50	
Cadmium	mg/L	ND	0.00050	0.00012	04/19/21 12:50	
Cobalt	mg/L	ND	0.0050	0.00038	04/19/21 12:50	

LABORATORY CONTROL SAMPLE: 3231541

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231542 3231543

Parameter	Units	92532953001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
Boron	mg/L	0.26	1	1	1	1.1	1.1	85	85	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.1	0.11	0.11	105	105	75-125	0	20		
Cobalt	mg/L	0.42	0.1	0.1	0.1	0.54	0.54	119	119	75-125	0	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH III&IV

Pace Project No.: 92532954

QC Batch:	613879	Analysis Method:	SM 2540C-2011
QC Batch Method:	SM 2540C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

METHOD BLANK: 3230812 Matrix: Water  
Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	04/17/21 09:43	

LABORATORY CONTROL SAMPLE: 3230813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	90-111	

SAMPLE DUPLICATE: 3230814

Parameter	Units	92532611001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	27500	26200	5	10	

SAMPLE DUPLICATE: 3230815

Parameter	Units	92533049003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	227	233	3	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH III&IV  
Pace Project No.: 92532954

QC Batch: 614053 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

METHOD BLANK: 3231883 Matrix: Water  
Associated Lab Samples: 92532954001, 92532954002, 92532954003, 92532954004, 92532954005, 92532954006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/17/21 18:51	
Fluoride	mg/L	ND	0.10	0.050	04/17/21 18:51	
Sulfate	mg/L	ND	1.0	0.50	04/17/21 18:51	

LABORATORY CONTROL SAMPLE: 3231884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.0	96	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	51.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231885 3231886

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92533082001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	27.9	50	50	50	81.7	83.2	108	111	90-110	2	10	M1
Fluoride	mg/L	0.42	2.5	2.5	2.5	3.3	3.3	114	117	90-110	2	10	M1
Sulfate	mg/L	36.8	50	50	50	94.8	96.6	116	120	90-110	2	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231887 3231888

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92532913001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	10.3	50	50	50	64.1	62.2	108	104	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.8	2.7	109	105	90-110	4	10	
Sulfate	mg/L	37.4	50	50	50	95.5	93.6	116	112	90-110	2	10	M1

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH III&IV

Pace Project No.: 92532954

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH III&IV  
Pace Project No.: 92532954

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92532954001	PZ-57I				
92532954002	PZ-58I				
92532954003	PZ-60I				
92532954001	PZ-57I	EPA 3010A	613990	EPA 6010D	614064
92532954002	PZ-58I	EPA 3010A	613990	EPA 6010D	614064
92532954003	PZ-60I	EPA 3010A	613990	EPA 6010D	614064
92532954004	EB-1	EPA 3010A	613990	EPA 6010D	614064
92532954005	FB-1	EPA 3010A	613990	EPA 6010D	614064
92532954006	DUP-1	EPA 3010A	613990	EPA 6010D	614064
92532954001	PZ-57I	EPA 3005A	613997	EPA 6020B	614066
92532954002	PZ-58I	EPA 3005A	613997	EPA 6020B	614066
92532954003	PZ-60I	EPA 3005A	613997	EPA 6020B	614066
92532954004	EB-1	EPA 3005A	613997	EPA 6020B	614066
92532954005	FB-1	EPA 3005A	613997	EPA 6020B	614066
92532954006	DUP-1	EPA 3005A	613997	EPA 6020B	614066
92532954001	PZ-57I	SM 2540C-2011	613879		
92532954002	PZ-58I	SM 2540C-2011	613879		
92532954003	PZ-60I	SM 2540C-2011	613879		
92532954004	EB-1	SM 2540C-2011	613879		
92532954005	FB-1	SM 2540C-2011	613879		
92532954006	DUP-1	SM 2540C-2011	613879		
92532954001	PZ-57I	EPA 300.0 Rev 2.1 1993	614053		
92532954002	PZ-58I	EPA 300.0 Rev 2.1 1993	614053		
92532954003	PZ-60I	EPA 300.0 Rev 2.1 1993	614053		
92532954004	EB-1	EPA 300.0 Rev 2.1 1993	614053		
92532954005	FB-1	EPA 300.0 Rev 2.1 1993	614053		
92532954006	DUP-1	EPA 300.0 Rev 2.1 1993	614053		

### REPORT OF LABORATORY ANALYSIS

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

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

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

GA Power

Project #: **W0# : 92532954**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_



92532954

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/13/21  
CAJ

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

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

Yes  No  N/A

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) -0.2

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

Cooler Temp Corrected (°C): 2.2

USDA Regulated Soil (  N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



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

Document Revised: October 23, 2010  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

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

Exceptions: VOA, Coliform, TOC, Oil and Grease, DPO/8015 (water) DOC, LHG

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

Project # **WO# : 92532954**

PM: KLH1

Due Date: 04/27/21

CLIENT: GR-GR Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unsp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	VJGK (3 vials per kit)-VJH/GWS kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

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

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



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information:	<b>Section B</b> Required Project Information:	<b>Section C</b> Invoice Information:	Page : 1 Of 1
Company: Georgia Power- Coal Combustion Residuals Address: 2480 Maner Road Atlanta, GA 30339 Email To: jabraham@southernco.com Phone: (404) 506-7239 Fax: Requested Due Date: Standard	Report To: Joju Abraham Copy To: Brian Steele - Golder bsteele@golder.com Purchase Order # Project Name: Branch-BCD Project Number: 166625421	Attention: Company Name: Address: Pace Quote: Pace Project Manager: Kevin Herring Pace Profile #: 10838	
		Regulatory Agency	
		State / Location	
		GA	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique	MATRIX Drinking Water DW Water WT Waste Water WW Product P Soil/Solid S Oil OL Wipe WP Air AR Other OT Tissue TS	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analyse Test Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)			
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other				6010/6020/7470 - Cadmium, Cobalt, Boron, Calcium	TDS	Chloride, Fluoride, Sulfate
						DATE	TIME	DATE	TIME																
1	PZ-571	WT	G		G	4/12/2021	14:20	-	-	3	2	1											pH= 5.38		
2	PZ-581	WT	G		G	4/12/2021	14:55	-	-	3	2	1												pH= 5.15	
3	PZ-601	WT	G		G	4/12/2021	12:30	-	-	3	2	1												pH= 5.05	
4	EB-1	WT	G		G	4/12/2021	14:45	-	-	3	2	1													
5	FB-1	WT	G		G	4/12/2021	10:30	-	-	3	2	1													
6	DUP-1	WT	G		G	4/12/2021	-	-	-	3	2	1													
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Chris Tidwell / Golder	4/13/21	10:55	<i>[Signature]</i> / HERRING	4/13/21	10:55	

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Chris Tidwell		TEMP in C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
SIGNATURE of SAMPLER: <i>[Signature]</i> DATE Signed: 4-13-2021		



June 02, 2021

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

RE: Project: BRANCH  
Pace Project No.: 92539838

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH

Pace Project No.: 92539838

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH  
Pace Project No.: 92539838

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92539838001	PZ-61I	Water	05/19/21 14:12	05/19/21 16:53
92539838002	DUP-1	Water	05/19/21 00:00	05/19/21 16:53
92539838003	FB-1	Water	05/19/21 14:05	05/19/21 16:53
92539838004	EB-1	Water	05/19/21 14:05	05/19/21 16:53

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH

Pace Project No.: 92539838

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92539838001	PZ-61I	EPA 6020B	CW1	2
92539838002	DUP-1	EPA 6020B	CW1	2
92539838003	FB-1	EPA 6020B	CW1	2
92539838004	EB-1	EPA 6020B	CW1	2

PASI-C = Pace Analytical Services - Charlotte

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

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH  
Pace Project No.: 92539838

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92539838001</b>	<b>PZ-61I</b>					
	Performed by	CUSTOME			05/19/21 17:12	
	pH	5.36	Std. Units		05/19/21 17:12	
EPA 6020B	Boron	0.31	mg/L	0.040	05/27/21 13:58	
EPA 6020B	Cobalt	0.44	mg/L	0.0050	05/27/21 13:58	
<b>92539838002</b>	<b>DUP-1</b>					
EPA 6020B	Boron	0.31	mg/L	0.040	05/27/21 14:21	
EPA 6020B	Cobalt	0.43	mg/L	0.0050	05/27/21 14:21	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BRANCH  
Pace Project No.: 92539838

Sample: PZ-61I		Lab ID: 92539838001		Collected: 05/19/21 14:12		Received: 05/19/21 16:53		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		05/19/21 17:12		
pH	<b>5.36</b>	Std. Units			1		05/19/21 17:12		
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.31</b>	mg/L	0.040	0.0052	1	05/26/21 10:07	05/27/21 13:58	7440-42-8	
Cobalt	<b>0.44</b>	mg/L	0.0050	0.00038	1	05/26/21 10:07	05/27/21 13:58	7440-48-4	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92539838

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**Sample: DUP-1**      **Lab ID: 92539838002**      Collected: 05/19/21 00:00      Received: 05/19/21 16:53      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>0.31</b>	mg/L	0.040	0.0052	1	05/26/21 10:07	05/27/21 14:21	7440-42-8	
Cobalt	<b>0.43</b>	mg/L	0.0050	0.00038	1	05/26/21 10:07	05/27/21 14:21	7440-48-4	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92539838

Sample: FB-1		Lab ID: 92539838003		Collected: 05/19/21 14:05	Received: 05/19/21 16:53	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	ND	mg/L	0.040	0.0052	1	05/26/21 10:07	05/27/21 14:27	7440-42-8	
Cobalt	ND	mg/L	0.0050	0.00038	1	05/26/21 10:07	05/27/21 14:27	7440-48-4	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92539838

**Sample: EB-1**      **Lab ID: 92539838004**      Collected: 05/19/21 14:05      Received: 05/19/21 16:53      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	ND	mg/L	0.040	0.0052	1	05/26/21 10:07	05/27/21 14:32	7440-42-8	
Cobalt	ND	mg/L	0.0050	0.00038	1	05/26/21 10:07	05/27/21 14:32	7440-48-4	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH  
Pace Project No.: 92539838

QC Batch: 622865 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92539838001, 92539838002, 92539838003, 92539838004

METHOD BLANK: 3276817 Matrix: Water  
Associated Lab Samples: 92539838001, 92539838002, 92539838003, 92539838004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0052	05/27/21 13:47	
Cobalt	mg/L	ND	0.0050	0.00038	05/27/21 13:47	

LABORATORY CONTROL SAMPLE: 3276818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.0	101	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3276819 3276820

Parameter	Units	92539838001		3276820		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Boron	mg/L	0.31	1	1	1.2	1.2	87	90	75-125	2	20
Cobalt	mg/L	0.44	0.1	0.1	0.52	0.52	78	80	75-125	0	20

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH  
Pace Project No.: 92539838

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH  
Pace Project No.: 92539838

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92539838001	PZ-61I				
92539838001	PZ-61I	EPA 3005A	622865	EPA 6020B	623085
92539838002	DUP-1	EPA 3005A	622865	EPA 6020B	623085
92539838003	FB-1	EPA 3005A	622865	EPA 6020B	623085
92539838004	EB-1	EPA 3005A	622865	EPA 6020B	623085

**REPORT OF LABORATORY ANALYSIS**

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**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

Golder (GA Power)

Project #:

**WO# : 92539838**



Courier:  Fed Ex  UPS  USPS  Other  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 5/19/21 Kew

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: THR230 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 4.9 Correction Factor: Add/Subtract (°C) -0.2

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.7

USDA Regulated Soil ( N/A, water sample)

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

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

Yes  No

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



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

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

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

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

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

Project #

**W0# : 92539838**

PM: KLH1

Due Date: 06/03/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG9U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																													
2																													
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12																													

**pH Adjustment Log for Preserved Samples**

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

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



May 03, 2021

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

RE: Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 02, 2021 and March 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.

Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92524842001	BRGWA-6S	Water	03/01/21 16:30	03/02/21 10:05
92524842002	BRGWA-2I	Water	03/01/21 16:39	03/02/21 10:05
92524842003	BRGWA-5S	Water	03/02/21 09:29	03/03/21 10:03
92524842004	BRGWA-5I	Water	03/02/21 10:11	03/03/21 10:03
92524842005	BRGWA-2S	Water	03/02/21 12:05	03/03/21 10:03

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92524842001	BRGWA-6S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	JKG	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842002	BRGWA-2I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	JKG	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842003	BRGWA-5S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842004	BRGWA-5I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842005	BRGWA-2S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92524842001</b>	<b>BRGWA-6S</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.70	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.094	mg/L	0.040	03/03/21 17:44	
EPA 6010D	Manganese	0.0051J	mg/L	0.040	03/03/21 17:44	
EPA 6010D	Potassium	1.3	mg/L	0.20	03/03/21 17:44	
EPA 6010D	Sodium	3.0	mg/L	1.0	03/03/21 17:44	
EPA 6010D	Magnesium	3.8	mg/L	0.050	03/03/21 17:44	
EPA 6010D	Hardness, Total(SM 2340B)	26.1	mg/L	2.7	03/03/21 17:44	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	27.6	mg/L	5.0	03/12/21 16:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	27.6	mg/L	5.0	03/12/21 16:01	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.57	mg/L	0.040	03/06/21 12:19	
<b>92524842002</b>	<b>BRGWA-2I</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.66	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.64	mg/L	0.040	03/03/21 17:49	
EPA 6010D	Manganese	0.024J	mg/L	0.040	03/03/21 17:49	
EPA 6010D	Potassium	6.6	mg/L	0.20	03/03/21 17:49	
EPA 6010D	Sodium	5.9	mg/L	1.0	03/03/21 17:49	
EPA 6010D	Magnesium	7.0	mg/L	0.050	03/03/21 17:49	
EPA 6010D	Hardness, Total(SM 2340B)	67.6	mg/L	2.7	03/03/21 17:49	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.3	mg/L	5.0	03/12/21 16:08	
SM 2320B-2011	Alkalinity, Total as CaCO3	79.3	mg/L	5.0	03/12/21 16:08	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.15	mg/L	0.040	03/06/21 12:22	
<b>92524842003</b>	<b>BRGWA-5S</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.42	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.14	mg/L	0.040	03/19/21 04:33	
EPA 6010D	Manganese	0.0063J	mg/L	0.040	03/19/21 04:33	
EPA 6010D	Potassium	0.49	mg/L	0.20	03/19/21 15:40	
EPA 6010D	Sodium	4.5	mg/L	1.0	03/19/21 04:33	
EPA 6010D	Magnesium	7.0	mg/L	0.050	03/19/21 04:33	
EPA 6010D	Hardness, Total(SM 2340B)	73.0	mg/L	2.7	03/19/21 04:33	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.4	mg/L	5.0	03/12/21 18:54	
SM 2320B-2011	Alkalinity, Total as CaCO3	79.4	mg/L	5.0	03/12/21 18:54	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.17	mg/L	0.040	03/08/21 11:30	
<b>92524842004</b>	<b>BRGWA-5I</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.47	Std. Units		03/22/21 11:45	
EPA 6010D	Potassium	0.99	mg/L	0.20	03/10/21 00:57	
EPA 6010D	Sodium	4.5	mg/L	1.0	03/10/21 00:57	
EPA 6010D	Magnesium	8.9	mg/L	0.050	03/10/21 00:57	
EPA 6010D	Hardness, Total(SM 2340B)	69.6	mg/L	2.7	03/10/21 00:57	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.3	mg/L	5.0	03/12/21 19:03	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92524842004</b>	<b>BRGWA-5I</b>					
SM 2320B-2011	Alkalinity, Total as CaCO <sub>3</sub>	79.3	mg/L	5.0	03/12/21 19:03	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	0.21	mg/L	0.040	03/08/21 11:35	
<b>92524842005</b>	<b>BRGWA-2S</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.20	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.19	mg/L	0.040	03/19/21 04:37	
EPA 6010D	Manganese	0.064	mg/L	0.040	03/19/21 04:37	
EPA 6010D	Potassium	0.36	mg/L	0.20	03/19/21 15:44	
EPA 6010D	Sodium	3.2	mg/L	1.0	03/19/21 04:37	
EPA 6010D	Magnesium	3.9	mg/L	0.050	03/19/21 04:37	
EPA 6010D	Hardness, Total(SM 2340B)	26.5	mg/L	2.7	03/19/21 04:37	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	31.9	mg/L	5.0	03/12/21 19:12	
SM 2320B-2011	Alkalinity, Total as CaCO <sub>3</sub>	31.9	mg/L	5.0	03/12/21 19:12	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	0.23	mg/L	0.040	03/08/21 11:39	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

Sample: <b>BRGWA-6S</b> Lab ID: <b>92524842001</b> Collected: 03/01/21 16:30      Received: 03/02/21 10:05      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.70</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.094</b>	mg/L	0.040	0.016	1	03/03/21 10:17	03/03/21 17:44	7439-89-6	
Manganese	<b>0.0051J</b>	mg/L	0.040	0.0017	1	03/03/21 10:17	03/03/21 17:44	7439-96-5	
Potassium	<b>1.3</b>	mg/L	0.20	0.056	1	03/03/21 10:17	03/03/21 17:44	7440-09-7	
Sodium	<b>3.0</b>	mg/L	1.0	0.26	1	03/03/21 10:17	03/03/21 17:44	7440-23-5	
Magnesium	<b>3.8</b>	mg/L	0.050	0.0076	1	03/03/21 10:17	03/03/21 17:44	7439-95-4	
Hardness, Total(SM 2340B)	<b>26.1</b>	mg/L	2.7	0.21	1	03/03/21 10:17	03/03/21 17:44		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>27.6</b>	mg/L	5.0	5.0	1		03/12/21 16:01		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/12/21 16:01		
Alkalinity, Total as CaCO3	<b>27.6</b>	mg/L	5.0	5.0	1		03/12/21 16:01		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.57</b>	mg/L	0.040	0.017	1		03/06/21 12:19		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/09/21 08:28		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-2I		Lab ID: 92524842002		Collected: 03/01/21 16:39		Received: 03/02/21 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.66</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.64</b>	mg/L	0.040	0.016	1	03/03/21 10:17	03/03/21 17:49	7439-89-6	
Manganese	<b>0.024J</b>	mg/L	0.040	0.0017	1	03/03/21 10:17	03/03/21 17:49	7439-96-5	
Potassium	<b>6.6</b>	mg/L	0.20	0.056	1	03/03/21 10:17	03/03/21 17:49	7440-09-7	
Sodium	<b>5.9</b>	mg/L	1.0	0.26	1	03/03/21 10:17	03/03/21 17:49	7440-23-5	
Magnesium	<b>7.0</b>	mg/L	0.050	0.0076	1	03/03/21 10:17	03/03/21 17:49	7439-95-4	
Hardness, Total(SM 2340B)	<b>67.6</b>	mg/L	2.7	0.21	1	03/03/21 10:17	03/03/21 17:49		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 16:08		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/12/21 16:08		
Alkalinity, Total as CaCO3	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 16:08		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.15</b>	mg/L	0.040	0.017	1		03/06/21 12:22		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/09/21 08:43		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-5S      Lab ID: 92524842003      Collected: 03/02/21 09:29      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.42</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.14</b>	mg/L	0.040	0.016	1	03/15/21 14:10	03/19/21 04:33	7439-89-6	
Manganese	<b>0.0063J</b>	mg/L	0.040	0.0017	1	03/15/21 14:10	03/19/21 04:33	7439-96-5	
Potassium	<b>0.49</b>	mg/L	0.20	0.056	1	03/15/21 14:10	03/19/21 15:40	7440-09-7	
Sodium	<b>4.5</b>	mg/L	1.0	0.26	1	03/15/21 14:10	03/19/21 04:33	7440-23-5	
Magnesium	<b>7.0</b>	mg/L	0.050	0.0076	1	03/15/21 14:10	03/19/21 04:33	7439-95-4	
Hardness, Total(SM 2340B)	<b>73.0</b>	mg/L	2.7	0.21	1	03/15/21 14:10	03/19/21 04:33		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>79.4</b>	mg/L	5.0	5.0	1		03/12/21 18:54		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/12/21 18:54		
Alkalinity, Total as CaCO3	<b>79.4</b>	mg/L	5.0	5.0	1		03/12/21 18:54		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.17</b>	mg/L	0.040	0.017	1		03/08/21 11:30		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/16/21 04:13		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-5I		Lab ID: 92524842004		Collected: 03/02/21 10:11	Received: 03/03/21 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.47</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/05/21 10:53	03/10/21 00:57	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/05/21 10:53	03/10/21 00:57	7439-96-5	
Potassium	<b>0.99</b>	mg/L	0.20	0.056	1	03/05/21 10:53	03/10/21 00:57	7440-09-7	
Sodium	<b>4.5</b>	mg/L	1.0	0.26	1	03/05/21 10:53	03/10/21 00:57	7440-23-5	
Magnesium	<b>8.9</b>	mg/L	0.050	0.0076	1	03/05/21 10:53	03/10/21 00:57	7439-95-4	
Hardness, Total(SM 2340B)	<b>69.6</b>	mg/L	2.7	0.21	1	03/05/21 10:53	03/10/21 00:57		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 19:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/12/21 19:03		
Alkalinity, Total as CaCO3	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 19:03		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.21</b>	mg/L	0.040	0.017	1		03/08/21 11:35		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 04:53		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-2S		Lab ID: 92524842005		Collected: 03/02/21 12:05		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.20</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.19</b>	mg/L	0.040	0.016	1	03/15/21 14:10	03/19/21 04:37	7439-89-6	
Manganese	<b>0.064</b>	mg/L	0.040	0.0017	1	03/15/21 14:10	03/19/21 04:37	7439-96-5	
Potassium	<b>0.36</b>	mg/L	0.20	0.056	1	03/15/21 14:10	03/19/21 15:44	7440-09-7	
Sodium	<b>3.2</b>	mg/L	1.0	0.26	1	03/15/21 14:10	03/19/21 04:37	7440-23-5	
Magnesium	<b>3.9</b>	mg/L	0.050	0.0076	1	03/15/21 14:10	03/19/21 04:37	7439-95-4	
Hardness, Total(SM 2340B)	<b>26.5</b>	mg/L	2.7	0.21	1	03/15/21 14:10	03/19/21 04:37		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>31.9</b>	mg/L	5.0	5.0	1		03/12/21 19:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/12/21 19:12		
Alkalinity, Total as CaCO3	<b>31.9</b>	mg/L	5.0	5.0	1		03/12/21 19:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.23</b>	mg/L	0.040	0.017	1		03/08/21 11:39		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:09		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 603832 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3180960 Matrix: Water  
Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/03/21 17:08	
Iron	mg/L	ND	0.040	0.016	03/03/21 17:08	
Magnesium	mg/L	ND	0.050	0.0076	03/03/21 17:08	
Manganese	mg/L	ND	0.040	0.0017	03/03/21 17:08	
Potassium	mg/L	ND	0.20	0.056	03/03/21 17:08	
Sodium	mg/L	ND	1.0	0.26	03/03/21 17:08	

LABORATORY CONTROL SAMPLE: 3180961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.0	100	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3180962 3180963

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524853001 Result	Spike Conc.	Spike Conc.	Conc.								
Hardness, Total(SM 2340B)	mg/L	72.7	6.6	6.6	6.6	82.1	84.5	141	178	75-125	3	20	
Iron	mg/L	1.5	1	1	1	2.6	2.7	109	114	75-125	2	20	
Magnesium	mg/L	3.5	1	1	1	4.7	4.8	112	125	75-125	3	20	
Manganese	mg/L	0.35	1	1	1	1.3	1.4	98	100	75-125	2	20	
Potassium	mg/L	4.0	1	1	1	5.1	5.2	110	123	75-125	3	20	
Sodium	mg/L	7.5	1	1	1	8.8	9.0	137	150	75-125	2	20 M1	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 604550	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D ATL
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524842004

METHOD BLANK: 3184771 Matrix: Water

Associated Lab Samples: 92524842004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/09/21 23:35	
Magnesium	mg/L	ND	0.050	0.0076	03/09/21 23:35	
Manganese	mg/L	ND	0.040	0.0017	03/09/21 23:35	
Potassium	mg/L	0.081J	0.20	0.056	03/09/21 23:35	
Sodium	mg/L	ND	1.0	0.26	03/09/21 23:35	

LABORATORY CONTROL SAMPLE: 3184772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.6	99	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	100	80-120	
Manganese	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	1.1	109	80-120	
Sodium	mg/L	1	1.2	117	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3184773 3184774

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524831002 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	149	6.6	6.6	152	154	49	84	75-125	2	20
Iron	mg/L	0.53	1	1	2.3	1.6	178	110	75-125	35	20 M1,R1
Magnesium	mg/L	9.5	1	1	10.3	10.4	81	96	75-125	1	20
Manganese	mg/L	1.3	1	1	2.2	2.3	94	101	75-125	3	20
Potassium	mg/L	6.1	1	1	7.0	7.1	93	104	75-125	2	20
Sodium	mg/L	10.5	1	1	11.2	11.4	68	89	75-125	2	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 606634 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92524842003, 92524842005

METHOD BLANK: 3196175 Matrix: Water  
Associated Lab Samples: 92524842003, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/19/21 03:10	
Iron	mg/L	ND	0.040	0.016	03/19/21 03:10	
Magnesium	mg/L	ND	0.050	0.0076	03/19/21 03:10	
Manganese	mg/L	ND	0.040	0.0017	03/19/21 03:10	
Potassium	mg/L	ND	0.20	0.056	03/19/21 03:10	
Sodium	mg/L	ND	1.0	0.26	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.1	113	80-120	
Sodium	mg/L	1	1.1	115	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031001 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	789	6.6	6.6	797	775	122	-204	75-125	3	20
Iron	mg/L	2.8	1	1	3.8	3.7	101	89	75-125	3	20
Magnesium	mg/L	66.1	1	1	67.0	65.6	86	-56	75-125	2	20 M1
Manganese	mg/L	1.1	1	1	2.1	2.0	99	91	75-125	4	20
Potassium	mg/L	14.1	1	1	15.3	15.0	122	90	75-125	2	20
Sodium	mg/L	51.4	1	1	52.6	51.1	123	-27	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 606220

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3193657

Matrix: Water

Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/12/21 12:40	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/12/21 12:40	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/12/21 12:40	

LABORATORY CONTROL SAMPLE: 3193658

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3193659 3193660

Parameter	Units	92526098001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	496	50	50	506	510	20	28	80-120	1	25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3193661 3193662

Parameter	Units	92526099006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	25.2	25.5	50	51	80-120	1	25	M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 606222 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524842003, 92524842004, 92524842005

METHOD BLANK: 3193668 Matrix: Water

Associated Lab Samples: 92524842003, 92524842004, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/12/21 16:41	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/12/21 16:41	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/12/21 16:41	

LABORATORY CONTROL SAMPLE: 3193669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.5	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3193670 3193671

Parameter	Units	92526099008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	ND	ND	0	0	80-120		25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3194100 3194101

Parameter	Units	92526099009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	51.4	51.6	103	103	80-120	0	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 604635	Analysis Method: EPA 353.2 Rev 2.0 1993
QC Batch Method: EPA 353.2 Rev 2.0 1993	Analysis Description: 353.2 Nitrate + Nitrite, preserved
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3185368 Matrix: Water

Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/06/21 12:02	

LABORATORY CONTROL SAMPLE: 3185369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185370 3185371

Parameter	Units	92525704003		3185371		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.29	2.5	2.5	2.4	2.3	83	82	90-110	1	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185372 3185373

Parameter	Units	92525704004		3185373		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.25	2.5	2.5	2.4	2.4	86	85	90-110	1	10 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 604829 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

METHOD BLANK: 3186506 Matrix: Water  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 11:27	

LABORATORY CONTROL SAMPLE: 3186507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186508 3186509

Parameter	Units	3186508		3186509		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Conc.	MS Result	MSD Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.17	2.5	2.6	2.6	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186510 3186511

Parameter	Units	3186510		3186511		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Conc.	MS Result	MSD Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.21	2.5	2.6	2.6	97	96	90-110	1	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 710987 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3874940 Matrix: Water  
Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/09/21 05:57	

LABORATORY CONTROL SAMPLE: 3874941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3874942 3874943

Parameter	Units	3874942		3874943		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	7.0	20	25.6	25.7	93	93	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3874944 3874945

Parameter	Units	3874944		3874945		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	1.9		20.6	20.7				0	20	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 712765 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

METHOD BLANK: 3886735 Matrix: Water  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/16/21 03:44	

LABORATORY CONTROL SAMPLE: 3886736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886737 3886738

Parameter	Units	92524842003		3886738		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Dissolved Organic Carbon	mg/L	ND	20	20	18.6	18.7	91	91	80-120	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886739 3886740

Parameter	Units	92525383006		3886740		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Dissolved Organic Carbon	mg/L	ND	20	20	18.8	18.8	93	93	80-120	0	20

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92524842001	BRGWA-6S				
92524842002	BRGWA-2I				
92524842003	BRGWA-5S				
92524842004	BRGWA-5I				
92524842005	BRGWA-2S				
92524842001	BRGWA-6S	EPA 3010A	603832	EPA 6010D	603942
92524842002	BRGWA-2I	EPA 3010A	603832	EPA 6010D	603942
92524842003	BRGWA-5S	EPA 3010A	606634	EPA 6010D	606723
92524842004	BRGWA-5I	EPA 3010A	604550	EPA 6010D	604640
92524842005	BRGWA-2S	EPA 3010A	606634	EPA 6010D	606723
92524842001	BRGWA-6S	SM 2320B-2011	606220		
92524842002	BRGWA-2I	SM 2320B-2011	606220		
92524842003	BRGWA-5S	SM 2320B-2011	606222		
92524842004	BRGWA-5I	SM 2320B-2011	606222		
92524842005	BRGWA-2S	SM 2320B-2011	606222		
92524842001	BRGWA-6S	EPA 353.2 Rev 2.0 1993	604635		
92524842002	BRGWA-2I	EPA 353.2 Rev 2.0 1993	604635		
92524842003	BRGWA-5S	EPA 353.2 Rev 2.0 1993	604829		
92524842004	BRGWA-5I	EPA 353.2 Rev 2.0 1993	604829		
92524842005	BRGWA-2S	EPA 353.2 Rev 2.0 1993	604829		
92524842001	BRGWA-6S	SM 5310B	710987		
92524842002	BRGWA-2I	SM 5310B	710987		
92524842003	BRGWA-5S	SM 5310B	712765		
92524842004	BRGWA-5I	SM 5310B	712765		
92524842005	BRGWA-2S	SM 5310B	712765		

**REPORT OF LABORATORY ANALYSIS**

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

Document Revised: October 23, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: G-A power - coal combustion Project

WO#: **92524842**

Carrier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seal Intact?  Yes  No

Date/Initials Person Examining Contents: MT 3/2/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Time Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Cooler Temp: 4.4 Correction Factor: Add/Subtract (°C) ± 0

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

Cooler Temp Corrected (°C): 4.4

USDA Regulated Soil?  N/A, water sample  
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

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

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

COMMENTS/SAMPLE DISCREPANCY \_\_\_\_\_ Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_ Date: \_\_\_\_\_



ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals

Address: 2480 Walker Road

Atlanta, GA 30339

Report To: Jhp Alvarado

Copy To: Galder

Phone: (404) 506-7139

Email: jzaham@southernco.com

Collected by: Jhp Alvarado

Address: Mactac

Collected by: Jhp Alvarado

Site: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Project Name: Plant Branch 600/E Background

Project #: CR 4th Semi-Annual

Price Project Manager: Kevin.hertel@patefab.com

Turnaround Date Required: [ ] Yes [ ] No

Field Filled (if applicable): [ ] Yes [ ] No

Rush: [ ] Same Day [ ] Next Day [ ] 1-2 Day [ ] 3-5 Day [ ] 6-10 Day

Analysis: \_\_\_\_\_

Matrix Codes: Insert in Matrix Box below: Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Sediment (SL), Oil (OL), Vapor (VP), Air (AA), Tissue (T), Shavings (S), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Conc / Grab	Collected (or Composite) Date	Time	Composite End Date	Time	pH	# of Cans
BRGWA-5S	GW	6	3-2-21	0924			6.42	6
RRGWA-5I	GW	6	3-2-21	1011			6.47	6
BRGWA-2S	GW	6	3-2-21	1205			6.20	6

Type of Ice Used	Wet	Blue	Dry	Name
Shipping Material Used:				

Additional sample(s) submitted (<500 gms): Y N NA

Requested by/Company (Signature): Jhp Alvarado

Date/Time: 3-3-21 10815

Requested by/Company (Signature): \_\_\_\_\_

Date/Time: \_\_\_\_\_

Condition Preservative Type: 1

Analysis: 1

Lab Project Manager: \_\_\_\_\_

Metals 6010/6020/7470 - see comments	Total Alkalinity and Bicarbonate/Carbonate Alkalinity	Dissolved Organic Carbon	NOX 353 2	Total Hardness 5M 2304B
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X

SHOWN HOLDS PRESENT (432 hours): Y N N/A

Lab Sample Temperature info: \_\_\_\_\_

Temp Blank Received: Y N NA

Order 1 Temp: \_\_\_\_\_

Order 2 Temp: \_\_\_\_\_

Order 3 Temp: \_\_\_\_\_

Requested by/Company (Signature): \_\_\_\_\_

Date/Time: \_\_\_\_\_

Non-Conformance(s): \_\_\_\_\_

Page: 1 of 1



May 03, 2021

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

RE: Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 03, 2021 and March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta

Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525383001	BRGWA-12S	Water	03/02/21 11:50	03/03/21 10:03
92525383002	BRGWA-12I	Water	03/02/21 08:56	03/03/21 10:03
92525383003	BRGWA-23S	Water	03/02/21 15:55	03/03/21 10:03
92525383004	BRGWC-45	Water	03/02/21 13:40	03/03/21 10:03
92525383005	BRGWC-47	Water	03/02/21 15:48	03/03/21 10:03
92525383006	BRGWC-25I	Water	03/02/21 17:08	03/03/21 10:03
92525383007	BRGWC-27I	Water	03/03/21 14:14	03/04/21 08:15
92525383008	BRGWC-29I	Water	03/03/21 16:12	03/04/21 08:15
92525383009	BRGWC-30I	Water	03/03/21 13:06	03/04/21 08:15
92525383010	DUP-1	Water	03/03/21 13:06	03/04/21 08:15
92525383011	BRGWC-32S	Water	03/04/21 11:11	03/05/21 11:30
92525383012	BRGWC-52I	Water	03/04/21 12:20	03/05/21 11:30
92525383013	FB-2	Water	03/04/21 12:40	03/05/21 11:30
92525383014	BRGWC-50	Water	03/04/21 17:07	03/05/21 11:30
92525383015	EB-1	Water	03/05/21 07:31	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525383001	BRGWA-12S	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383002	BRGWA-12I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383003	BRGWA-23S	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383004	BRGWC-45	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383005	BRGWC-47	EPA 6010D	DRB, KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383006	BRGWC-25I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383007	BRGWC-27I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383008	BRGWC-29I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383009	BRGWC-30I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383010	DUP-1	EPA 6010D	KH	6	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525383011	BRGWC-32S	SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
92525383012	BRGWC-52I	SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
92525383013	FB-2	SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
92525383014	BRGWC-50	SM 5310B	AGS	1	PASI-O
		EPA 6010D	DRB, KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
92525383015	EB-1	SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525383001</b>	<b>BRGWA-12S</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.92	Std. Units		03/18/21 07:54	
EPA 6010D	Potassium	2.6	mg/L	0.20	03/10/21 01:21	
EPA 6010D	Sodium	5.0	mg/L	1.0	03/10/21 01:21	
EPA 6010D	Magnesium	3.1	mg/L	0.050	03/10/21 01:21	
EPA 6010D	Hardness, Total(SM 2340B)	26.4	mg/L	2.7	03/10/21 01:21	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	31.2	mg/L	5.0	03/15/21 17:31	
SM 2320B-2011	Alkalinity, Total as CaCO3	31.2	mg/L	5.0	03/15/21 17:31	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.97	mg/L	0.040	03/08/21 11:40	
<b>92525383002</b>	<b>BRGWA-12I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	6.11	Std. Units		03/18/21 07:54	
EPA 6010D	Manganese	0.0056J	mg/L	0.040	03/10/21 01:41	
EPA 6010D	Potassium	3.2	mg/L	0.20	03/10/21 01:41	
EPA 6010D	Sodium	10.0	mg/L	1.0	03/10/21 01:41	
EPA 6010D	Magnesium	3.4	mg/L	0.050	03/10/21 01:41	
EPA 6010D	Hardness, Total(SM 2340B)	43.4	mg/L	2.7	03/10/21 01:41	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	64.7	mg/L	5.0	03/15/21 17:40	
SM 2320B-2011	Alkalinity, Total as CaCO3	64.7	mg/L	5.0	03/15/21 17:40	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.64	mg/L	0.040	03/08/21 11:41	
<b>92525383003</b>	<b>BRGWA-23S</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.75	Std. Units		03/18/21 07:54	
EPA 6010D	Manganese	0.021J	mg/L	0.040	03/10/21 01:55	
EPA 6010D	Potassium	4.0	mg/L	0.20	03/10/21 01:55	
EPA 6010D	Sodium	11.3	mg/L	1.0	03/10/21 01:55	
EPA 6010D	Magnesium	6.5	mg/L	0.050	03/10/21 01:55	
EPA 6010D	Hardness, Total(SM 2340B)	55.8	mg/L	2.7	03/10/21 01:55	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	27.8	mg/L	5.0	03/15/21 17:52	
SM 2320B-2011	Alkalinity, Total as CaCO3	27.8	mg/L	5.0	03/15/21 17:52	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.13	mg/L	0.040	03/08/21 11:42	
<b>92525383004</b>	<b>BRGWC-45</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	6.17	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	1.2	mg/L	0.040	03/10/21 02:00	
EPA 6010D	Manganese	0.42	mg/L	0.040	03/10/21 02:00	
EPA 6010D	Potassium	4.1	mg/L	0.20	03/10/21 02:00	
EPA 6010D	Sodium	14.8	mg/L	1.0	03/10/21 02:00	
EPA 6010D	Magnesium	15.7	mg/L	0.050	03/10/21 02:00	
EPA 6010D	Hardness, Total(SM 2340B)	149	mg/L	2.7	03/10/21 02:00	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	50.6	mg/L	5.0	03/15/21 18:14	
SM 2320B-2011	Alkalinity, Total as CaCO3	50.6	mg/L	5.0	03/15/21 18:14	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.019J	mg/L	0.040	03/08/21 11:43	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525383004</b>	<b>BRGWC-45</b>					
SM 5310B	Dissolved Organic Carbon	1.2	mg/L	1.0	03/16/21 06:03	
<b>92525383005</b>	<b>BRGWC-47</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.59	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	0.58	mg/L	0.040	03/10/21 02:05	
EPA 6010D	Manganese	0.028J	mg/L	0.040	03/10/21 02:05	
EPA 6010D	Potassium	12.8	mg/L	0.20	03/10/21 02:05	
EPA 6010D	Sodium	42.9	mg/L	1.0	03/10/21 02:05	
EPA 6010D	Magnesium	135	mg/L	0.50	03/11/21 17:30	
EPA 6010D	Hardness, Total(SM 2340B)	1440	mg/L	27.0	03/11/21 17:30	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	26.5	mg/L	5.0	03/15/21 18:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	26.5	mg/L	5.0	03/15/21 18:24	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.076	mg/L	0.040	03/08/21 11:44	
<b>92525383006</b>	<b>BRGWC-25I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	6.10	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	1.7	mg/L	0.040	03/10/21 02:10	
EPA 6010D	Manganese	1.5	mg/L	0.040	03/10/21 02:10	
EPA 6010D	Potassium	4.3	mg/L	0.20	03/10/21 02:10	
EPA 6010D	Sodium	16.9	mg/L	1.0	03/10/21 02:10	
EPA 6010D	Magnesium	17.4	mg/L	0.050	03/10/21 02:10	
EPA 6010D	Hardness, Total(SM 2340B)	182	mg/L	2.7	03/10/21 02:10	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	74.9	mg/L	5.0	03/15/21 18:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	74.9	mg/L	5.0	03/15/21 18:32	
<b>92525383007</b>	<b>BRGWC-27I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.90	Std. Units		03/18/21 07:54	
EPA 6010D	Manganese	0.52	mg/L	0.040	03/10/21 02:15	
EPA 6010D	Potassium	5.1	mg/L	0.20	03/10/21 02:15	
EPA 6010D	Sodium	14.9	mg/L	1.0	03/10/21 02:15	
EPA 6010D	Magnesium	4.9	mg/L	0.050	03/10/21 02:15	
EPA 6010D	Hardness, Total(SM 2340B)	165	mg/L	2.7	03/10/21 02:15	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	21.5	mg/L	5.0	03/16/21 22:17	
SM 2320B-2011	Alkalinity, Total as CaCO3	21.5	mg/L	5.0	03/16/21 22:17	
<b>92525383008</b>	<b>BRGWC-29I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	4.46	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	35.4	mg/L	0.040	03/10/21 02:20	
EPA 6010D	Manganese	1.6	mg/L	0.040	03/10/21 02:20	
EPA 6010D	Potassium	10.6	mg/L	0.20	03/10/21 02:20	
EPA 6010D	Sodium	18.5	mg/L	1.0	03/10/21 02:20	
EPA 6010D	Magnesium	9.2	mg/L	0.050	03/10/21 02:20	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525383008</b>	<b>BRGWC-29I</b>					
EPA 6010D	Hardness, Total(SM 2340B)	221	mg/L	2.7	03/10/21 02:20	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.021J	mg/L	0.040	03/08/21 12:15	
<b>92525383009</b>	<b>BRGWC-30I</b>					
	Performed by	CUSTOMER			03/18/21 07:54	
	pH	6.29	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	1.8	mg/L	0.040	03/10/21 02:24	
EPA 6010D	Manganese	0.51	mg/L	0.040	03/10/21 02:24	
EPA 6010D	Potassium	4.3	mg/L	0.20	03/10/21 02:24	
EPA 6010D	Sodium	25.7	mg/L	1.0	03/10/21 02:24	
EPA 6010D	Magnesium	33.6	mg/L	0.050	03/10/21 02:24	
EPA 6010D	Hardness, Total(SM 2340B)	444	mg/L	2.7	03/10/21 02:24	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	109	mg/L	5.0	03/16/21 22:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	109	mg/L	5.0	03/16/21 22:24	
<b>92525383010</b>	<b>DUP-1</b>					
EPA 6010D	Manganese	0.51	mg/L	0.040	03/10/21 02:29	
EPA 6010D	Potassium	5.0	mg/L	0.20	03/10/21 02:29	
EPA 6010D	Sodium	14.6	mg/L	1.0	03/10/21 02:29	
EPA 6010D	Magnesium	4.8	mg/L	0.050	03/10/21 02:29	
EPA 6010D	Hardness, Total(SM 2340B)	162	mg/L	2.7	03/10/21 02:29	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	22.4	mg/L	5.0	03/16/21 22:34	
SM 2320B-2011	Alkalinity, Total as CaCO3	22.4	mg/L	5.0	03/16/21 22:34	
<b>92525383011</b>	<b>BRGWC-32S</b>					
	Performed by	CUSTOMER			03/18/21 07:54	
	pH	5.98	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	0.52	mg/L	0.040	03/10/21 07:25	
EPA 6010D	Manganese	0.0040J	mg/L	0.040	03/10/21 07:25	
EPA 6010D	Potassium	1.6	mg/L	0.20	03/10/21 07:25	
EPA 6010D	Sodium	24.3	mg/L	1.0	03/10/21 07:25	
EPA 6010D	Magnesium	25.4	mg/L	0.050	03/10/21 07:25	
EPA 6010D	Hardness, Total(SM 2340B)	194	mg/L	2.7	03/10/21 07:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	28.9	mg/L	5.0	03/17/21 20:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	28.9	mg/L	5.0	03/17/21 20:01	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.14	mg/L	0.040	03/08/21 12:56	
<b>92525383012</b>	<b>BRGWC-52I</b>					
	Performed by	CUSTOMER			03/18/21 07:54	
	pH	5.87	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	6.0	mg/L	0.040	03/10/21 07:55	
EPA 6010D	Manganese	0.95	mg/L	0.040	03/10/21 07:55	
EPA 6010D	Potassium	5.8	mg/L	0.20	03/10/21 07:55	
EPA 6010D	Sodium	20.9	mg/L	1.0	03/10/21 07:55	
EPA 6010D	Magnesium	19.3	mg/L	0.050	03/10/21 07:55	
EPA 6010D	Hardness, Total(SM 2340B)	198	mg/L	2.7	03/10/21 07:55	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	128	mg/L	5.0	03/17/21 20:16	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525383012</b>	<b>BRGWC-52I</b>					
SM 2320B-2011	Alkalinity, Total as CaCO3	128	mg/L	5.0	03/17/21 20:16	
SM 5310B	Dissolved Organic Carbon	1.5	mg/L	1.0	03/12/21 17:26	
<b>92525383013</b>	<b>FB-2</b>					
EPA 6010D	Iron	0.29	mg/L	0.040	03/10/21 08:00	
EPA 6010D	Manganese	0.0022J	mg/L	0.040	03/10/21 08:00	
<b>92525383014</b>	<b>BRGWC-50</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	4.34	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	0.36	mg/L	0.040	03/10/21 08:05	
EPA 6010D	Manganese	164	mg/L	0.40	03/11/21 18:02	
EPA 6010D	Potassium	11.0	mg/L	0.20	03/10/21 08:05	
EPA 6010D	Sodium	50.3	mg/L	1.0	03/10/21 08:05	
EPA 6010D	Magnesium	312	mg/L	0.50	03/11/21 18:02	
EPA 6010D	Hardness, Total(SM 2340B)	2430	mg/L	27.0	03/11/21 18:02	
SM 5310B	Dissolved Organic Carbon	0.91J	mg/L	1.0	03/12/21 17:51	
<b>92525383015</b>	<b>EB-1</b>					
EPA 6010D	Manganese	0.0027J	mg/L	0.040	03/10/21 08:10	
EPA 6010D	Magnesium	0.0087J	mg/L	0.050	03/10/21 08:10	
SM 5310B	Dissolved Organic Carbon	0.73J	mg/L	1.0	03/12/21 18:04	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWA-12S</b> Lab ID: <b>92525383001</b> Collected: 03/02/21 11:50 Received: 03/03/21 10:03 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.92</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 01:21	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 01:21	7439-96-5	
Potassium	<b>2.6</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 01:21	7440-09-7	
Sodium	<b>5.0</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 01:21	7440-23-5	
Magnesium	<b>3.1</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 01:21	7439-95-4	
Hardness, Total(SM 2340B)	<b>26.4</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 01:21		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>31.2</b>	mg/L	5.0	5.0	1		03/15/21 17:31		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 17:31		
Alkalinity, Total as CaCO3	<b>31.2</b>	mg/L	5.0	5.0	1		03/15/21 17:31		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.97</b>	mg/L	0.040	0.017	1		03/08/21 11:40		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:22		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: BRGWA-121      Lab ID: 92525383002      Collected: 03/02/21 08:56      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.11</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 01:41	7439-89-6	
Manganese	<b>0.0056J</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 01:41	7439-96-5	
Potassium	<b>3.2</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 01:41	7440-09-7	
Sodium	<b>10.0</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 01:41	7440-23-5	
Magnesium	<b>3.4</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 01:41	7439-95-4	
Hardness, Total(SM 2340B)	<b>43.4</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 01:41		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>64.7</b>	mg/L	5.0	5.0	1		03/15/21 17:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 17:40		
Alkalinity, Total as CaCO3	<b>64.7</b>	mg/L	5.0	5.0	1		03/15/21 17:40		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.64</b>	mg/L	0.040	0.017	1		03/08/21 11:41		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:36		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWA-23S</b> Lab ID: <b>92525383003</b> Collected: 03/02/21 15:55      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.75</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 01:55	7439-89-6	
Manganese	<b>0.021J</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 01:55	7439-96-5	
Potassium	<b>4.0</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 01:55	7440-09-7	
Sodium	<b>11.3</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 01:55	7440-23-5	
Magnesium	<b>6.5</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 01:55	7439-95-4	
Hardness, Total(SM 2340B)	<b>55.8</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 01:55		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>27.8</b>	mg/L	5.0	5.0	1		03/15/21 17:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 17:52		
Alkalinity, Total as CaCO3	<b>27.8</b>	mg/L	5.0	5.0	1		03/15/21 17:52		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.13</b>	mg/L	0.040	0.017	1		03/08/21 11:42		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:49		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWC-45</b> Lab ID: <b>92525383004</b> Collected: 03/02/21 13:40      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.17</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.2</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:00	7439-89-6	
Manganese	<b>0.42</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:00	7439-96-5	
Potassium	<b>4.1</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:00	7440-09-7	
Sodium	<b>14.8</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:00	7440-23-5	
Magnesium	<b>15.7</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:00	7439-95-4	
Hardness, Total(SM 2340B)	<b>149</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:00		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>50.6</b>	mg/L	5.0	5.0	1		03/15/21 18:14		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/15/21 18:14		
Alkalinity, Total as CaCO3	<b>50.6</b>	mg/L	5.0	5.0	1		03/15/21 18:14		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.019J</b>	mg/L	0.040	0.017	1		03/08/21 11:43		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.2</b>	mg/L	1.0	0.50	1		03/16/21 06:03		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-47</b> Lab ID: <b>92525383005</b> Collected: 03/02/21 15:48      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.59</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.58</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:05	7439-89-6	
Manganese	<b>0.028J</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:05	7439-96-5	
Potassium	<b>12.8</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:05	7440-09-7	
Sodium	<b>42.9</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:05	7440-23-5	
Magnesium	<b>135</b>	mg/L	0.50	0.076	10	03/09/21 11:14	03/11/21 17:30	7439-95-4	
Hardness, Total(SM 2340B)	<b>1440</b>	mg/L	27.0	2.1	10	03/09/21 11:14	03/11/21 17:30		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>26.5</b>	mg/L	5.0	5.0	1		03/15/21 18:24		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/15/21 18:24		
Alkalinity, Total as CaCO3	<b>26.5</b>	mg/L	5.0	5.0	1		03/15/21 18:24		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.076</b>	mg/L	0.040	0.017	1		03/08/21 11:44		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/16/21 06:16		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: BRGWC-25I		Lab ID: 92525383006		Collected: 03/02/21 17:08		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.10</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.7</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:10	7439-89-6	
Manganese	<b>1.5</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:10	7439-96-5	
Potassium	<b>4.3</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:10	7440-09-7	
Sodium	<b>16.9</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:10	7440-23-5	
Magnesium	<b>17.4</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:10	7439-95-4	
Hardness, Total(SM 2340B)	<b>182</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:10		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>74.9</b>	mg/L	5.0	5.0	1		03/15/21 18:32		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/15/21 18:32		
Alkalinity, Total as CaCO3	<b>74.9</b>	mg/L	5.0	5.0	1		03/15/21 18:32		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 11:48		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/16/21 06:30		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: BRGWC-271      Lab ID: 92525383007      Collected: 03/03/21 14:14      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.90</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:15	7439-89-6	
Manganese	<b>0.52</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:15	7439-96-5	
Potassium	<b>5.1</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:15	7440-09-7	
Sodium	<b>14.9</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:15	7440-23-5	
Magnesium	<b>4.9</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:15	7439-95-4	
Hardness, Total(SM 2340B)	<b>165</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:15		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>21.5</b>	mg/L	5.0	5.0	1		03/16/21 22:17		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:17		
Alkalinity, Total as CaCO3	<b>21.5</b>	mg/L	5.0	5.0	1		03/16/21 22:17		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:09		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 15:50		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: BRGWC-291		Lab ID: 92525383008		Collected: 03/03/21 16:12		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>4.46</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>35.4</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:20	7439-89-6	
Manganese	<b>1.6</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:20	7439-96-5	
Potassium	<b>10.6</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:20	7440-09-7	
Sodium	<b>18.5</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:20	7440-23-5	
Magnesium	<b>9.2</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:20	7439-95-4	
Hardness, Total(SM 2340B)	<b>221</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:20		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:22		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:22		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/16/21 22:22		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.021J</b>	mg/L	0.040	0.017	1		03/08/21 12:15		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 16:32		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: BRGWC-301      Lab ID: 92525383009      Collected: 03/03/21 13:06      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.29</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.8</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:24	7439-89-6	
Manganese	<b>0.51</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:24	7439-96-5	
Potassium	<b>4.3</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:24	7440-09-7	
Sodium	<b>25.7</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:24	7440-23-5	
Magnesium	<b>33.6</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:24	7439-95-4	
Hardness, Total(SM 2340B)	<b>444</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:24		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>109</b>	mg/L	5.0	5.0	1		03/16/21 22:24		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/16/21 22:24		
Alkalinity, Total as CaCO3	<b>109</b>	mg/L	5.0	5.0	1		03/16/21 22:24		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:16		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 16:46		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: DUP-1		Lab ID: 92525383010		Collected: 03/03/21 13:06	Received: 03/04/21 08:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:29	7439-89-6	
Manganese	0.51	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:29	7439-96-5	
Potassium	5.0	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:29	7440-09-7	
Sodium	14.6	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:29	7440-23-5	
Magnesium	4.8	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:29	7439-95-4	
Hardness, Total(SM 2340B)	162	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:29		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	22.4	mg/L	5.0	5.0	1		03/16/21 22:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:34		
Alkalinity, Total as CaCO3	22.4	mg/L	5.0	5.0	1		03/16/21 22:34		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:17		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 16:59		

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### ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-32S</b> Lab ID: <b>92525383011</b> Collected: 03/04/21 11:11      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.98</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.52</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 07:25	7439-89-6	
Manganese	<b>0.0040J</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 07:25	7439-96-5	
Potassium	<b>1.6</b>	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 07:25	7440-09-7	
Sodium	<b>24.3</b>	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 07:25	7440-23-5	
Magnesium	<b>25.4</b>	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 07:25	7439-95-4	
Hardness, Total(SM 2340B)	<b>194</b>	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 07:25		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>28.9</b>	mg/L	5.0	5.0	1		03/17/21 20:01		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 20:01		
Alkalinity, Total as CaCO3	<b>28.9</b>	mg/L	5.0	5.0	1		03/17/21 20:01		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.14</b>	mg/L	0.040	0.017	1		03/08/21 12:56		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 17:12		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: BRGWC-521      Lab ID: 92525383012      Collected: 03/04/21 12:20      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.87</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>6.0</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 07:55	7439-89-6	
Manganese	<b>0.95</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 07:55	7439-96-5	
Potassium	<b>5.8</b>	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 07:55	7440-09-7	
Sodium	<b>20.9</b>	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 07:55	7440-23-5	
Magnesium	<b>19.3</b>	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 07:55	7439-95-4	
Hardness, Total(SM 2340B)	<b>198</b>	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 07:55		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>128</b>	mg/L	5.0	5.0	1		03/17/21 20:16		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 20:16		
Alkalinity, Total as CaCO3	<b>128</b>	mg/L	5.0	5.0	1		03/17/21 20:16		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:58		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.5</b>	mg/L	1.0	0.50	1		03/12/21 17:26		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: FB-2		Lab ID: 92525383013		Collected: 03/04/21 12:40	Received: 03/05/21 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	0.29	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 08:00	7439-89-6	
Manganese	0.0022J	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 08:00	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 08:00	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 08:00	7440-23-5	
Magnesium	ND	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 08:00	7439-95-4	
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 08:00		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:28		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 20:28		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:59		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 17:37		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-50</b> Lab ID: <b>92525383014</b> Collected: 03/04/21 17:07      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>4.34</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.36</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 08:05	7439-89-6	
Manganese	<b>164</b>	mg/L	0.40	0.017	10	03/09/21 13:33	03/11/21 18:02	7439-96-5	
Potassium	<b>11.0</b>	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 08:05	7440-09-7	
Sodium	<b>50.3</b>	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 08:05	7440-23-5	
Magnesium	<b>312</b>	mg/L	0.50	0.076	10	03/09/21 13:33	03/11/21 18:02	7439-95-4	
Hardness, Total(SM 2340B)	<b>2430</b>	mg/L	27.0	2.1	10	03/09/21 13:33	03/11/21 18:02		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:31		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:31		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 20:31		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 13:00		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.91J</b>	mg/L	1.0	0.50	1		03/12/21 17:51		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: EB-1		Lab ID: 92525383015		Collected: 03/05/21 07:31	Received: 03/05/21 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 08:10	7439-89-6	
Manganese	<b>0.0027J</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 08:10	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 08:10	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 08:10	7440-23-5	
Magnesium	<b>0.0087J</b>	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 08:10	7439-95-4	
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 08:10		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:36		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:36		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 20:36		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 13:01		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	<b>0.73J</b>	mg/L	1.0	0.50	1		03/12/21 18:04		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 605192 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006, 92525383007, 92525383008, 92525383009, 92525383010

METHOD BLANK: 3188292 Matrix: Water  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006, 92525383007, 92525383008, 92525383009, 92525383010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/10/21 01:11	
Iron	mg/L	ND	0.040	0.016	03/10/21 01:11	
Magnesium	mg/L	ND	0.050	0.0076	03/10/21 01:11	
Manganese	mg/L	ND	0.040	0.0017	03/10/21 01:11	
Potassium	mg/L	ND	0.20	0.056	03/10/21 01:11	
Sodium	mg/L	ND	1.0	0.26	03/10/21 01:11	

LABORATORY CONTROL SAMPLE: 3188293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.7	101	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.0	102	80-120	
Manganese	mg/L	1	1.0	100	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188294 3188295

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525375001 Result	Spike Conc.	Spike Conc.	Conc.								
Hardness, Total(SM 2340B)	mg/L	26.4	6.6	6.6	33.8	38.8	112	188	75-125	14	20		
Iron	mg/L	ND	1	1	1.3	2.0	130	202	75-125	43	20	M0, R1	
Magnesium	mg/L	3.1	1	1	4.2	5.1	111	195	75-125	18	20	M1	
Manganese	mg/L	ND	1	1	1.0	2.0	100	198	75-125	66	20	M1, R1	
Potassium	mg/L	2.6	1	1	3.7	4.5	113	198	75-125	21	20	M1, R1	
Sodium	mg/L	5.0	1	1	6.1	6.8	112	177	75-125	10	20	M1	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 605231 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3188482 Matrix: Water  
Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/10/21 07:16	
Iron	mg/L	ND	0.040	0.016	03/10/21 07:16	
Magnesium	mg/L	ND	0.050	0.0076	03/10/21 07:16	
Manganese	mg/L	ND	0.040	0.0017	03/10/21 07:16	
Potassium	mg/L	0.080J	0.20	0.056	03/10/21 07:16	
Sodium	mg/L	ND	1.0	0.26	03/10/21 07:16	

LABORATORY CONTROL SAMPLE: 3188483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.5	98	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	0.99	99	80-120	
Manganese	mg/L	1	0.96	96	80-120	
Potassium	mg/L	1	1.0	105	80-120	
Sodium	mg/L	1	1.0J	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188484 3188485

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	194	6.6	6.6	201	196	111	39	75-125	2	20
Iron	mg/L	0.52	1	1	2.8	1.0	228	49	75-125	94	20 M1, R1
Magnesium	mg/L	25.4	1	1	26.5	25.8	117	45	75-125	3	20 M1
Manganese	mg/L	0.0040J	1	1	0.98	0.95	98	95	75-125	4	20
Potassium	mg/L	1.6	1	1	2.7	2.6	103	99	75-125	2	20
Sodium	mg/L	24.3	1	1	25.3	25.0	101	63	75-125	1	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 606583 Analysis Method: SM 2320B-2011  
 QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

METHOD BLANK: 3195778 Matrix: Water

Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	03/15/21 16:33	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	03/15/21 16:33	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	03/15/21 16:33	

LABORATORY CONTROL SAMPLE: 3195779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195780 3195781

Parameter	Units	92526541001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	42.6	50	50	91.9	91.7	99	98	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195782 3195783

Parameter	Units	92525478002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	12.6	50	50	64.0	64.4	103	104	80-120	1	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 606874

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

METHOD BLANK: 3197235

Matrix: Water

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 19:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 19:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 19:52	

LABORATORY CONTROL SAMPLE: 3197236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	50.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197237 3197238

Parameter	Units	92527199002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	110	50	50	157	160	94	100	80-120	2	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197239 3197240

Parameter	Units	92527211001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	28.5	50	50	78.5	79.4	100	102	80-120	1	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 607154 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3198620

Matrix: Water

Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/17/21 17:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/17/21 17:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/17/21 17:52	

LABORATORY CONTROL SAMPLE: 3198621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198624 3198625

Parameter	Units	92525669006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	57.3	50	50	110	109	106	104	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200194 3200195

Parameter	Units	92525383011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	28.9	50	50	80.0	81.0	102	104	80-120	1	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 604829 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

METHOD BLANK: 3186506 Matrix: Water  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 11:27	

LABORATORY CONTROL SAMPLE: 3186507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186508 3186509

Parameter	Units	92524842003		3186509		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.17	2.5	2.6	2.6	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186510 3186511

Parameter	Units	92524842004		3186511		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.21	2.5	2.6	2.6	97	96	90-110	1	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 604832 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

METHOD BLANK: 3186513 Matrix: Water  
Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:03	

LABORATORY CONTROL SAMPLE: 3186514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186515 3186516

Parameter	Units	3186515		3186516		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.3	2.3	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186517 3186518

Parameter	Units	3186517		3186518		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.4	2.4	95	95	90-110	0	10	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 604834 Analysis Method: EPA 353.2 Rev 2.0 1993  
 QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3186519 Matrix: Water  
 Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:37	

LABORATORY CONTROL SAMPLE: 3186520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186521 3186522

Parameter	Units	3186521		3186522		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.26	2.5	2.5	2.5	91	90	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186523 3186524

Parameter	Units	3186523		3186524		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.092	2.5	2.5	1.7	63	64	90-110	1	10 M1	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch:	711998	Analysis Method:	SM 5310B
QC Batch Method:	SM 5310B	Analysis Description:	5310B Dissolved Organic Carbon
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010, 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3881059 Matrix: Water

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010, 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 15:23	

LABORATORY CONTROL SAMPLE: 3881060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881061 3881062

Parameter	Units	92525383007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	ND	20	20	18.7	18.7	93	93	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881063 3881064

Parameter	Units	92525677002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	0.89J	20	20	19.8	19.7	95	94	80-120	0	20	

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

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 712765 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

METHOD BLANK: 3886735 Matrix: Water  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/16/21 03:44	

LABORATORY CONTROL SAMPLE: 3886736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886737 3886738

Parameter	Units	92524842003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	ND	20	20	18.6	18.7	91	91	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886739 3886740

Parameter	Units	92525383006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	ND	20	20	18.8	18.8	93	93	80-120	0	20	

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

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525383001	BRGWA-12S				
92525383002	BRGWA-12I				
92525383003	BRGWA-23S				
92525383004	BRGWC-45				
92525383005	BRGWC-47				
92525383006	BRGWC-25I				
92525383007	BRGWC-27I				
92525383008	BRGWC-29I				
92525383009	BRGWC-30I				
92525383011	BRGWC-32S				
92525383012	BRGWC-52I				
92525383014	BRGWC-50				
92525383001	BRGWA-12S	EPA 3010A	605192	EPA 6010D	605250
92525383002	BRGWA-12I	EPA 3010A	605192	EPA 6010D	605250
92525383003	BRGWA-23S	EPA 3010A	605192	EPA 6010D	605250
92525383004	BRGWC-45	EPA 3010A	605192	EPA 6010D	605250
92525383005	BRGWC-47	EPA 3010A	605192	EPA 6010D	605250
92525383006	BRGWC-25I	EPA 3010A	605192	EPA 6010D	605250
92525383007	BRGWC-27I	EPA 3010A	605192	EPA 6010D	605250
92525383008	BRGWC-29I	EPA 3010A	605192	EPA 6010D	605250
92525383009	BRGWC-30I	EPA 3010A	605192	EPA 6010D	605250
92525383010	DUP-1	EPA 3010A	605192	EPA 6010D	605250
92525383011	BRGWC-32S	EPA 3010A	605231	EPA 6010D	605319
92525383012	BRGWC-52I	EPA 3010A	605231	EPA 6010D	605319
92525383013	FB-2	EPA 3010A	605231	EPA 6010D	605319
92525383014	BRGWC-50	EPA 3010A	605231	EPA 6010D	605319
92525383015	EB-1	EPA 3010A	605231	EPA 6010D	605319
92525383001	BRGWA-12S	SM 2320B-2011	606583		
92525383002	BRGWA-12I	SM 2320B-2011	606583		
92525383003	BRGWA-23S	SM 2320B-2011	606583		
92525383004	BRGWC-45	SM 2320B-2011	606583		
92525383005	BRGWC-47	SM 2320B-2011	606583		
92525383006	BRGWC-25I	SM 2320B-2011	606583		
92525383007	BRGWC-27I	SM 2320B-2011	606874		
92525383008	BRGWC-29I	SM 2320B-2011	606874		
92525383009	BRGWC-30I	SM 2320B-2011	606874		
92525383010	DUP-1	SM 2320B-2011	606874		
92525383011	BRGWC-32S	SM 2320B-2011	607154		
92525383012	BRGWC-52I	SM 2320B-2011	607154		
92525383013	FB-2	SM 2320B-2011	607154		
92525383014	BRGWC-50	SM 2320B-2011	607154		
92525383015	EB-1	SM 2320B-2011	607154		
92525383001	BRGWA-12S	EPA 353.2 Rev 2.0 1993	604829		
92525383002	BRGWA-12I	EPA 353.2 Rev 2.0 1993	604829		
92525383003	BRGWA-23S	EPA 353.2 Rev 2.0 1993	604829		
92525383004	BRGWC-45	EPA 353.2 Rev 2.0 1993	604829		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525383005	BRGWC-47	EPA 353.2 Rev 2.0 1993	604829		
92525383006	BRGWC-25I	EPA 353.2 Rev 2.0 1993	604829		
92525383007	BRGWC-27I	EPA 353.2 Rev 2.0 1993	604832		
92525383008	BRGWC-29I	EPA 353.2 Rev 2.0 1993	604832		
92525383009	BRGWC-30I	EPA 353.2 Rev 2.0 1993	604832		
92525383010	DUP-1	EPA 353.2 Rev 2.0 1993	604832		
92525383011	BRGWC-32S	EPA 353.2 Rev 2.0 1993	604834		
92525383012	BRGWC-52I	EPA 353.2 Rev 2.0 1993	604834		
92525383013	FB-2	EPA 353.2 Rev 2.0 1993	604834		
92525383014	BRGWC-50	EPA 353.2 Rev 2.0 1993	604834		
92525383015	EB-1	EPA 353.2 Rev 2.0 1993	604834		
92525383001	BRGWA-12S	SM 5310B	712765		
92525383002	BRGWA-12I	SM 5310B	712765		
92525383003	BRGWA-23S	SM 5310B	712765		
92525383004	BRGWC-45	SM 5310B	712765		
92525383005	BRGWC-47	SM 5310B	712765		
92525383006	BRGWC-25I	SM 5310B	712765		
92525383007	BRGWC-27I	SM 5310B	711998		
92525383008	BRGWC-29I	SM 5310B	711998		
92525383009	BRGWC-30I	SM 5310B	711998		
92525383010	DUP-1	SM 5310B	711998		
92525383011	BRGWC-32S	SM 5310B	711998		
92525383012	BRGWC-52I	SM 5310B	711998		
92525383013	FB-2	SM 5310B	711998		
92525383014	BRGWC-50	SM 5310B	711998		
92525383015	EB-1	SM 5310B	711998		

### REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Simple Condition Upon Receipt

Client Name: GA Power

Project #:

WO#: 92525383



Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 7/3/24

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 3.3 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil ( N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

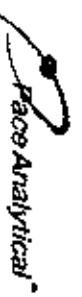
Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SARF Review: \_\_\_\_\_ Date: \_\_\_\_\_



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields.

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Walker Road  
 Atlanta, GA 30339  
 Report To: John Abraham  
 Copy To: Golder

Phone: (404) 506-7239  
 Email: j.abraham@scdhepc.com  
 Project Name: Plant Branch BCO Network  
 Project # CCR 4th Semi-Annual

State: Georgia City: Milledgeville Time Zone Collected:  
 ( ) PT ( ) MT ( ) CT ( ) ET  
 Page Profiled

Price Project Manager:  
 kenhart@pacanalytical.com  
 Immediately Packed on Ice:  
 Yes  No

Field Filtered (if applicable):  
 Yes  No  
 Analytic: \_\_\_\_\_

Batch:  
 Same Day  Next Day  
 1-2 Day  3 Day  4 Day  5 Day  
 (specify changes apply)

\* Markers Codes (insert in Matrix box below): Drink ing Water (DW), Ground Water (GW), Wastewater (WW),  
 Product (P), Soil/Solid (SL), Oil (O), Wipe (WP), Air (AR), Tissue (TS), Gypsum (G), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp/ Grab	Collected (or Composite Start)		Composite End		pH	# of Cons
			Date	Time	Date	Time		
BRGW-125	GW	G	3-2-21	1150			5.92	6
BRGW-121	GW	G	3-2-21	0856			6.11	6
BRGW-235	GW	G	3-2-21	1555			5.75	6
BRGWC-45	GW	G	3-2-21	1340			6.17	6
BRGWC-47	GW	G	3-2-21	1548			5.54	6
BRGWC-251	GW	G	3-2-21	1708			6.10	6

Matrix: Fe, K, Mg, Mn, Ni  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:  
 Specimen sample(s) screened (4500 count): Y N NA

Requisitioned by/Company (Signature):  
 Date/Time: 3-3-21/0815  
 Received by/Company (Signature):  
 Date/Time: 3-3-21/0003

Requisitioned by/Company (Signature):  
 Date/Time: \_\_\_\_\_  
 Received by/Company (Signature):  
 Date/Time: \_\_\_\_\_

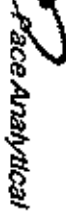
Requisitioned by/Company (Signature):  
 Date/Time: \_\_\_\_\_  
 Received by/Company (Signature):  
 Date/Time: \_\_\_\_\_

LAB USE ONLY - ADD DEVELOPER/LOGIC LINES HERE OR USE FOR CUSTOMER REQUEST OR  
 MTLI Log#44 Number 1449  
 ALL SHADED AREAS are for LAB USE ONLY  
 Contaminant Parameters Type: 1 0 2 1 1  
 Lab Project Manager:  
 Lab Profile/Type:  
 Lab Sample Received/Checked  
 Analytic: \_\_\_\_\_

Metals 6010/6020/7470 - see comments	Total Alkalinity and Bicarbonate/Carbonate Alkalinity	Dissolved Organic Carbon	NOX 353.2	Total Hardness SM 2304B
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X

STRICTLY NOISE PRESENT (72 hours): Y N N/A  
 Lab Tracking #: \_\_\_\_\_  
 Samples received via: FEDEX UPS Other Courier Page Courier  
 MTLI LAB USE ONLY  
 Lab Sample Received/Checked Y N NA  
 Therm Blank Received Y N NA  
 Cooler 1 Temp Alarm Received: AC  
 Cooler 1 Therm Core Fridge: AC  
 Cooler 2 Corrupted Temp: AC  
 Comments:

Lab Sample Received/Checked Y N NA  
 Therm Blank Received Y N NA  
 Cooler 1 Temp Alarm Received: AC  
 Cooler 1 Therm Core Fridge: AC  
 Cooler 2 Corrupted Temp: AC  
 Comments:  
 Trip Blank Received: Y N NA  
 HCL Method: TSP Other:  
 Non-Compliance(s):  
 YES / NO  
 Page: 1 of 1



CHAIN-OF-CUSTODY Analytical Request Document

Chain of Custody is a LEGAL DOCUMENT - Complete all relevant fields

Billing Information

Company: Georgia Power - Coal Combustion Residuals
Address: 2480 Asper Road
Atlanta, GA 30339

Client: Georgia Cog. Milledgeville
Site: Georgia Cog. Milledgeville Plant Branch

Phone: (404) 506-7239

State: Georgia Cog. Milledgeville Time Zone: Eastern

Email: jshaham@southern.com

Project Name: Plant Branch BCD Network

Phone: (404) 506-7239

Project # & CCR 4th Semi-Annual

Collected by (initial): Travis Martinez

Purchase Order #

Quota #

Turnaround Date Required

Collected By (signature):

Number

1 Start Day 1 Next Day

1 2 Day 1 3 Day 1 4 Day 1 5 Day

Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Solid (SD), Oil (OL), Waste (WR), Air (AQ), Tissue (TS), Biosay (BI), Voke (VO), Other (OT)

Customer Sample #:

Matrix \*

Comp / Grab

Collected for Composite

Composite End

Date

Time

Date

Time

pH

WT DRY None

BRGW-27I

GW

3-3-21

1414

5:40

6

6

6

6

6

6

BRGW-29I

GW

3-3-21

1612

4:46

6

6

6

6

6

6

BRGW-C-30I

GW

3-3-21

1306

6:29

6

6

6

6

6

6

DVE-1

GW

3-3-21

Metals Fe, K, Mg, Mn, Ni

Type of Use Used:

Wt DRY None

Wt DRY None

Wt DRY None

Wt DRY None

Wt DRY None

Wt DRY None

Wt DRY None

Wt DRY None

Wt DRY None

Requester By/Company (Signature)

Date/Time

3-4-21/0815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

Requester By/Company (Signature)

Date/Time

3-4-21/0815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

Requester By/Company (Signature)

Date/Time

3-4-21/0815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

Requester By/Company (Signature)

Date/Time

3-4-21/0815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

3-4-21 815

Received by/Company (Signature)

Date/Time

ALL SHADED AREAS ARE FOR LAB USE ONLY

Container Retention Type

1 2 1 1

Retention Type: (1) silver seal, (2) silver seal, (3) hydrophobic seal, (4) sodium hydroxide, (5) tin acetate, (6) methanol, (7) sodium borohydride, (8) sodium thiosulfate, (9) hexane, (10) sorbic acid, (11) sodium molybdate, (12) other

Lab Project Manager:

Analyses

Metals 6010/6020/7470 - see comments

Total Alkalinity and Bicarbonate/Carbonate Alkalinity

Dissolved Organic Carbon

NOX 353 2

Total Hardness SM 2304B

Lab Project/Line:

Lab Sample Receipt/Checklist

Quantity: Solid Present/Weight Y/N NA

Operator Signature Present Y/N NA

Collector Signature Present Y/N NA

Barcode Present Y/N NA

Correct Bottle Y/N NA

Sufficient Volume Y/N NA

Yield - Residuals Acceptable Y/N NA

Yield - Residuals Not Acceptable Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

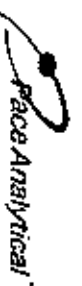
Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA

Yield - Residuals Not Present Y/N NA





**CHAIN-OF-CUSTODY Analytical Request Document**

Chain of Custody is a LEGAL DOCUMENT - Complete all relevant fields:

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339

Report To: Jeyu Abotiam  
 Email To: ssew@ce@fourteneca.com

Copy To: Golder  
 Site Collection info/Address: Plant Branch

Phone: (404) 508-7239  
 State: Georgia City: Milledgeville Time Zone Collected: 1 per 1, 2 per 1, 3 per 1

Email: jay@sham@fourteneca.com  
 Project Name: Plant Branch BOD Network  
 Project # C05 4th Semi-Annual

Collector By: Jeyu Abotiam  
 Purchaser Order #  
 Quote #

Collected By (signature):  
 Turnaround Date Required:  
 Rush: [ ] Same Day [ ] Next Day [ ] 1-2 Day [ ] 3-4 Day [ ] 5-7 Day [ ] 8-14 Day [ ] 15 Day

Project Manager: Jeyu Abotiam  
 Email: jay@sham@fourteneca.com  
 Immediate by Packaged on: [ ] Yes [ ] No  
 Field Filtered (if applicable): [ ] Yes [ ] No

Analyst: [ ]  
 (Specify Changes apply)

\* Matrix Codes (insert in Matrix code below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Spill/Solid (S), Oil (O), Waste (WP), Air (AQ), Tracer (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID: [ ]

Matrix #	Comp / Grab	Collected for Composite		Composite End	pH	# of Cans
		Date	Time			
RRGW-C-325	GW	3-4-21	1111	5:58	6	
RRGW-C-521	GW	3-4-21	1220	5:57	6	
HR-2	W	3-4-21	1240		6	
RRGW-C-520	GW	3-4-21	1707	4:34	6	
HR-1	W	3-5-21	0731		6	

Material: To: R. Mac Millan

Type of Ice Used: Wet Blue Dry None

Packing Material Used: [ ]

Random sample(s) screened (<500 count): Y N NA

Retained by/Company (Signature): [ ]

Date/Time: 3-5-21 1100

Received by/Company (Signature): [ ]

Retained by/Company (Signature): [ ]

Date/Time: [ ]

LAB USE ONLY - After Workorder/Log Label Here or Use From Workorder Number or MTR Log-in Number Here

**ALL SHADED AREAS ARE FOR LAB USE ONLY**

Container Pre-Exposure Type: [ ]

Analyst: [ ]

Lab Project Manager: [ ]

Resuspension Factor (1) name and (2) surface area (3) hypochlorite acid (4) medium hardness (5) test results	(6) overboard (7) sodium borohydride (8) sodium thiosulfate (9) hexane (10) acetone w/d (11) methanol/water	(12) bariumium hydroxide (13) 5% (14) Unpreserved (15) Other
1	0	2

Metals 6010/6020/7470 - see comments	Total Alkalinity and Bicarbonate/Carbonate Alkalinity	Dissolved Organic Carbon	NOX 353.2	Total Hardness SM 2304B
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X

SHOWN HOLDING PRESENT (<72 hours): Y N N/A

Lab Tracking #: [ ]

Samples received via: [ ]

RECEIVED BY: [ ]

DATE/TIME: [ ]

Customer Page Counter: [ ]

TABLE #:

ACQUANT: [ ]

TEMPERATURE: [ ]

PRELIMINARY: [ ]

PH: [ ]

LAB USE ONLY

LAB SAMPLE RECEIVED: Y N NA

TEMPERATURE: [ ]

DATE/TIME: [ ]

LAB PROJECT MANAGER: [ ]

NON-CONFIRMATION: YES / NO

Page 1 of 1

May 03, 2021

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

RE: Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

Dear Joju Abraham:

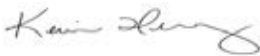
Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

---

### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525680001	PZ-51S	Water	03/03/21 09:23	03/04/21 08:15
92525680002	PZ-51D	Water	03/03/21 10:55	03/04/21 08:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525680001	PZ-51S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525680002	PZ-51D	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525680001</b>	<b>PZ-51S</b>					
	Performed by	CUSTOME			03/04/21 13:28	
		R				
	pH	5.41	Std. Units		03/04/21 13:28	
EPA 6010D	Iron	0.52	mg/L	0.040	03/09/21 20:24	
EPA 6010D	Manganese	1.9	mg/L	0.040	03/09/21 20:24	
EPA 6010D	Potassium	2.5	mg/L	0.20	03/09/21 20:24	
EPA 6010D	Sodium	11.5	mg/L	1.0	03/09/21 20:24	
EPA 6010D	Magnesium	8.4	mg/L	0.050	03/09/21 20:24	
EPA 6010D	Hardness, Total(SM 2340B)	54.2	mg/L	2.7	03/09/21 20:24	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	68.5	mg/L	5.0	03/17/21 02:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	68.5	mg/L	5.0	03/17/21 02:51	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	3.3	mg/L	0.040	03/08/21 12:30	
SM 5310B	Dissolved Organic Carbon	1.4	mg/L	1.0	03/12/21 19:53	
<b>92525680002</b>	<b>PZ-51D</b>					
	Performed by	CUSTOME			03/04/21 13:28	
		R				
	pH	7.10	Std. Units		03/04/21 13:28	
EPA 6010D	Iron	2.5	mg/L	0.040	03/09/21 20:29	
EPA 6010D	Manganese	1.2	mg/L	0.040	03/09/21 20:29	
EPA 6010D	Potassium	11.8	mg/L	0.20	03/09/21 20:29	
EPA 6010D	Sodium	40.2	mg/L	1.0	03/09/21 20:29	
EPA 6010D	Magnesium	28.7	mg/L	0.050	03/09/21 20:29	
EPA 6010D	Hardness, Total(SM 2340B)	414	mg/L	2.7	03/09/21 20:29	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	134	mg/L	5.0	03/17/21 03:02	
SM 2320B-2011	Alkalinity, Total as CaCO3	134	mg/L	5.0	03/17/21 03:02	
SM 5310B	Dissolved Organic Carbon	2.0	mg/L	1.0	03/12/21 20:07	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

Sample: PZ-51S		Lab ID: 92525680001		Collected: 03/03/21 09:23		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:28		
pH	<b>5.41</b>	Std. Units			1		03/04/21 13:28		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.52</b>	mg/L	0.040	0.016	1	03/09/21 11:12	03/09/21 20:24	7439-89-6	
Manganese	<b>1.9</b>	mg/L	0.040	0.0017	1	03/09/21 11:12	03/09/21 20:24	7439-96-5	
Potassium	<b>2.5</b>	mg/L	0.20	0.056	1	03/09/21 11:12	03/09/21 20:24	7440-09-7	
Sodium	<b>11.5</b>	mg/L	1.0	0.26	1	03/09/21 11:12	03/09/21 20:24	7440-23-5	
Magnesium	<b>8.4</b>	mg/L	0.050	0.0076	1	03/09/21 11:12	03/09/21 20:24	7439-95-4	
Hardness, Total(SM 2340B)	<b>54.2</b>	mg/L	2.7	0.21	1	03/09/21 11:12	03/09/21 20:24		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>68.5</b>	mg/L	5.0	5.0	1		03/17/21 02:51		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 02:51		
Alkalinity, Total as CaCO3	<b>68.5</b>	mg/L	5.0	5.0	1		03/17/21 02:51		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>3.3</b>	mg/L	0.040	0.017	1		03/08/21 12:30		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.4</b>	mg/L	1.0	0.50	1		03/12/21 19:53		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

Sample: PZ-51D		Lab ID: 92525680002		Collected: 03/03/21 10:55		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:28		
pH	<b>7.10</b>	Std. Units			1		03/04/21 13:28		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>2.5</b>	mg/L	0.040	0.016	1	03/09/21 11:12	03/09/21 20:29	7439-89-6	
Manganese	<b>1.2</b>	mg/L	0.040	0.0017	1	03/09/21 11:12	03/09/21 20:29	7439-96-5	
Potassium	<b>11.8</b>	mg/L	0.20	0.056	1	03/09/21 11:12	03/09/21 20:29	7440-09-7	
Sodium	<b>40.2</b>	mg/L	1.0	0.26	1	03/09/21 11:12	03/09/21 20:29	7440-23-5	
Magnesium	<b>28.7</b>	mg/L	0.050	0.0076	1	03/09/21 11:12	03/09/21 20:29	7439-95-4	
Hardness, Total(SM 2340B)	<b>414</b>	mg/L	2.7	0.21	1	03/09/21 11:12	03/09/21 20:29		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>134</b>	mg/L	5.0	5.0	1		03/17/21 03:02		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 03:02		
Alkalinity, Total as CaCO3	<b>134</b>	mg/L	5.0	5.0	1		03/17/21 03:02		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:32		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>2.0</b>	mg/L	1.0	0.50	1		03/12/21 20:07		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

QC Batch: 605190

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3188284

Matrix: Water

Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/09/21 19:35	
Iron	mg/L	ND	0.040	0.016	03/09/21 19:35	
Magnesium	mg/L	ND	0.050	0.0076	03/09/21 19:35	
Manganese	mg/L	ND	0.040	0.0017	03/09/21 19:35	
Potassium	mg/L	ND	0.20	0.056	03/09/21 19:35	
Sodium	mg/L	ND	1.0	0.26	03/09/21 19:35	

LABORATORY CONTROL SAMPLE: 3188285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.1	105	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	101	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188286 3188287

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526065007 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	969000 ug/L	6.6	6.6	957	977	-181	124	75-125	2	20
Iron	mg/L	ND	1	1	1.2	1.0	116	101	75-125	13	20
Magnesium	mg/L	ND	1	1	1.0	1.0	100	103	75-125	3	20
Manganese	mg/L	ND	1	1	0.95	0.97	95	97	75-125	2	20
Potassium	mg/L	1660 ug/L	1	1	2.6	2.7	98	102	75-125	2	20
Sodium	mg/L	14400 ug/L	1	1	15.2	15.5	78	110	75-125	2	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

QC Batch: 606876

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3197245

Matrix: Water

Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	

LABORATORY CONTROL SAMPLE: 3197246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197247 3197248

Parameter	Units	92525669002		3197248		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	29.2	50	50	79.0	78.6	100	99	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197249 3197250

Parameter	Units	92525536003		3197250		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	54.8	54.7	104	103	80-120	0	25

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

QC Batch: 604832 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3186513 Matrix: Water  
Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:03	

LABORATORY CONTROL SAMPLE: 3186514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186515 3186516

Parameter	Units	3186515		3186516		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Result	MSD Result							
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.3	2.3	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186517 3186518

Parameter	Units	3186517		3186518		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Result	MSD Result							
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.4	2.4	95	95	90-110	0	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

QC Batch: 711998

Analysis Method: SM 5310B

QC Batch Method: SM 5310B

Analysis Description: 5310B Dissolved Organic Carbon

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3881059

Matrix: Water

Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 15:23	

LABORATORY CONTROL SAMPLE: 3881060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881061 3881062

Parameter	Units	92525383007		3881061		3881062		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Dissolved Organic Carbon	mg/L	ND	20	20	18.7	18.7	93	93	80-120	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881063 3881064

Parameter	Units	92525677002		3881063		3881064		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Dissolved Organic Carbon	mg/L	0.89J	20	20	19.8	19.7	95	94	80-120	0	20

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## QUALIFIERS

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525680001	PZ-51S				
92525680002	PZ-51D				
92525680001	PZ-51S	EPA 3010A	605190	EPA 6010D	605248
92525680002	PZ-51D	EPA 3010A	605190	EPA 6010D	605248
92525680001	PZ-51S	SM 2320B-2011	606876		
92525680002	PZ-51D	SM 2320B-2011	606876		
92525680001	PZ-51S	EPA 353.2 Rev 2.0 1993	604832		
92525680002	PZ-51D	EPA 353.2 Rev 2.0 1993	604832		
92525680001	PZ-51S	SM 5310B	711998		
92525680002	PZ-51D	SM 5310B	711998		

**REPORT OF LABORATORY ANALYSIS**

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Document Name:  
Sample Condition Upon Receipt (SCUR)  
Document No.:  
F-CAR-CS-093-Rev.07

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

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

G A Power

Project #:

WO#: **92525680**

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



92525680

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 7/4/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:  Gun ID: 230 Type of Ice:  White  Blue  None

Cooler Temp: 1.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 1.6

USDA Regulated Soil?  N/A, water sample

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCUR Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Company: Georgia Power - Coal Combustion Residues  
 Address: 2480 Marist Road  
 Atlanta, GA 30339  
 Report To: John Abraham  
 Email To: jschroeder@southemco.com  
 Copy To: Golder

Phone: (404) 506-7239  
 Email: j.abraham@southemco.com  
 Project Name: Plant Branch BCD Demonstration  
 Project # CCR 4th Semi-Annual

State: Georgia City: Macon  
 Time Zone: Eastern  
 Project Manager: Kevin Henning  
 Email: khenning@paradeo.com

Collected By: (Signature)  
 Address: McChure  
 Matrix: Run  
 Date: 12 Day | 13 Day | 14 Day | 15 Day  
 (Equalize Charges Apply)

\* Matrix Codes: (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Sediment (S), Oil (O), Wipe (WP), Air (A), Tissue (T), Sludge (B), Water (W), Other (OT)

Customer Sample ID	Matrix *	Gross / GFD	Collected for Composite			pH	# of Cons
			Date	Time	Date		
PZ-S1S	GW	G	3-3-21	0923		5.91	6
PZ-S1D	GW	G	3-3-21	1055		7.10	6

**ALL SHADED AREAS are for LAB USE ONLY**

Condition: Preservative Type: 1 0 3 1

Analyses: 1 0 3 1

LAB Profile/Use:  
 Laboratory Accredited: Y/N NA  
 Quality System Present: Y/N NA  
 Collector Signature Present: Y/N NA  
 Certified Analyst: Y/N NA  
 Correct Analysis: Y/N NA  
 Sufficient Volume: Y/N NA  
 Samples Received on Ice: Y/N NA  
 NOA - Responder Acceptable: Y/N NA  
 USDA Regulated Soils: Y/N NA  
 Samples in Holding Time: Y/N NA  
 Residual Chloride Present: Y/N NA  
 D-Spec: Y/N NA  
 Sample pH Acceptable: Y/N NA  
 pH Range: Y/N NA  
 Sample Present: Y/N NA  
 Used Accurate Sips: Y/N NA  
 LAB USE ONLY:  
 Lab Sample #/Comments:

Analysis	Result	Notes
Metals: 6010/6020/7470 - see comments	X	
Total Alkalinity and Bicarbonate/Carbonate Alkalinity	X	
Dissolved Organic Carbon	X	
NOX 353.2	X	
Total Hardness SM 2304B	X	

LAB Sample Receipt Checklist:  
 Accuracy: Y/N NA  
 Correct Analysis: Y/N NA  
 Sufficient Volume: Y/N NA  
 Samples Received on Ice: Y/N NA  
 USDA Regulated Soils: Y/N NA  
 Samples in Holding Time: Y/N NA  
 Residual Chloride Present: Y/N NA  
 D-Spec: Y/N NA  
 Sample pH Acceptable: Y/N NA  
 pH Range: Y/N NA  
 Sample Present: Y/N NA  
 Used Accurate Sips: Y/N NA

LAB USE ONLY:  
 Lab Sample #/Comments:

LAB Sample Temperature Info:  
 Temp/Date Received: Y/N NA  
 Therm ID#:  
 Cooler 1 Temp Upon Receipt: °C  
 Cooler 1 Therm Corr Factor: °C  
 Cooler 1 Corrected Temp: °C  
 Comments:

Received by/Company (Signature):  
 Date/Time: 3-4-21/0815

Received by/Company (Signature):  
 Date/Time: 3-4-21/0815

Received by/Company (Signature):  
 Date/Time: 3-4-21/0815

Received by/Company (Signature):  
 Date/Time: 3-4-21/0815



March 22, 2021

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

RE: Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

Dear Joju Abraham:

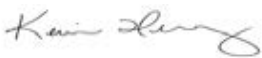
Enclosed are the analytical results for sample(s) received by the laboratory on March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526041001	PZ-50D	Water	03/05/21 08:02	03/05/21 11:30
92526041002	PZ-51I	Water	03/05/21 09:35	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD ASSESSMENT MISC

Pace Project No.: 92526041

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526041001	PZ-50D	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92526041002	PZ-51I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD ASSESSMENT MISC

Pace Project No.: 92526041

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92526041001</b>	<b>PZ-50D</b>					
	Performed by	CUSTOME			03/05/21 15:35	
		R				
	pH	7.06	Std. Units		03/05/21 15:35	
EPA 6010D	Iron	2.8	mg/L	0.040	03/19/21 03:20	
EPA 6010D	Manganese	1.1	mg/L	0.040	03/19/21 03:20	
EPA 6010D	Potassium	12.8	mg/L	0.20	03/19/21 15:11	
EPA 6010D	Sodium	51.4	mg/L	1.0	03/19/21 03:20	
EPA 6010D	Magnesium	66.1	mg/L	0.050	03/19/21 03:20	
EPA 6010D	Hardness, Total(SM 2340B)	789	mg/L	2.7	03/19/21 03:20	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	82.9	mg/L	5.0	03/17/21 22:15	
SM 2320B-2011	Alkalinity, Total as CaCO3	82.9	mg/L	5.0	03/17/21 22:15	
<b>92526041002</b>	<b>PZ-51I</b>					
	Performed by	CUSTOME			03/05/21 15:35	
		R				
	pH	4.57	Std. Units		03/05/21 15:35	
EPA 6010D	Iron	0.40	mg/L	0.040	03/19/21 03:54	
EPA 6010D	Manganese	41.7	mg/L	0.40	03/19/21 15:20	
EPA 6010D	Potassium	14.5	mg/L	0.20	03/19/21 15:16	
EPA 6010D	Sodium	46.5	mg/L	1.0	03/19/21 03:54	
EPA 6010D	Magnesium	114	mg/L	0.050	03/19/21 03:54	
EPA 6010D	Hardness, Total(SM 2340B)	924	mg/L	2.7	03/19/21 03:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	24.1	mg/L	5.0	03/17/21 22:45	
SM 2320B-2011	Alkalinity, Total as CaCO3	24.1	mg/L	5.0	03/17/21 22:45	
SM 5310B	Dissolved Organic Carbon	1.4	mg/L	1.0	03/13/21 00:26	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

Sample: PZ-50D		Lab ID: 92526041001		Collected: 03/05/21 08:02		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/05/21 15:35		
pH	<b>7.06</b>	Std. Units			1		03/05/21 15:35		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>2.8</b>	mg/L	0.040	0.016	1	03/15/21 14:10	03/19/21 03:20	7439-89-6	
Manganese	<b>1.1</b>	mg/L	0.040	0.0017	1	03/15/21 14:10	03/19/21 03:20	7439-96-5	
Potassium	<b>12.8</b>	mg/L	0.20	0.056	1	03/15/21 14:10	03/19/21 15:11	7440-09-7	
Sodium	<b>51.4</b>	mg/L	1.0	0.26	1	03/15/21 14:10	03/19/21 03:20	7440-23-5	
Magnesium	<b>66.1</b>	mg/L	0.050	0.0076	1	03/15/21 14:10	03/19/21 03:20	7439-95-4	
Hardness, Total(SM 2340B)	<b>789</b>	mg/L	2.7	0.21	1	03/15/21 14:10	03/19/21 03:20		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>82.9</b>	mg/L	5.0	5.0	1		03/17/21 22:15		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 22:15		
Alkalinity, Total as CaCO3	<b>82.9</b>	mg/L	5.0	5.0	1		03/17/21 22:15		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 13:09		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/13/21 00:12		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

Sample: PZ-511      Lab ID: 92526041002      Collected: 03/05/21 09:35      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/05/21 15:35		
pH	<b>4.57</b>	Std. Units			1		03/05/21 15:35		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.40</b>	mg/L	0.040	0.016	1	03/15/21 14:10	03/19/21 03:54	7439-89-6	
Manganese	<b>41.7</b>	mg/L	0.40	0.017	10	03/15/21 14:10	03/19/21 15:20	7439-96-5	
Potassium	<b>14.5</b>	mg/L	0.20	0.056	1	03/15/21 14:10	03/19/21 15:16	7440-09-7	
Sodium	<b>46.5</b>	mg/L	1.0	0.26	1	03/15/21 14:10	03/19/21 03:54	7440-23-5	
Magnesium	<b>114</b>	mg/L	0.050	0.0076	1	03/15/21 14:10	03/19/21 03:54	7439-95-4	
Hardness, Total(SM 2340B)	<b>924</b>	mg/L	2.7	0.21	1	03/15/21 14:10	03/19/21 03:54		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>24.1</b>	mg/L	5.0	5.0	1		03/17/21 22:45		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 22:45		
Alkalinity, Total as CaCO3	<b>24.1</b>	mg/L	5.0	5.0	1		03/17/21 22:45		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 13:10		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.4</b>	mg/L	1.0	0.50	1		03/13/21 00:26		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT MISC

Pace Project No.: 92526041

QC Batch: 606634

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526041001, 92526041002

METHOD BLANK: 3196175

Matrix: Water

Associated Lab Samples: 92526041001, 92526041002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/19/21 03:10	
Iron	mg/L	ND	0.040	0.016	03/19/21 03:10	
Magnesium	mg/L	ND	0.050	0.0076	03/19/21 03:10	
Manganese	mg/L	ND	0.040	0.0017	03/19/21 03:10	
Potassium	mg/L	ND	0.20	0.056	03/19/21 03:10	
Sodium	mg/L	ND	1.0	0.26	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.1	113	80-120	
Sodium	mg/L	1	1.1	115	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	789	6.6	6.6	797	775	122	-204	75-125	3	20
Iron	mg/L	2.8	1	1	3.8	3.7	101	89	75-125	3	20
Magnesium	mg/L	66.1	1	1	67.0	65.6	86	-56	75-125	2	20 M1
Manganese	mg/L	1.1	1	1	2.1	2.0	99	91	75-125	4	20
Potassium	mg/L	14.1	1	1	15.3	15.0	122	90	75-125	2	20
Sodium	mg/L	51.4	1	1	52.6	51.1	123	-27	75-125	3	20 M1

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT MISC

Pace Project No.: 92526041

QC Batch: 607155

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92526041001, 92526041002

METHOD BLANK: 3198626

Matrix: Water

Associated Lab Samples: 92526041001, 92526041002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/17/21 22:07	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/17/21 22:07	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/17/21 22:07	

LABORATORY CONTROL SAMPLE: 3198627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.5	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198628 3198629

Parameter	Units	92526041001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	82.9	50	50	131	131	96	97	80-120	0	25	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

QC Batch: 604834 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92526041001, 92526041002

METHOD BLANK: 3186519 Matrix: Water  
Associated Lab Samples: 92526041001, 92526041002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:37	

LABORATORY CONTROL SAMPLE: 3186520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186521 3186522

Parameter	Units	92525798002		3186521		3186522		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.26	2.5	2.5	2.5	2.5	2.5	91	90	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186523 3186524

Parameter	Units	92525827002		3186523		3186524		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.092	2.5	2.5	1.7	1.7	1.7	63	64	90-110	1	10 M1	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD ASSESSMENT MISC  
Pace Project No.: 92526041

QC Batch: 711999 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92526041001, 92526041002

METHOD BLANK: 3881067 Matrix: Water

Associated Lab Samples: 92526041001, 92526041002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 22:46	

LABORATORY CONTROL SAMPLE: 3881068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.0	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881069 3881070

Parameter	Units	3881069		3881070		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Result	MSD Result							
Dissolved Organic Carbon	mg/L	92525669008 ND	MS Spike Conc. 20	MSD Spike Conc. 20	MS Result 18.8	MSD Result 18.6	93	93	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881071 3881072

Parameter	Units	3881071		3881072		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Result	MSD Result							
Dissolved Organic Carbon	mg/L	35617414003 20.4	MS Spike Conc. 20	MSD Spike Conc. 20	MS Result 39.3	MSD Result 38.8	94	92	80-120	1	20	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD ASSESSMENT MISC

Pace Project No.: 92526041

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD ASSESSMENT MISC

Pace Project No.: 92526041

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526041001	PZ-50D				
92526041002	PZ-51I				
92526041001	PZ-50D	EPA 3010A	606634	EPA 6010D	606723
92526041002	PZ-51I	EPA 3010A	606634	EPA 6010D	606723
92526041001	PZ-50D	SM 2320B-2011	607155		
92526041002	PZ-51I	SM 2320B-2011	607155		
92526041001	PZ-50D	EPA 353.2 Rev 2.0 1993	604834		
92526041002	PZ-51I	EPA 353.2 Rev 2.0 1993	604834		
92526041001	PZ-50D	SM 5310B	711999		
92526041002	PZ-51I	SM 5310B	711999		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020

Page 1 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

GAPower

Project #:

WO#: 92526041



92526041

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_

Study Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 3/5/21 log

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Biological Tissue Frozen?

Yes  No  N/A

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

Cooler Temp: 3.2 Correction Factor: -0.2  
Add/Subtract (°C)

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 3.0

ISDA Regulated Soil ( N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



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

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

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

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

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

Project #

**WO# : 92526041**

PM: KLH1

Due Date: 03/19/21

CLIENT: GA-GA Power

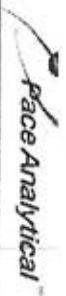
Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		21																												
2		21																												
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

**pH Adjustment Log for Preserved Samples**

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

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





Company: Georgia Power - Coal Combustion on Residuals  
 Address: 2480 Manor Road  
 Atlanta, GA 30339

Report To: Joly Abraham  
 Email To: jscinvolces@southenco.com  
 Site Collect on Info/Address: P-art Branch

Phone: (404) 506-7239  
 Email: j.abraham@southenco.com  
 Project Name: P-art Branch BCD Assessment  
 Project # CCR 4th Semi-Annual

Collected By (Signature): *Joly*  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  4 Day  5 Day  
 (Expedite Charges Apply)

Matrix \*  
 PZ-511  
 GW  
 G  
 3-5-21  
 0802  
 7.06  
 6

Customer Sample ID  
 Matrix \*  
 Comp / Grab  
 Date  
 Time  
 Composite End  
 Date  
 Time  
 pH  
 # of Ctns

Matrix \*  
 Comp / Grab  
 Date  
 Time  
 Composite End  
 Date  
 Time  
 pH  
 # of Ctns

Matrix \*  
 Comp / Grab  
 Date  
 Time  
 Composite End  
 Date  
 Time  
 pH  
 # of Ctns

Matrix \*  
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 Time  
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 # of Ctns

Matrix \*  
 Comp / Grab  
 Date  
 Time  
 Composite End  
 Date  
 Time  
 pH  
 # of Ctns

Matrix \*  
 Comp / Grab  
 Date  
 Time  
 Composite End  
 Date  
 Time  
 pH  
 # of Ctns

Container Preservative Type \*\*  
 0 2 1  
**ALL SHADED AREAS are for LAB USE ONLY**  
 Lab Project Manager:  
 Lab Profile/Line:  
 Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signatures Present Y N NA  
 Bottles Intact Y N NA  
 Corrosion Y N NA  
 Significant Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 Residual Chlorine Present Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 C-Strips  
 Sample pH Acceptable Y N NA  
 pH Strips  
 Sample Present Y N NA  
 Lead Acetate Strip

Analyses  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate,  
 (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) acetic acid, (B) ammonium sulfate,  
 (C) ammonium hydroxide, (D) TSP, (U) unpreserved, (O) Other \_\_\_\_\_

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID# \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_\_\_ °C  
 Cooler 1 Therm Corr Factor: \_\_\_\_\_ °C  
 Cooler 1 Corrected Temp: \_\_\_\_\_ °C  
 Comments:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s): YES / NO  
 Page 1 of 1



April 26, 2021

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

RE: Project: BRANCH PZ-611 CATIONS/ANIONS  
Pace Project No.: 92532950

Dear Joju Abraham:

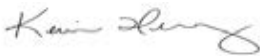
Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

---

### **Pace Analytical Services Charlotte**

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

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

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### **Pace Analytical Services Asheville**

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

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

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### **Pace Analytical Services Peachtree Corners**

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

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

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92532950001	PZ-61I	Water	04/12/21 10:20	04/13/21 16:55

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92532950001	PZ-61I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA  
PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92532950001</b>	<b>PZ-61I</b>					
	Performed by	CUSTOME			04/14/21 08:18	
		R				
	pH	5.40	Std. Units		04/14/21 08:18	
EPA 6010D	Iron	7.3	mg/L	0.040	04/15/21 18:52	
EPA 6010D	Manganese	118	mg/L	0.40	04/16/21 16:54	
EPA 6010D	Potassium	9.2	mg/L	0.20	04/15/21 18:52	
EPA 6010D	Sodium	60.9	mg/L	1.0	04/15/21 18:52	
EPA 6010D	Magnesium	177	mg/L	0.050	04/15/21 18:52	
EPA 6010D	Hardness, Total(SM 2340B)	1300	mg/L	2.7	04/15/21 18:52	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	28.1	mg/L	5.0	04/22/21 20:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	28.1	mg/L	5.0	04/22/21 20:24	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.20	mg/L	0.040	04/20/21 13:17	
SM 5310B	Dissolved Organic Carbon	0.91J	mg/L	1.0	04/21/21 08:36	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

Sample: PZ-61I		Lab ID: 92532950001		Collected: 04/12/21 10:20		Received: 04/13/21 16:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/14/21 08:18		
pH	<b>5.40</b>	Std. Units			1		04/14/21 08:18		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>7.3</b>	mg/L	0.040	0.016	1	04/15/21 11:15	04/15/21 18:52	7439-89-6	
Manganese	<b>118</b>	mg/L	0.40	0.017	10	04/15/21 11:15	04/16/21 16:54	7439-96-5	
Potassium	<b>9.2</b>	mg/L	0.20	0.056	1	04/15/21 11:15	04/15/21 18:52	7440-09-7	
Sodium	<b>60.9</b>	mg/L	1.0	0.26	1	04/15/21 11:15	04/15/21 18:52	7440-23-5	
Magnesium	<b>177</b>	mg/L	0.050	0.0076	1	04/15/21 11:15	04/15/21 18:52	7439-95-4	
Hardness, Total(SM 2340B)	<b>1300</b>	mg/L	2.7	0.21	1	04/15/21 11:15	04/15/21 18:52		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>28.1</b>	mg/L	5.0	5.0	1		04/22/21 20:24		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		04/22/21 20:24		
Alkalinity, Total as CaCO3	<b>28.1</b>	mg/L	5.0	5.0	1		04/22/21 20:24		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.20</b>	mg/L	0.040	0.017	1		04/20/21 13:17		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.91J</b>	mg/L	1.0	0.50	1		04/21/21 08:36		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

QC Batch: 613959 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92532950001

METHOD BLANK: 3231144 Matrix: Water  
Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	04/15/21 18:38	
Iron	mg/L	ND	0.040	0.016	04/15/21 18:38	
Magnesium	mg/L	ND	0.050	0.0076	04/15/21 18:38	
Manganese	mg/L	ND	0.040	0.0017	04/15/21 18:38	
Potassium	mg/L	ND	0.20	0.056	04/15/21 18:38	
Sodium	mg/L	ND	1.0	0.26	04/15/21 18:38	

LABORATORY CONTROL SAMPLE: 3231145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.1	108	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.1	113	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231146 3231147

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92532953001 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	1300	6.6	6.6	1300	1280	78	-217	75-125	2	20
Iron	mg/L	7.3	1	1	8.5	8.4	113	108	75-125	1	20
Magnesium	mg/L	177	1	1	179	176	151	-139	75-125	2	20 M1
Manganese	mg/L	79.2	1	1	80.1	79.5	92	36	75-125	1	20
Potassium	mg/L	9.2	1	1	10.2	10.1	100	90	75-125	1	20
Sodium	mg/L	60.9	1	1	61.2	60.7	31	-22	75-125	1	20 M1

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

QC Batch: 615461

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92532950001

METHOD BLANK: 3238715

Matrix: Water

Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	04/22/21 16:46	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/22/21 16:46	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/22/21 16:46	

LABORATORY CONTROL SAMPLE: 3238716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238717 3238718

Parameter	Units	92532666002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	436	50	50	471	471	68	70	80-120	0	25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238719 3238720

Parameter	Units	92532492003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	60.7	59.8	114	112	80-120	1	25	

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

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

QC Batch: 614819

Analysis Method: EPA 353.2 Rev 2.0 1993

QC Batch Method: EPA 353.2 Rev 2.0 1993

Analysis Description: 353.2 Nitrate + Nitrite, preserved

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92532950001

METHOD BLANK: 3235434

Matrix: Water

Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	04/20/21 13:02	

LABORATORY CONTROL SAMPLE: 3235435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235436 3235437

Parameter	Units	3235436		3235437		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.11	2.5	1.7	1.8	65	66	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235438 3235439

Parameter	Units	3235438		3235439		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	5.4	2.5	7.9	7.9	102	101	90-110	0	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

QC Batch: 722429

Analysis Method: SM 5310B

QC Batch Method: SM 5310B

Analysis Description: 5310B Dissolved Organic Carbon

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92532950001

METHOD BLANK: 3937892

Matrix: Water

Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	04/21/21 07:55	

LABORATORY CONTROL SAMPLE: 3937893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3937894 3937895

Parameter	Units	92532950001		3937895		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	0.91J	20	20	20.5	20.4	98	98	80-120	0	20

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

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## QUALIFIERS

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

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### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

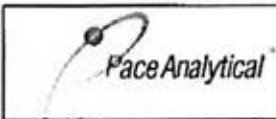
Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92532950001	PZ-61I				
92532950001	PZ-61I	EPA 3010A	613959	EPA 6010D	614020
92532950001	PZ-61I	SM 2320B-2011	615461		
92532950001	PZ-61I	EPA 353.2 Rev 2.0 1993	614819		
92532950001	PZ-61I	SM 5310B	722429		

### REPORT OF LABORATORY ANALYSIS

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Document Name: <b>Sample Condition Upon Receipt(SCUR)</b>	Document Revised: October 28, 2020 Page 1 of 2
Document No.: <b>F-CAR-CS-033-Rev.07</b>	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: G A Power

Project #: **WO# : 92532950**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/13/21  
COE

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 233 Type of Ice:  Wet  Blue  None

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) -0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.2

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 23, 2010  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\* Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, UHg

\*\* Bottom half of box is to list number of bottles

Project #

**WO# : 92532950**

PM: KLH1

Due Date: 04/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unip (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-503T kit (N/A)	V/GK (3 vials per kit)-V/H/Gas kit (N/A)	SP5S-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Georgia Power- Coal Combustion Residuals  
 Address: 2480 Manter Road Atlanta, GA 30339  
 Email To: jbraham@southern-co.com  
 Phone: (404) 506-7239  
 Requested Due Date: Standard

Section B Required Project Information: Report To: Jolu Abraham  
 Copy To: Brian Steele - Golder  
 Email To: bsteele@golder.com  
 Project Name: Branch-BCD  
 Project Number: 166625421

Section C Invoice Information: Attention: Company Name: Address: Pace Project Manager: Kevin Herring  
 Pace Profile #: 10838  
 State / Location: CA

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analyses Test	Y/N	Requested Analytes Filtered (Y/N)	Residual Chlorine (Y/N)	pH= 5.40
					START DATE	START TIME	END DATE	END TIME			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol					
1	Dinking Water WATER Product Standard Cr Waste Air Other Tissue	DW WT WW P SL OL WP AR OT TS	WT G	4/12/2021	10:20				4	1											
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

RELINQUISHED BY / AFFILIATION: Chris Towell / Golder  
 DATE: 4/13/21  
 TIME: 16:55

ACCEPTED BY / AFFILIATION: [Signature]  
 DATE: 4/13/21  
 TIME: 16:55

SAMPLER NAME AND SIGNATURE: [Signature]  
 PRINT Name of SAMPLER: Chris Towell  
 SIGNATURE of SAMPLER: [Signature]  
 DATE Signed: 4-13-2021



April 27, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

Dear Joju Abraham:

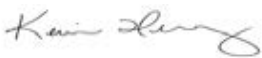
Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Arizona Certification# AZ0819

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92532951001	PZ-57I	Water	04/12/21 14:10	04/13/21 16:55
92532951002	PZ-58I	Water	04/12/21 14:55	04/13/21 16:55
92532951003	PZ-60I	Water	04/12/21 12:30	04/13/21 16:55
92532951004	EB-1	Water	04/12/21 14:45	04/13/21 16:55
92532951005	FB-1	Water	04/12/21 10:30	04/13/21 16:55
92532951006	DUP-1	Water	04/12/21 00:00	04/13/21 16:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92532951001	PZ-57I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951002	PZ-58I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951003	PZ-60I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951004	EB-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951005	FB-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951006	DUP-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92532951001</b>	<b>PZ-57I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.35	Std. Units		04/26/21 08:30	
EPA 6010D	Iron	3.6	mg/L	0.040	04/15/21 19:37	
EPA 6010D	Manganese	12.4	mg/L	0.40	04/19/21 16:18	
EPA 6010D	Potassium	4.9	mg/L	0.20	04/15/21 19:37	
EPA 6010D	Sodium	17.5	mg/L	1.0	04/15/21 19:37	
EPA 6010D	Magnesium	32.6	mg/L	0.050	04/15/21 19:37	
EPA 6010D	Hardness, Total(SM 2340B)	264	mg/L	2.7	04/15/21 19:37	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	28.0	mg/L	5.0	04/26/21 16:29	
SM 2320B-2011	Alkalinity, Total as CaCO3	28.0	mg/L	5.0	04/26/21 16:29	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.038J	mg/L	0.040	04/20/21 13:19	
SM 5310B	Dissolved Organic Carbon	0.57J	mg/L	1.0	04/21/21 09:19	
<b>92532951002</b>	<b>PZ-58I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.15	Std. Units		04/26/21 08:30	
EPA 6010D	Iron	29.7	mg/L	0.040	04/15/21 19:56	
EPA 6010D	Manganese	17.9	mg/L	0.040	04/15/21 19:56	
EPA 6010D	Potassium	8.6	mg/L	0.20	04/15/21 19:56	
EPA 6010D	Sodium	26.2	mg/L	1.0	04/15/21 19:56	
EPA 6010D	Magnesium	50.9	mg/L	0.050	04/15/21 19:56	
EPA 6010D	Hardness, Total(SM 2340B)	446	mg/L	2.7	04/15/21 19:56	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.089	mg/L	0.040	04/20/21 13:20	
SM 5310B	Dissolved Organic Carbon	2.2	mg/L	1.0	04/21/21 09:35	
<b>92532951003</b>	<b>PZ-60I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.05	Std. Units		04/26/21 08:30	
EPA 6010D	Iron	1.7	mg/L	0.040	04/15/21 20:01	
EPA 6010D	Manganese	148	mg/L	0.40	04/19/21 16:23	
EPA 6010D	Potassium	14.4	mg/L	0.20	04/15/21 20:01	
EPA 6010D	Sodium	57.9	mg/L	1.0	04/15/21 20:01	
EPA 6010D	Magnesium	164	mg/L	0.050	04/15/21 20:01	
EPA 6010D	Hardness, Total(SM 2340B)	1330	mg/L	2.7	04/15/21 20:01	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	8.1	mg/L	5.0	04/26/21 16:40	
SM 2320B-2011	Alkalinity, Total as CaCO3	8.1	mg/L	5.0	04/26/21 16:40	
SM 5310B	Dissolved Organic Carbon	0.59J	mg/L	1.0	04/21/21 09:51	
<b>92532951004</b>	<b>EB-1</b>					
EPA 6010D	Manganese	0.020J	mg/L	0.040	04/15/21 20:11	B
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.019J	mg/L	0.040	04/20/21 13:22	
<b>92532951005</b>	<b>FB-1</b>					
EPA 6010D	Iron	0.019J	mg/L	0.040	04/15/21 20:26	
<b>92532951006</b>	<b>DUP-1</b>					
EPA 6010D	Iron	1.9	mg/L	0.040	04/15/21 20:31	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92532951006</b>	<b>DUP-1</b>					
EPA 6010D	Manganese	149	mg/L	0.40	04/19/21 16:28	
EPA 6010D	Potassium	14.7	mg/L	0.20	04/15/21 20:31	
EPA 6010D	Sodium	59.4	mg/L	1.0	04/15/21 20:31	
EPA 6010D	Magnesium	165	mg/L	0.050	04/15/21 20:31	
EPA 6010D	Hardness, Total(SM 2340B)	1350	mg/L	2.7	04/15/21 20:31	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	8.9	mg/L	5.0	04/26/21 16:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	8.9	mg/L	5.0	04/26/21 16:51	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.024J	mg/L	0.040	04/20/21 13:26	
SM 5310B	Dissolved Organic Carbon	0.63J	mg/L	1.0	04/21/21 10:36	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: PZ-571      Lab ID: 92532951001      Collected: 04/12/21 14:10      Received: 04/13/21 16:55      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.35</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>3.6</b>	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 19:37	7439-89-6	
Manganese	<b>12.4</b>	mg/L	0.40	0.017	10	04/15/21 13:03	04/19/21 16:18	7439-96-5	
Potassium	<b>4.9</b>	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 19:37	7440-09-7	
Sodium	<b>17.5</b>	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 19:37	7440-23-5	
Magnesium	<b>32.6</b>	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 19:37	7439-95-4	
Hardness, Total(SM 2340B)	<b>264</b>	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 19:37		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>28.0</b>	mg/L	5.0	5.0	1		04/26/21 16:29		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		04/26/21 16:29		
Alkalinity, Total as CaCO3	<b>28.0</b>	mg/L	5.0	5.0	1		04/26/21 16:29		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.038J</b>	mg/L	0.040	0.017	1		04/20/21 13:19		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.57J</b>	mg/L	1.0	0.50	1		04/21/21 09:19		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: PZ-581      Lab ID: 92532951002      Collected: 04/12/21 14:55      Received: 04/13/21 16:55      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.15</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>29.7</b>	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 19:56	7439-89-6	
Manganese	<b>17.9</b>	mg/L	0.040	0.0017	1	04/15/21 13:03	04/15/21 19:56	7439-96-5	
Potassium	<b>8.6</b>	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 19:56	7440-09-7	
Sodium	<b>26.2</b>	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 19:56	7440-23-5	
Magnesium	<b>50.9</b>	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 19:56	7439-95-4	
Hardness, Total(SM 2340B)	<b>446</b>	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 19:56		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:37		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:37		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		04/26/21 16:37		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.089</b>	mg/L	0.040	0.017	1		04/20/21 13:20		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>2.2</b>	mg/L	1.0	0.50	1		04/21/21 09:35		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

**Sample: PZ-60I**      **Lab ID: 92532951003**      Collected: 04/12/21 12:30      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.05</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.7</b>	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:01	7439-89-6	
Manganese	<b>148</b>	mg/L	0.40	0.017	10	04/15/21 13:03	04/19/21 16:23	7439-96-5	
Potassium	<b>14.4</b>	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:01	7440-09-7	
Sodium	<b>57.9</b>	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:01	7440-23-5	
Magnesium	<b>164</b>	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:01	7439-95-4	
Hardness, Total(SM 2340B)	<b>1330</b>	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:01		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>8.1</b>	mg/L	5.0	5.0	1		04/26/21 16:40		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		04/26/21 16:40		
Alkalinity, Total as CaCO3	<b>8.1</b>	mg/L	5.0	5.0	1		04/26/21 16:40		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		04/20/21 13:21		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.59J</b>	mg/L	1.0	0.50	1		04/21/21 09:51		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: EB-1		Lab ID: 92532951004		Collected: 04/12/21 14:45	Received: 04/13/21 16:55	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:11	7439-89-6		
Manganese	<b>0.020J</b>	mg/L	0.040	0.0017	1	04/15/21 13:03	04/15/21 20:11	7439-96-5	B	
Potassium	ND	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:11	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:11	7440-23-5		
Magnesium	ND	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:11	7439-95-4		
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:11			
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:46			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:46			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		04/26/21 16:46			
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville								
Nitrogen, NO2 plus NO3	<b>0.019J</b>	mg/L	0.040	0.017	1		04/20/21 13:22			
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach								
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		04/21/21 10:05			

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: FB-1		Lab ID: 92532951005		Collected: 04/12/21 10:30	Received: 04/13/21 16:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	0.019J	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:26	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	04/15/21 13:03	04/15/21 20:26	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:26	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:26	7440-23-5	
Magnesium	ND	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:26	7439-95-4	
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:26		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:48		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:48		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		04/26/21 16:48		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		04/20/21 13:23		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		04/21/21 10:20		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: DUP-1		Lab ID: 92532951006		Collected: 04/12/21 00:00	Received: 04/13/21 16:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	1.9	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:31	7439-89-6	
Manganese	149	mg/L	0.40	0.017	10	04/15/21 13:03	04/19/21 16:28	7439-96-5	
Potassium	14.7	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:31	7440-09-7	
Sodium	59.4	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:31	7440-23-5	
Magnesium	165	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:31	7439-95-4	
Hardness, Total(SM 2340B)	1350	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:31		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	8.9	mg/L	5.0	5.0	1		04/26/21 16:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:51		
Alkalinity, Total as CaCO3	8.9	mg/L	5.0	5.0	1		04/26/21 16:51		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.024J	mg/L	0.040	0.017	1		04/20/21 13:26		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	0.63J	mg/L	1.0	0.50	1		04/21/21 10:36		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

QC Batch: 613990 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3231497 Matrix: Water  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	04/15/21 19:27	
Iron	mg/L	ND	0.040	0.016	04/15/21 19:27	
Magnesium	mg/L	ND	0.050	0.0076	04/15/21 19:27	
Manganese	mg/L	0.0065J	0.040	0.0017	04/15/21 19:27	
Potassium	mg/L	ND	0.20	0.056	04/15/21 19:27	
Sodium	mg/L	ND	1.0	0.26	04/15/21 19:27	

LABORATORY CONTROL SAMPLE: 3231498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.7	102	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	0.99	99	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231499 3231500

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	6.6	264	6.6	265	22	-27	75-125	1	20	
Iron	mg/L	1	3.6	1	4.5	93	89	75-125	1	20	
Magnesium	mg/L	1	32.6	1	32.8	18	-23	75-125	1	20 M1	
Manganese	mg/L	1	12.2	1	12.8	66	50	75-125	1	20	
Potassium	mg/L	1	4.9	1	5.9	97	98	75-125	0	20	
Sodium	mg/L	1	17.5	1	18.4	93	71	75-125	1	20 M1	

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### QUALITY CONTROL DATA

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

QC Batch: 616118 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3242301 Matrix: Water  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	04/26/21 15:01	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/26/21 15:01	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/26/21 15:01	

LABORATORY CONTROL SAMPLE: 3242302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	52.6	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242303 3242304

Parameter	Units	92533456001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	799	50	50	827	824	57	50	80-120	0	25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242307 3242308

Parameter	Units	92533344004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	568	50	50	604	627	72	117	80-120	4	25	M1

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### QUALITY CONTROL DATA

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

QC Batch: 614819 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3235434 Matrix: Water  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	04/20/21 13:02	

LABORATORY CONTROL SAMPLE: 3235435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235436 3235437

Parameter	Units	92532782001		3235437		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.11	2.5	1.7	2.5	65	66	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235438 3235439

Parameter	Units	92532823002		3235439		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	5.4	2.5	7.9	2.5	102	101	90-110	0	10	

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**QUALITY CONTROL DATA**

Project: BRANCH CATIONS/ANIONS  
 Pace Project No.: 92532951

QC Batch: 722429 Analysis Method: SM 5310B  
 QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
 Laboratory: Pace Analytical Services - Ormond Beach  
 Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3937892 Matrix: Water  
 Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	04/21/21 07:55	

LABORATORY CONTROL SAMPLE: 3937893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3937894 3937895

Parameter	Units	92532950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	0.91J	20	20	20.5	20.4	98	98	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92532951001	PZ-57I				
92532951002	PZ-58I				
92532951003	PZ-60I				
92532951001	PZ-57I	EPA 3010A	613990	EPA 6010D	614064
92532951002	PZ-58I	EPA 3010A	613990	EPA 6010D	614064
92532951003	PZ-60I	EPA 3010A	613990	EPA 6010D	614064
92532951004	EB-1	EPA 3010A	613990	EPA 6010D	614064
92532951005	FB-1	EPA 3010A	613990	EPA 6010D	614064
92532951006	DUP-1	EPA 3010A	613990	EPA 6010D	614064
92532951001	PZ-57I	SM 2320B-2011	616118		
92532951002	PZ-58I	SM 2320B-2011	616118		
92532951003	PZ-60I	SM 2320B-2011	616118		
92532951004	EB-1	SM 2320B-2011	616118		
92532951005	FB-1	SM 2320B-2011	616118		
92532951006	DUP-1	SM 2320B-2011	616118		
92532951001	PZ-57I	EPA 353.2 Rev 2.0 1993	614819		
92532951002	PZ-58I	EPA 353.2 Rev 2.0 1993	614819		
92532951003	PZ-60I	EPA 353.2 Rev 2.0 1993	614819		
92532951004	EB-1	EPA 353.2 Rev 2.0 1993	614819		
92532951005	FB-1	EPA 353.2 Rev 2.0 1993	614819		
92532951006	DUP-1	EPA 353.2 Rev 2.0 1993	614819		
92532951001	PZ-57I	SM 5310B	722429		
92532951002	PZ-58I	SM 5310B	722429		
92532951003	PZ-60I	SM 5310B	722429		
92532951004	EB-1	SM 5310B	722429		
92532951005	FB-1	SM 5310B	722429		
92532951006	DUP-1	SM 5310B	722429		

### REPORT OF LABORATORY ANALYSIS

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**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

**Sample Condition Upon Receipt**

Client Name:

GA Power

Project #:

**WO# : 92532951**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/13/21  
CAJ

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 233 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) -0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.2

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  
 Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

\_\_\_\_\_

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION

\_\_\_\_\_

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
 Sample Condition Upon Receipt(SCUR)  
 Document No.:  
 F-CAR-CS-033-Rev.07

Document Revised: October 23, 2010  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolina Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DPO/8015 (water) DOC, L&G

\*\*Bottom half of box is to list number of bottles

Project # **WO# : 92532951**

PM: KLH1

Due Date: 04/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Whole-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unip (N/A)	DG9P-40 mL VOA H1PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic NH2SO4 (9.3-9.7)	AG2U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEH-NR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: Georgia Power- Coal Combustion Residuals	Report To: Joju Abraham	Attention:
Address: 2480 Manner Road	Copy To: Brian Steele - Golder	Company Name:
Atlanta, GA 30339	Project Name: Branch-BCD	Address:
Email To: jabraham@southernco.com	Purchase Order #	Face Quote:
Phone: (404) 506-7239 Fax:	Project Number: 19692421	Face Project Manager: Kevin Herring
Requested Due Date: Standard		Face Profile #: 10838
		Requested Analysis Filtered (Y/N)
		State / Location: GA
		Regulatory Agency:

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9/, -) Sample IDs must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analyses Test	Y/N	Residual Chlorine (Y/N)	SAFETY CONDITIONS
				START DATE	START TIME			END DATE	END TIME	Unpreserved	H2SO4	HNO3	HCl				
1	PZ-S71	WT G	G	4/12/2021	14:10	-	4										
2	PZ-S81	WT G	G	4/12/2021	14:55	-	4										
3	PZ-S01	WT G	G	4/12/2021	12:30	-	4										
4	EB-1	WT G	G	4/12/2021	14:45	-	4										
5	FB-1	WT G	G	4/12/2021	10:30	-	4										
6	TUP-1	WT G	G	4/12/2021	-	-	4										
7																	
8																	
9																	
10																	
11																	
12																	

<b>RELINQUISHED BY / AFFILIATION</b>	<b>DATE</b>
Chris Towell/Golder	4/12/21
<b>ACCEPTED BY / AFFILIATION</b>	<b>DATE</b>
Lo SS / Golder	4/12/21
<b>TEMP in C</b>	
Received on site (Y/N)	Temp: 13.5
Custody Sealed Cooler (Y/N)	
Samples intact (Y/N)	

October 29, 2020

Kelley Sharpe  
ARCADIS - Atlanta  
2839 Paces Ferry Rd  
STE 900  
Atlanta, GA 30339

RE: Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

Dear Kelley Sharpe:

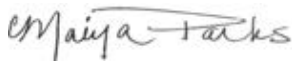
Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Maiya Parks  
maiya.parks@pacelabs.com  
(770)734-4200  
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power  
Warren Johnson, ARCADIS - Atlanta



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

---

### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92501802001	LR-1	Water	10/22/20 12:10	10/22/20 15:14
92501802002	LR+8	Water	10/22/20 12:25	10/22/20 15:14
92501802003	LR+9	Water	10/22/20 12:30	10/22/20 15:14
92501802004	LR+10	Water	10/22/20 12:38	10/22/20 15:14

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**SAMPLE ANALYTE COUNT**

Project: Plant Branch CCR-Ash Pond  
 Pace Project No.: 92501802

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92501802001	LR-1	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
92501802002	LR+8	EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
92501802003	LR+9	SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
92501802004	LR+10	EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA

PASI-A = Pace Analytical Services - Asheville  
 PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

Sample: LR-1	Lab ID: 92501802001	Collected: 10/22/20 12:10	Received: 10/22/20 15:14	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Sodium	4.4	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:13	7440-23-5	
Calcium	3.7	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:13	7440-70-2	
Magnesium	2.0	mg/L	0.050	1	10/23/20 14:00	10/24/20 00:13	7439-95-4	
Potassium	2.7	mg/L	0.20	1	10/23/20 14:00	10/27/20 13:38	7440-09-7	M1
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	10/23/20 14:04	10/26/20 13:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	10/23/20 14:04	10/26/20 13:50	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	10/23/20 14:04	10/26/20 13:50	7440-48-4	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	59.0	mg/L	10.0	1		10/23/20 16:53		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.1	Std. Units	0.10	1		10/23/20 14:57		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	24.2	mg/L	5.0	1		10/28/20 13:19		
Alkalinity, Total as CaCO <sub>3</sub>	24.2	mg/L	5.0	1		10/28/20 13:19		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.3	mg/L	1.0	1		10/25/20 22:08	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/25/20 22:08	16984-48-8	
Sulfate	2.1	mg/L	1.0	1		10/25/20 22:08	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

Sample: LR+8	Lab ID: 92501802002	Collected: 10/22/20 12:25	Received: 10/22/20 15:14	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Sodium	4.9	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:31	7440-23-5	
Calcium	4.2	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:31	7440-70-2	
Magnesium	2.1	mg/L	0.050	1	10/23/20 14:00	10/24/20 00:31	7439-95-4	
Potassium	2.8	mg/L	0.20	1	10/23/20 14:00	10/27/20 13:43	7440-09-7	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	10/23/20 14:04	10/26/20 14:12	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	10/23/20 14:04	10/26/20 14:12	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	10/23/20 14:04	10/26/20 14:12	7440-48-4	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	60.0	mg/L	10.0	1		10/23/20 16:53		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.2	Std. Units	0.10	1		10/23/20 15:14		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	25.6	mg/L	5.0	1		10/28/20 13:25		
Alkalinity, Total as CaCO3	25.6	mg/L	5.0	1		10/28/20 13:25		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.7	mg/L	1.0	1		10/25/20 22:54	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/25/20 22:54	16984-48-8	
Sulfate	2.5	mg/L	1.0	1		10/25/20 22:54	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

Sample: LR+9	Lab ID: 92501802003	Collected: 10/22/20 12:30	Received: 10/22/20 15:14	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Sodium	4.9	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:35	7440-23-5	
Calcium	4.3	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:35	7440-70-2	
Magnesium	2.1	mg/L	0.050	1	10/23/20 14:00	10/24/20 00:35	7439-95-4	
Potassium	2.9	mg/L	0.20	1	10/23/20 14:00	10/27/20 13:48	7440-09-7	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	10/23/20 14:04	10/26/20 14:18	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	10/23/20 14:04	10/26/20 14:18	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	10/23/20 14:04	10/26/20 14:18	7440-48-4	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	57.0	mg/L	10.0	1		10/23/20 16:53		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.2	Std. Units	0.10	1		10/23/20 15:18		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	25.8	mg/L	5.0	1		10/28/20 13:31		
Alkalinity, Total as CaCO3	25.8	mg/L	5.0	1		10/28/20 13:31		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		10/25/20 23:10	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/25/20 23:10	16984-48-8	
Sulfate	2.6	mg/L	1.0	1		10/25/20 23:10	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

Sample: LR+10	Lab ID: 92501802004	Collected: 10/22/20 12:38	Received: 10/22/20 15:14	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.8	mg/L	0.20	1	10/23/20 14:00	10/27/20 13:54	7440-09-7	
Sodium	5.1	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:49	7440-23-5	
Calcium	4.5	mg/L	1.0	1	10/23/20 14:00	10/24/20 00:49	7440-70-2	
Magnesium	2.1	mg/L	0.050	1	10/23/20 14:00	10/24/20 00:49	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	10/23/20 14:04	10/26/20 14:24	7440-42-8	
Cadmium	ND	mg/L	0.00050	1	10/23/20 14:04	10/26/20 14:24	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	10/23/20 14:04	10/26/20 14:24	7440-48-4	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	59.0	mg/L	10.0	1		10/23/20 16:53		
<b>9040 pH</b>								
Analytical Method: EPA 9040C								
Pace Analytical Services - Peachtree Corners, GA								
pH at 25 Degrees C	7.1	Std. Units	0.10	1		10/23/20 15:20		H3,H6
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	26.5	mg/L	5.0	1		10/28/20 13:37		
Alkalinity, Total as CaCO3	26.5	mg/L	5.0	1		10/28/20 13:37		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.0	mg/L	1.0	1		10/25/20 23:25	16887-00-6	
Fluoride	ND	mg/L	0.10	1		10/25/20 23:25	16984-48-8	
Sulfate	2.6	mg/L	1.0	1		10/25/20 23:25	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

QC Batch:	575392	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

METHOD BLANK: 3045814 Matrix: Water

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	10/24/20 00:04	
Magnesium	mg/L	ND	0.050	10/24/20 00:04	
Potassium	mg/L	ND	0.20	10/27/20 13:27	
Sodium	mg/L	ND	1.0	10/24/20 00:04	

LABORATORY CONTROL SAMPLE: 3045815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	.98J	98	80-120	
Magnesium	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	101	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3045816 3045817

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92501802001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	3.7	1	1	4.5	4.9	85	124	75-125	8	20
Magnesium	mg/L	2.0	1	1	2.9	3.1	92	115	75-125	8	20
Potassium	mg/L	2.7	1	1	3.8	4.1	116	137	75-125	6	20 M1
Sodium	mg/L	4.4	1	1	5.3	5.6	83	119	75-125	7	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

QC Batch: 575391 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

METHOD BLANK: 3045807 Matrix: Water

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	10/26/20 13:38	
Cadmium	mg/L	ND	0.00050	10/26/20 13:38	
Cobalt	mg/L	ND	0.0050	10/26/20 13:38	

LABORATORY CONTROL SAMPLE: 3045808

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3045809 3045810

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92501802001 Result	Spike Conc.	Spike Conc.	Conc.								
Boron	mg/L	ND	1	1	0.95	1.0	94	99	75-125	5	20		
Cadmium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Cobalt	mg/L	ND	0.1	0.1	0.092	0.095	92	94	75-125	3	20		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

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QC Batch: 575357	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

---

METHOD BLANK: 3045601 Matrix: Water  
Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10/23/20 16:52	

---

LABORATORY CONTROL SAMPLE: 3045602

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	404	101	84-108	

---

SAMPLE DUPLICATE: 3045603

Parameter	Units	92501618001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	375	390	4	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

QC Batch: 575360

Analysis Method: EPA 9040C

QC Batch Method: EPA 9040C

Analysis Description: 9040 pH

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

SAMPLE DUPLICATE: 3045620

Parameter	Units	92501802001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	9	H3,H6

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

QC Batch: 576297 Analysis Method: SM 2320B-2011  
 QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

METHOD BLANK: 3049850 Matrix: Water  
 Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	10/28/20 12:39	
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	10/28/20 12:39	

LABORATORY CONTROL SAMPLE: 3049851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	52.4	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3049852 3049853

Parameter	Units	92500569012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	51.8	51.6	104	103	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3049854 3049855

Parameter	Units	92501837008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	146	50	50	195	197	99	104	80-120	1	25	

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

QC Batch: 575544 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

METHOD BLANK: 3046842 Matrix: Water  
Associated Lab Samples: 92501802001, 92501802002, 92501802003, 92501802004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/25/20 21:37	
Fluoride	mg/L	ND	0.10	10/25/20 21:37	
Sulfate	mg/L	ND	1.0	10/25/20 21:37	

LABORATORY CONTROL SAMPLE: 3046843

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	52.4	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3046844 3046845

Parameter	Units	92501802001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	3.3	50	50	56.6	57.1	107	108	90-110	1	10			
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	106	106	90-110	0	10			
Sulfate	mg/L	2.1	50	50	55.3	55.5	106	107	90-110	0	10			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3046846 3046847

Parameter	Units	92501621017		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result							
Chloride	mg/L	6.0	50	50	59.5	60.3	107	109	90-110	1	10			
Fluoride	mg/L	0.096J	2.5	2.5	2.7	2.8	105	108	90-110	2	10			
Sulfate	mg/L	224	50	50	270	271	92	93	90-110	0	10			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92501802

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92501802

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92501802001	LR-1	EPA 3010A	575392	EPA 6010D	575424
92501802002	LR+8	EPA 3010A	575392	EPA 6010D	575424
92501802003	LR+9	EPA 3010A	575392	EPA 6010D	575424
92501802004	LR+10	EPA 3010A	575392	EPA 6010D	575424
92501802001	LR-1	EPA 3005A	575391	EPA 6020B	575422
92501802002	LR+8	EPA 3005A	575391	EPA 6020B	575422
92501802003	LR+9	EPA 3005A	575391	EPA 6020B	575422
92501802004	LR+10	EPA 3005A	575391	EPA 6020B	575422
92501802001	LR-1	SM 2450C-2011	575357		
92501802002	LR+8	SM 2450C-2011	575357		
92501802003	LR+9	SM 2450C-2011	575357		
92501802004	LR+10	SM 2450C-2011	575357		
92501802001	LR-1	EPA 9040C	575360		
92501802002	LR+8	EPA 9040C	575360		
92501802003	LR+9	EPA 9040C	575360		
92501802004	LR+10	EPA 9040C	575360		
92501802001	LR-1	SM 2320B-2011	576297		
92501802002	LR+8	SM 2320B-2011	576297		
92501802003	LR+9	SM 2320B-2011	576297		
92501802004	LR+10	SM 2320B-2011	576297		
92501802001	LR-1	EPA 300.0 Rev 2.1 1993	575544		
92501802002	LR+8	EPA 300.0 Rev 2.1 1993	575544		
92501802003	LR+9	EPA 300.0 Rev 2.1 1993	575544		
92501802004	LR+10	EPA 300.0 Rev 2.1 1993	575544		

### REPORT OF LABORATORY ANALYSIS

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## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Required Client Information:</b> Company: Georgia Power Company Address: Email: <a href="mailto:JOHHODGE@SOUTHERNCO.COM">JOHHODGE@SOUTHERNCO.COM</a> Phone: (404)200-4200 Fax: Requested Due Date: Standard TAT		<b>Required Project Information:</b> Report To: Sam Hodges Copy To: Purchase Order #: SC51000275 Project Name: Branch Surface Water Sampling Project #:	
<b>Required Information:</b> Attention: Account's Payable Company Name: Georgia Power Company Address: POC Name: POC Project Manager: mario.gutierrez@epc.com POC Profile #:		Page Code: POC Project Manager: mario.gutierrez@epc.com POC Profile #:	
<b>Regulatory Agency:</b> State / Location: GA		<b>Page:</b> 1 of 1	

ITEM #	SAMPLE ID <small>One Character per box (A-Z, a-z, /, ) Sample IDs must be unique</small>	MATRIX CODE (see code to left)	SAMPLE TYPE (G=GRAV C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES								Analyses Test	Y/N	Requested Analytes Followed (Y/N)
				START DATE	END DATE			U/Unreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O8	Methanol	Other			
1	LE-1	WT	G	10/22/08	10/22/08	-	1										X	
2	LE+8	WT	G	12/25/08	12/25/08	-	1										X	
3	LE+9	LT	G	12/30/08	12/30/08	-	1										X	
4	LE+10	LT	G	12/30/08	12/30/08	-	1										X	
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

REQUISITIONED BY / APPLICATION: *David Stirling*      DATE: 12/22/08      TIME: 15:44

ACCEPTED BY / APPLICATION: *T.J. Wall*      DATE: 12/22/08      TIME: 15:14

WO#: 92501802

92501802

**SAMPLER NAME AND SIGNATURE**

PRINT NAME OF SAMPLER: *David Stirling*

SIGNATURE OF SAMPLER: *David Stirling*      DATE SIGNED: *12/22/08*

TEMP in C

Received on Ice (Y/N)

Cooler Sealed (Y/N)

Cooler Cooled (Y/N)

Sample Intact (Y/N)

**Sample Condition Upon Receipt**



Client Name: GA POWER

**WO#: 92501802**

PH: NP      Due Date: 10/29/20  
 CLIENT: GA-ArcadRI

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other  
 Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  No      Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other ZIPLOC

Thermometer Used THRU4      Type of Ice:  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 10.8  
 Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: KRW 10/22/20

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7. Standards
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WL-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed      Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?      Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

February 11, 2021

Kelley Sharpe  
ARCADIS - Atlanta  
2839 Paces Ferry Rd  
STE 900  
Atlanta, GA 30339

RE: Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

Dear Kelley Sharpe:

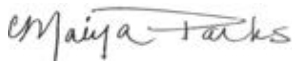
Enclosed are the analytical results for sample(s) received by the laboratory on February 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Maiya Parks  
maiya.parks@pacelabs.com  
(770)734-4200  
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR  
Ben Hodges, Georgia Power  
Warren Johnson, ARCADIS - Atlanta



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92520473001	LR-1	Water	02/04/21 12:30	02/04/21 15:40
92520473002	LR+8	Water	02/04/21 12:20	02/04/21 15:40
92520473003	LR+9	Water	02/04/21 12:05	02/04/21 15:40
92520473004	LR-9A	Water	02/04/21 12:15	02/04/21 15:40
92520473005	LR-10	Water	02/04/21 11:55	02/04/21 15:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92520473001	LR-1	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92520473002	LR+8	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92520473003	LR+9	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92520473004	LR-9A	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92520473005	LR-10	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		SM 2450C-2011	AW1	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

Sample: LR-1		Lab ID: 92520473001		Collected: 02/04/21 12:30	Received: 02/04/21 15:40	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.3	mg/L	0.20	1	02/05/21 11:58	02/08/21 18:14	7440-09-7	
Sodium	4.5	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:14	7440-23-5	
Calcium	4.8	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:14	7440-70-2	
Magnesium	2.2	mg/L	0.050	1	02/05/21 11:58	02/08/21 18:14	7439-95-4	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	02/10/21 10:04	02/10/21 13:54	7440-42-8	
Cadmium	ND	mg/L	0.00012	1	02/10/21 10:04	02/10/21 13:54	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	02/10/21 10:04	02/10/21 13:54	7440-48-4	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	70.0	mg/L	10.0	1		02/09/21 15:03		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	25.8	mg/L	5.0	1		02/10/21 14:12		
Alkalinity, Total as CaCO <sub>3</sub>	25.8	mg/L	5.0	1		02/10/21 14:12		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.7	mg/L	1.0	1		02/06/21 03:56	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/06/21 03:56	16984-48-8	
Sulfate	2.8	mg/L	1.0	1		02/06/21 03:56	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

Sample: LR+8		Lab ID: 92520473002		Collected: 02/04/21 12:20	Received: 02/04/21 15:40	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.5	mg/L	0.20	1	02/05/21 11:58	02/08/21 18:44	7440-09-7	
Sodium	4.4	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:44	7440-23-5	
Calcium	4.7	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:44	7440-70-2	
Magnesium	2.1	mg/L	0.050	1	02/05/21 11:58	02/08/21 18:44	7439-95-4	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	02/10/21 10:04	02/10/21 14:17	7440-42-8	
Cadmium	ND	mg/L	0.00012	1	02/10/21 10:04	02/10/21 14:17	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	02/10/21 10:04	02/10/21 14:17	7440-48-4	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	52.0	mg/L	10.0	1		02/09/21 15:04		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	24.3	mg/L	5.0	1		02/10/21 14:19		
Alkalinity, Total as CaCO <sub>3</sub>	24.3	mg/L	5.0	1		02/10/21 14:19		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.8	mg/L	1.0	1		02/06/21 04:11	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/06/21 04:11	16984-48-8	
Sulfate	3.2	mg/L	1.0	1		02/06/21 04:11	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

Sample: LR+9	Lab ID: 92520473003	Collected: 02/04/21 12:05	Received: 02/04/21 15:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.5	mg/L	0.20	1	02/05/21 11:58	02/08/21 18:49	7440-09-7	
Sodium	4.4	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:49	7440-23-5	
Calcium	4.6	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:49	7440-70-2	
Magnesium	2.1	mg/L	0.050	1	02/05/21 11:58	02/08/21 18:49	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	02/10/21 10:04	02/10/21 14:23	7440-42-8	
Cadmium	ND	mg/L	0.00012	1	02/10/21 10:04	02/10/21 14:23	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	02/10/21 10:04	02/10/21 14:23	7440-48-4	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	76.0	mg/L	10.0	1		02/09/21 15:04		
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	24.2	mg/L	5.0	1		02/10/21 14:26		
Alkalinity, Total as CaCO <sub>3</sub>	24.2	mg/L	5.0	1		02/10/21 14:26		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	3.8	mg/L	1.0	1		02/06/21 04:25	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/06/21 04:25	16984-48-8	
Sulfate	3.2	mg/L	1.0	1		02/06/21 04:25	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
 Pace Project No.: 92520473

Sample: LR-9A		Lab ID: 92520473004		Collected: 02/04/21 12:15	Received: 02/04/21 15:40	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	2.5	mg/L	0.20	1	02/05/21 11:58	02/08/21 18:53	7440-09-7	
Sodium	4.4	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:53	7440-23-5	
Calcium	4.8	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:53	7440-70-2	
Magnesium	2.2	mg/L	0.050	1	02/05/21 11:58	02/08/21 18:53	7439-95-4	
<b>6020 MET ICPMS</b>		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	ND	mg/L	0.040	1	02/10/21 10:04	02/10/21 14:29	7440-42-8	
Cadmium	ND	mg/L	0.00012	1	02/10/21 10:04	02/10/21 14:29	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	02/10/21 10:04	02/10/21 14:29	7440-48-4	
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	59.0	mg/L	10.0	1		02/09/21 15:05		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	24.9	mg/L	5.0	1		02/10/21 14:33		
Alkalinity, Total as CaCO <sub>3</sub>	24.9	mg/L	5.0	1		02/10/21 14:33		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	3.7	mg/L	1.0	1		02/06/21 04:40	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/06/21 04:40	16984-48-8	
Sulfate	3.4	mg/L	1.0	1		02/06/21 04:40	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

Sample: LR-10	Lab ID: 92520473005	Collected: 02/04/21 11:55	Received: 02/04/21 15:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	2.6	mg/L	0.20	1	02/05/21 11:58	02/08/21 18:58	7440-09-7	
Sodium	4.7	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:58	7440-23-5	
Calcium	4.6	mg/L	1.0	1	02/05/21 11:58	02/08/21 18:58	7440-70-2	
Magnesium	2.0	mg/L	0.050	1	02/05/21 11:58	02/08/21 18:58	7439-95-4	
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	02/10/21 10:04	02/10/21 14:34	7440-42-8	
Cadmium	ND	mg/L	0.00012	1	02/10/21 10:04	02/10/21 14:34	7440-43-9	
Cobalt	ND	mg/L	0.0050	1	02/10/21 10:04	02/10/21 14:34	7440-48-4	
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	49.0	mg/L	10.0	1		02/09/21 15:05		
<b>2320B Alkalinity</b>								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	24.6	mg/L	5.0	1		02/10/21 14:53		
Alkalinity, Total as CaCO <sub>3</sub>	24.6	mg/L	5.0	1		02/10/21 14:53		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	4.3	mg/L	1.0	1		02/06/21 04:54	16887-00-6	
Fluoride	ND	mg/L	0.10	1		02/06/21 04:54	16984-48-8	
Sulfate	3.3	mg/L	1.0	1		02/06/21 04:54	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

QC Batch: 598003 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

METHOD BLANK: 3153305 Matrix: Water  
Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	02/08/21 17:59	
Magnesium	mg/L	ND	0.050	02/08/21 17:59	
Potassium	mg/L	ND	0.20	02/08/21 17:59	
Sodium	mg/L	ND	1.0	02/08/21 17:59	

LABORATORY CONTROL SAMPLE: 3153306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	.99J	99	80-120	
Magnesium	mg/L	1	1.0	100	80-120	
Potassium	mg/L	1	0.94	94	80-120	
Sodium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153307 3153308

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92520473001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	4.8	1	1	6.0	5.9	116	104	75-125	2	20
Magnesium	mg/L	2.2	1	1	3.3	3.2	110	103	75-125	2	20
Potassium	mg/L	2.3	1	1	3.4	3.3	109	102	75-125	2	20
Sodium	mg/L	4.5	1	1	5.7	5.6	121	109	75-125	2	20

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

QC Batch: 598953 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

METHOD BLANK: 3157542 Matrix: Water

Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	02/10/21 13:43	
Cadmium	mg/L	ND	0.00012	02/10/21 13:43	
Cobalt	mg/L	ND	0.0050	02/10/21 13:43	

LABORATORY CONTROL SAMPLE: 3157543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157544 3157545

Parameter	Units	92520473001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	ND	1	1	0.99	0.97	97	95	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.097	0.099	97	99	75-125	2	20	
Cobalt	mg/L	ND	0.1	0.1	0.094	0.096	94	95	75-125	1	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

QC Batch: 598669

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

METHOD BLANK: 3156226

Matrix: Water

Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	02/09/21 15:02	

LABORATORY CONTROL SAMPLE: 3156227

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	84-108	

SAMPLE DUPLICATE: 3156760

Parameter	Units	92520473001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	70.0	65.0	7	10	

SAMPLE DUPLICATE: 3156765

Parameter	Units	92520915002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	145	151	4	10	

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

QC Batch: 599004

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

METHOD BLANK: 3157872

Matrix: Water

Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	02/10/21 13:15	
Alkalinity, Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	02/10/21 13:15	

LABORATORY CONTROL SAMPLE: 3157873

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157876 3157877

Parameter	Units	92519331003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	56.7	56.4	106	105	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157975 3157976

Parameter	Units	92520337004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	50.1	50.1	100	100	80-120	0	25	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Plant Branch CCR-Ash Pond  
Pace Project No.: 92520473

QC Batch: 597982 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

METHOD BLANK: 3153152 Matrix: Water  
Associated Lab Samples: 92520473001, 92520473002, 92520473003, 92520473004, 92520473005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	02/06/21 01:47	
Fluoride	mg/L	ND	0.10	02/06/21 01:47	
Sulfate	mg/L	ND	1.0	02/06/21 01:47	

LABORATORY CONTROL SAMPLE: 3153153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	54.8	110	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153154 3153155

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92520465002 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	ND	50	50	50	52.4	53.0	104	106	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	2.6	100	102	90-110	2	10	
Sulfate	mg/L	ND	50	50	50	52.2	53.0	103	105	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3153156 3153157

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92519913001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	7.2	50	50	50	59.8	60.5	105	106	90-110	1	10	
Fluoride	mg/L	0.58	2.5	2.5	2.5	3.2	3.1	103	102	90-110	1	10	
Sulfate	mg/L	23.0	50	50	50	73.7	74.0	101	102	90-110	0	10	

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## QUALIFIERS

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Branch CCR-Ash Pond

Pace Project No.: 92520473

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92520473001	LR-1	EPA 3010A	598003	EPA 6010D	598100
92520473002	LR+8	EPA 3010A	598003	EPA 6010D	598100
92520473003	LR+9	EPA 3010A	598003	EPA 6010D	598100
92520473004	LR-9A	EPA 3010A	598003	EPA 6010D	598100
92520473005	LR-10	EPA 3010A	598003	EPA 6010D	598100
92520473001	LR-1	EPA 3005A	598953	EPA 6020B	599040
92520473002	LR+8	EPA 3005A	598953	EPA 6020B	599040
92520473003	LR+9	EPA 3005A	598953	EPA 6020B	599040
92520473004	LR-9A	EPA 3005A	598953	EPA 6020B	599040
92520473005	LR-10	EPA 3005A	598953	EPA 6020B	599040
92520473001	LR-1	SM 2450C-2011	598669		
92520473002	LR+8	SM 2450C-2011	598669		
92520473003	LR+9	SM 2450C-2011	598669		
92520473004	LR-9A	SM 2450C-2011	598669		
92520473005	LR-10	SM 2450C-2011	598669		
92520473001	LR-1	SM 2320B-2011	599004		
92520473002	LR+8	SM 2320B-2011	599004		
92520473003	LR+9	SM 2320B-2011	599004		
92520473004	LR-9A	SM 2320B-2011	599004		
92520473005	LR-10	SM 2320B-2011	599004		
92520473001	LR-1	EPA 300.0 Rev 2.1 1993	597982		
92520473002	LR+8	EPA 300.0 Rev 2.1 1993	597982		
92520473003	LR+9	EPA 300.0 Rev 2.1 1993	597982		
92520473004	LR-9A	EPA 300.0 Rev 2.1 1993	597982		
92520473005	LR-10	EPA 300.0 Rev 2.1 1993	597982		

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant facts must be completed accurately.

Section A

Required Client Information:

Company: ARCADIS - Atlanta	Report To: Warren Johnson
Address: 2830 Paces Ferry Rd SE	Copy To:
Atlanta, GA 30339	Package Order #:
Email: warren.johnson@arcadis.com	Project Name: Plant Branch CCR Ash Pond Closure
Phone: (678)483-5288 Fax:	Project #:
Requested Due Date:	

Section B

Required Project Information:

Report To: Warren Johnson

Copy To:

Package Order #:

Project Name: Plant Branch CCR Ash Pond Closure

Project #:

Section C

Invoice Information:

Address:

Company Name:

Address:

Pace Order:

Pace Project Manager: aalya.parks@pacelabs.com

Pace Profile #: 12768

ITEM #	SAMPLE ID <small>One Character per box (A-Z, 0-9, -)</small>  Sample IDs must be unique	MATRIX CODE (SEE VARIOUS CODES TO MATRIX)	SAMPLE TYPE (UP-DOWN, L-R, etc)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Requested Analysis Requested (Y/N)						
				START		END				Unpreserved	HNO3A	HNO3	HCl	HNO2	H2SO4	Mn(NO3)2	Other	Analytes Test	Analytes Test	Analytes Test	Analytes Test					
				DATE	TIME	DATE	TIME																			
1	LR-1	W-		2.4.21	1230													X	X	X						
2	LR-8	W-		2.4.21	1220													X	X	X						
3	LR-9	W-		2.4.21	1205													X	X	X						
4	LR-8A	W-		2.4.21	1215													X	X	X						
5	LR-10	W-		2.4.21	1155													X	X	X						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Chad Tomlinson	2.4.21	15:40	R. W. Kelly / Pace	2/4/21	1540	11.7	Y	N	Y

W0#: 92520473

92520473

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Chad Tomlinson SIGNATURE of SAMPLER: <i>Chad Tomlinson</i>		DATE Signed: 2.4.2021	TEMP in C Received on Ice <input type="checkbox"/> (Y/N) Custody Sealed <input type="checkbox"/> Cooled <input type="checkbox"/> (Y/N) Samples Intact <input type="checkbox"/> (Y/N)
--	--	-----------------------	---



**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

Arcadis Atlanta

Project #:

**WO#: 92520473**  
 PM: NP Due Date: 02/11/21  
 CLIENT: GA-ArcadAt1

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 2/4/21 KRW

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:

HR Gun ID: TH2014

Type of Ice:

Wet  Blue  None

Cooler Temp:

11.7

Correction Factor:

Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 11.7

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?

Yes  No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_





**COMMONWEALTH of VIRGINIA**  
*Department of General Services*

*Division of Consolidated Laboratory Services*

*600 North 5th Street  
Richmond, Virginia 23219-3691  
(804) 648-4480  
FAX (804) 692-0416*

06/10/2020

Craig Tronzo  
Pace Analytical Services, LLC - Asheville NC  
2225 Riverside Drive  
Asheville NC 28804

VELAP ID: 460222

Dear Craig Tronzo:

The Division of Consolidated Laboratory Services (DCLS) has accredited Pace Analytical Services, LLC - Asheville NC pursuant to the provisions of 1VAC30-46 and The NELAC Institute (TNI) 2009 Standard. Certificate number 10807 and the corresponding Scope of Accreditation are enclosed. This certificate expires 06/14/2021. The certificate must be conspicuously displayed in the laboratory along with the associated Scope of Accreditation.

Please note that your laboratory is required to notify the Virginia Environmental Laboratory Accreditation Program (VELAP) in writing of any changes in key accreditation criteria within 30 calendar days of the change per 1VAC30-46-90 A. This requirement includes changes in ownership, location, key personnel, and major instrumentation.

To maintain accreditation, the laboratory must continue to comply with 1VAC30-46. This includes ongoing satisfactory proficiency testing. The method checklists used by VELAP in the on-site assessment process are available upon request as a supplement to internal audits.

Please direct all correspondences and questions regarding accreditation to your laboratory's lead assessor, Ila Meyer-Fritzsche, at [ila.meyer-fritzsche@dgs.virginia.gov](mailto:ila.meyer-fritzsche@dgs.virginia.gov) or (804) 648-4480 x306.

Sincerely yours,

Cathy Westerman  
Manager, Laboratory Certification Program

Enclosures  
cc: Felicia Grogan



**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF GENERAL SERVICES  
DIVISION OF CONSOLIDATED LABORATORY SERVICES**



**Certifies that**

**VA Laboratory ID#: 460222  
Pace Analytical Services, LLC - Asheville NC  
2225 Riverside Drive  
Asheville, NC 28804**

**Owner: PAS PARENT, LLC  
Operator: PACE ANALYTICAL SERVICES, LLC  
Responsible Official: FELICIA GROGAN**

Having met the requirements of 1 VAC 30-46 and  
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute  
is hereby approved as an

**Accredited Environmental Laboratory**

As more fully described in the attached Scope of Accreditation

**Effective Date: June 15, 2020**

**Expiration Date: June 14, 2021**

**Certificate # 10807**

**Denise M. Toney, Ph.D., HCLD  
DGS Deputy Director for Laboratories**

Continued accreditation status depends on successful ongoing participation in the program.  
Certificate to be conspicuously displayed at the laboratory.  
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)  
Scope of Accreditation.  
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation



**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 10807

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: June 15, 2020  
 Expiration Date: June 14, 2021

**DRINKING WATER**

METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	COPPER	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1 A + C)	NITRATE AS N	VA
SM 2320 B-2011	ALKALINITY AS CaCO <sub>3</sub>	VA
SM 9223 COLISURE®	TOTAL COLIFORMS	VA

METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	LEAD	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1-A)	NITRITE AS N	VA
SM 9223 COLISURE®	ESCHERICHIA COLI	VA

**NON-POTABLE WATER**

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	VA
EPA 160.4	RESIDUE-VOLATILE	VA
EPA 180.1 REV 2	TURBIDITY	VA
EPA 200.7 REV 4.4	ANTIMONY	VA
EPA 200.7 REV 4.4	BARIUM	VA
EPA 200.7 REV 4.4	BORON	VA
EPA 200.7 REV 4.4	CALCIUM	VA
EPA 200.7 REV 4.4	COBALT	VA
EPA 200.7 REV 4.4	IRON	VA
EPA 200.7 REV 4.4	MAGNESIUM	VA
EPA 200.7 REV 4.4	MOLYBDENUM	VA
EPA 200.7 REV 4.4	POTASSIUM	VA
EPA 200.7 REV 4.4	SILICA AS SiO <sub>2</sub>	VA
EPA 200.7 REV 4.4	SODIUM	VA
EPA 200.7 REV 4.4	TIN	VA
EPA 200.7 REV 4.4	VANADIUM	VA
EPA 200.8 REV 5.4	ALUMINUM	VA
EPA 200.8 REV 5.4	ARSENIC	VA
EPA 200.8 REV 5.4	BERYLLIUM	VA
EPA 200.8 REV 5.4	CHROMIUM	VA
EPA 200.8 REV 5.4	COPPER	VA
EPA 200.8 REV 5.4	MANGANESE	VA
EPA 200.8 REV 5.4	NICKEL	VA
EPA 200.8 REV 5.4	SILVER	VA
EPA 200.8 REV 5.4	VANADIUM	VA
EPA 200.8 REV 5.4 - EXTENDED	BORON	VA
EPA 200.8 REV 5.4 - EXTENDED	IRON	VA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	VA

METHOD	ANALYTE	PRIMARY
EPA 120.1	CONDUCTIVITY	VA
EPA 1631 E	MERCURY	VA
EPA 200.7 REV 4.4	ALUMINUM	VA
EPA 200.7 REV 4.4	ARSENIC	VA
EPA 200.7 REV 4.4	BERYLLIUM	VA
EPA 200.7 REV 4.4	CADMIUM	VA
EPA 200.7 REV 4.4	CHROMIUM	VA
EPA 200.7 REV 4.4	COPPER	VA
EPA 200.7 REV 4.4	LEAD	VA
EPA 200.7 REV 4.4	MANGANESE	VA
EPA 200.7 REV 4.4	NICKEL	VA
EPA 200.7 REV 4.4	SELENIUM	VA
EPA 200.7 REV 4.4	SILVER	VA
EPA 200.7 REV 4.4	THALLIUM	VA
EPA 200.7 REV 4.4	TITANIUM	VA
EPA 200.7 REV 4.4	ZINC	VA
EPA 200.8 REV 5.4	ANTIMONY	VA
EPA 200.8 REV 5.4	BARIUM	VA
EPA 200.8 REV 5.4	CADMIUM	VA
EPA 200.8 REV 5.4	COBALT	VA
EPA 200.8 REV 5.4	LEAD	VA
EPA 200.8 REV 5.4	MOLYBDENUM	VA
EPA 200.8 REV 5.4	SELENIUM	VA
EPA 200.8 REV 5.4	THALLIUM	VA
EPA 200.8 REV 5.4	ZINC	VA
EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	VA
EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	VA
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	VA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.





**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 10807

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: June 15, 2020  
 Expiration Date: June 14, 2021

**NON-POTABLE WATER**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 200.8 REV 5.4 - EXTENDED	TIN	VA
EPA 218.6 REV 3.3	CHROMIUM VI	VA
EPA 300.0 REV 2.1	BROMIDE	VA
EPA 300.0 REV 2.1	FLUORIDE	VA
EPA 300.0 REV 2.1	NITRATE/NITRITE	VA
EPA 300.0 REV 2.1	ORTHOPOSPHATE AS P	VA
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	VA
EPA 350.1 REV 2	AMMONIA AS N	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1 A + C)	NITRATE AS N	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1-A)	NITRITE AS N	VA
EPA 420.4 REV 1 (AS LACHAT 10-210-00-1-X)	TOTAL PHENOLICS	VA
EPA 6010 D	ANTIMONY	VA
EPA 6010 D	BARIUM	VA
EPA 6010 D	BORON	VA
EPA 6010 D	CALCIUM	VA
EPA 6010 D	COBALT	VA
EPA 6010 D	IRON	VA
EPA 6010 D	LITHIUM	VA
EPA 6010 D	MANGANESE	VA
EPA 6010 D	NICKEL	VA
EPA 6010 D	SELENIUM	VA
EPA 6010 D	SILVER	VA
EPA 6010 D	STRONTIUM	VA
EPA 6010 D	TIN	VA
EPA 6010 D	VANADIUM	VA
EPA 6010 D - EXTENDED	SILICON	VA
EPA 6020 B	ANTIMONY	VA
EPA 6020 B	BARIUM	VA
EPA 6020 B	CADMIUM	VA
EPA 6020 B	CHROMIUM	VA
EPA 6020 B	COPPER	VA
EPA 6020 B	LEAD	VA
EPA 6020 B	MANGANESE	VA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	VA
EPA 245.1 REV 3	MERCURY	VA
EPA 300.0 REV 2.1	CHLORIDE	VA
EPA 300.0 REV 2.1	NITRATE AS N	VA
EPA 300.0 REV 2.1	NITRITE AS N	VA
EPA 300.0 REV 2.1	SULFATE	VA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	VA
EPA 351.2 REV 2 (AS LACHAT 10-107-06-2-D)	KJELDAHL NITROGEN - TOTAL (TKN)	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1-A)	NITRATE/NITRITE	VA
EPA 365.1 REV 2 (AS LACHAT 10-115-01-1-E)	PHOSPHORUS, TOTAL	VA
EPA 6010 D	ALUMINUM	VA
EPA 6010 D	ARSENIC	VA
EPA 6010 D	BERYLLIUM	VA
EPA 6010 D	CADMIUM	VA
EPA 6010 D	CHROMIUM	VA
EPA 6010 D	COPPER	VA
EPA 6010 D	LEAD	VA
EPA 6010 D	MAGNESIUM	VA
EPA 6010 D	MOLYBDENUM	VA
EPA 6010 D	POTASSIUM	VA
EPA 6010 D	SILICA AS SiO2	VA
EPA 6010 D	SODIUM	VA
EPA 6010 D	THALLIUM	VA
EPA 6010 D	TITANIUM	VA
EPA 6010 D	ZINC	VA
EPA 6020 B	ALUMINUM	VA
EPA 6020 B	ARSENIC	VA
EPA 6020 B	BERYLLIUM	VA
EPA 6020 B	CALCIUM	VA
EPA 6020 B	COBALT	VA
EPA 6020 B	IRON	VA
EPA 6020 B	MAGNESIUM	VA
EPA 6020 B	MOLYBDENUM	VA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 10807

**Face Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: June 15, 2020  
 Expiration Date: June 14, 2021

**NON-POTABLE WATER**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8020 B	NICKEL	VA
EPA 8020 B	SELENIUM	VA
EPA 8020 B	SODIUM	VA
EPA 8020 B	TIN	VA
EPA 8020 B	ZINC	VA
EPA 8020 B - EXTENDED	BORON	VA
EPA 8020 B - EXTENDED	STRONTIUM	VA
EPA 8020 B - EXTENDED	URANIUM	VA
EPA 7470 A	MERCURY	VA
EPA 9012 B	TOTAL CYANIDE	VA
EPA 9056 A	BROMIDE	VA
EPA 9056 A	FLUORIDE	VA
EPA 9056 A	NITRITE AS N	VA
EPA 9056 A	SULFATE	VA
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	VA
LACHAT QUIKCHEM 10-204-00-1-X	CYANIDE	VA
SM 2340 B-2011	TOTAL HARDNESS AS CaCO <sub>3</sub>	VA
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	VA
SM 2540 F-2011	RESIDUE-SETTLABLE	VA
SM 4500-CL <sup>-</sup> E-2011	CHLORIDE	VA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	VA
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	VA
SM 5220 D-2011	CHEMICAL OXYGEN DEMAND (COD)	VA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 8020 B	POTASSIUM	VA
EPA 8020 B	SILVER	VA
EPA 8020 B	THALLIUM	VA
EPA 8020 B	VANADIUM	VA
EPA 8020 B - EXTENDED	BISMUTH	VA
EPA 8020 B - EXTENDED	LITHIUM	VA
EPA 8020 B - EXTENDED	TITANIUM	VA
EPA 7186 A	CHROMIUM VI	VA
EPA 8010 C	PREP: CYANIDE DISTILLATION	VA
EPA 8040 C	PH	VA
EPA 8056 A	CHLORIDE	VA
EPA 8056 A	NITRATE AS N	VA
EPA 8056 A	ORTHOPHOSPHATE AS P	VA
EPA 8056 A - EXTENDED	NITRATE/NITRITE	VA
EPA 8095 B	FREE LIQUID	VA
SM 2320 B-2011	ALKALINITY AS CaCO <sub>3</sub>	VA
SM 2540 B-2011	RESIDUE-TOTAL (TS)	VA
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	VA
SM 3500-CR B-2011	CHROMIUM VI	VA
SM 4500-CN <sup>-</sup> E-2011	CYANIDE	VA
SM 4500-S <sub>2</sub> <sup>-</sup> D-2011	SULFIDE	VA
SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	VA
SM 5310 B-2011	TOTAL ORGANIC CARBON (TOC)	VA

**SOLID AND CHEMICAL MATERIALS**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010 A	FLASHPOINT	VA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	VA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	VA
EPA 6010 D	ANTIMONY	VA
EPA 6010 D	BARIUM	VA
EPA 6010 D	BORON	VA
EPA 6010 D	CALCIUM	VA
EPA 6010 D	COBALT	VA
EPA 6010 D	IRON	VA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	VA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	VA
EPA 6010 D	ALUMINUM	VA
EPA 6010 D	ARSENIC	VA
EPA 6010 D	BERYLLIUM	VA
EPA 6010 D	CADMIUM	VA
EPA 6010 D	CHROMIUM	VA
EPA 6010 D	COPPER	VA
EPA 6010 D	LEAD	VA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 10807

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: June 15, 2020  
 Expiration Date: June 14, 2021

**SOLID AND CHEMICAL MATERIALS**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 D	MAGNESIUM	VA
EPA 6010 D	MOLYBDENUM	VA
EPA 6010 D	POTASSIUM	VA
EPA 6010 D	SILVER	VA
EPA 6010 D	STRONTIUM	VA
EPA 6010 D	TITANIUM	VA
EPA 6010 D	ZINC	VA
EPA 7471 B	MERCURY	VA
EPA 9060	TOTAL ORGANIC CARBON (TOC)	VA
EPA 9065	TOTAL PHENOLICS	VA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 D	MANGANESE	VA
EPA 6010 D	NICKEL	VA
EPA 6010 D	SELENIUM	VA
EPA 6010 D	SODIUM	VA
EPA 6010 D	THALLIUM	VA
EPA 6010 D	VANADIUM	VA
EPA 6010 D - EXTENDED	SILICON	VA
EPA 9045 D	PH	VA
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	VA
EPA 9095 B	FREE LIQUID	VA





State of Florida  
Department of Health, Bureau of Public Health Laboratories  
This is to certify that



E87315

PACE ANALYTICAL SERVICES, LLC- ATLANTA GA  
110 TECHNOLOGY PARKWAY  
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,  
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: October 06, 2020      Expiration Date: June 30, 2021



A handwritten signature in blue ink, appearing to read "P. Lewandowski".

Patty A. Lewandowski, MBA, MT(ASCP)  
Chief Bureau of Public Health Laboratories  
DH Form 1697, 7/04

NON-TRANSFERABLE E87315-49-10/06/2020  
Supersedes all previously issued certificates



**Laboratory Scope of Accreditation**

**Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.**

State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Drinking Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Color	SM 2120 B	Secondary Inorganic Contaminants	NELAP	4/10/2002
Escherichia coli	SM 9223 B	Microbiology	NELAP	4/10/2002
Escherichia coli	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Heterotrophic plate count	SIMPLATE	Microbiology	NELAP	5/29/2012
Nitrate	EPA 353.2	Primary Inorganic Contaminants	NELAP	4/17/2020
Nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	4/17/2020
Orthophosphate as P	SM 4500-P E	Primary Inorganic Contaminants	NELAP	4/10/2002
pH	SM 4500-H+-B	Primary Inorganic Contaminants, Secondary Inorganic Contaminants	NELAP	4/10/2002
Residual free chlorine	SM 4500-Cl G	Primary Inorganic Contaminants	NELAP	11/4/2010
Total coliforms	SM 9223 B	Microbiology	NELAP	4/10/2002
Total coliforms	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Total nitrate-nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	4/17/2020
Total residual chlorine	SM 4500-Cl G	Primary Inorganic Contaminants	NELAP	11/4/2010
Turbidity	EPA 180.1	Secondary Inorganic Contaminants	NELAP	4/10/2002





**Laboratory Scope of Accreditation**

**Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.**

State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aluminum	EPA 200.7	Metals	NELAP	4/10/2002
Aluminum	EPA 200.8	Metals	NELAP	8/30/2004
Aluminum	EPA 6010	Metals	NELAP	7/1/2003
Aluminum	EPA 6020	Metals	NELAP	8/30/2004
Amenable cyanide	EPA 9010/9014	General Chemistry	NELAP	7/1/2003
Amenable cyanide	SM 4500-CN- G	General Chemistry	NELAP	10/15/2007
Antimony	EPA 200.7	Metals	NELAP	4/10/2002
Antimony	EPA 200.8	Metals	NELAP	8/30/2004
Antimony	EPA 6010	Metals	NELAP	7/1/2003
Antimony	EPA 6020	Metals	NELAP	8/30/2004
Arsenic	EPA 200.7	Metals	NELAP	4/10/2002
Arsenic	EPA 200.8	Metals	NELAP	8/30/2004
Arsenic	EPA 6010	Metals	NELAP	4/10/2002
Arsenic	EPA 6020	Metals	NELAP	8/30/2004
Barium	EPA 200.7	Metals	NELAP	4/10/2002
Barium	EPA 200.8	Metals	NELAP	8/30/2004
Barium	EPA 6010	Metals	NELAP	7/1/2003
Barium	EPA 6020	Metals	NELAP	8/30/2004
Beryllium	EPA 200.7	Metals	NELAP	4/10/2002
Beryllium	EPA 200.8	Metals	NELAP	8/30/2004
Beryllium	EPA 6010	Metals	NELAP	7/1/2003
Beryllium	EPA 6020	Metals	NELAP	8/30/2004
Biochemical oxygen demand	SM 5210 B	General Chemistry	NELAP	4/10/2002
Boron	EPA 200.7	Metals	NELAP	4/10/2002
Boron	EPA 200.8	Metals	NELAP	11/6/2014
Boron	EPA 6010	Metals	NELAP	7/1/2003
Boron	EPA 6020	Metals	NELAP	8/30/2004
Cadmium	EPA 200.7	Metals	NELAP	4/10/2002
Cadmium	EPA 200.8	Metals	NELAP	8/30/2004
Cadmium	EPA 6010	Metals	NELAP	4/10/2002
Cadmium	EPA 6020	Metals	NELAP	8/30/2004
Calcium	EPA 200.7	Metals	NELAP	4/10/2002
Calcium	EPA 200.8	Metals	NELAP	11/6/2014
Calcium	EPA 6010	Metals	NELAP	7/1/2003
Calcium	EPA 6020	Metals	NELAP	8/30/2004
Carbonaceous BOD (CBOD)	SM 5210 B	General Chemistry	NELAP	4/10/2002

**Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.**

**Issue Date: 10/6/2020**

**Expiration Date: 6/30/2021**



**Laboratory Scope of Accreditation**

**Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.**

State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Chromium	EPA 200.7	Metals	NELAP	4/10/2002
Chromium	EPA 200.8	Metals	NELAP	8/30/2004
Chromium	EPA 6010	Metals	NELAP	7/1/2003
Chromium	EPA 6020	Metals	NELAP	8/30/2004
Chromium VI	SM 3500-Cr B (20th/21st/22nd Ed.)/UV-VIS	General Chemistry	NELAP	7/28/2009
Cobalt	EPA 200.7	Metals	NELAP	4/10/2002
Cobalt	EPA 200.8	Metals	NELAP	8/30/2004
Cobalt	EPA 6010	Metals	NELAP	7/1/2003
Cobalt	EPA 6020	Metals	NELAP	8/30/2004
Color	SM 2120 B	General Chemistry	NELAP	4/10/2002
Copper	EPA 200.7	Metals	NELAP	4/10/2002
Copper	EPA 200.8	Metals	NELAP	8/30/2004
Copper	EPA 6010	Metals	NELAP	4/10/2002
Copper	EPA 6020	Metals	NELAP	8/30/2004
Corrosivity (pH)	EPA 9040	General Chemistry	NELAP	7/1/2003
Cyanide	SM 4500-CN E	General Chemistry	NELAP	10/15/2007
Escherichia coli	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Fecal coliforms	COLILERT®-18 (Fecal Coliforms)	Microbiology	NELAP	11/6/2014
Fecal coliforms	SM 9222 D	Microbiology	NELAP	2/21/2002
Hardness	SM 2340 B	General Chemistry	NELAP	7/28/2009
Hardness (calc.)	EPA 200.7	Metals	NELAP	6/6/2002
Heterotrophic plate count	SIMPLATE	Microbiology	NELAP	5/29/2012
Iron	EPA 200.7	Metals	NELAP	4/10/2002
Iron	EPA 200.8	Metals	NELAP	11/6/2014
Iron	EPA 6010	Metals	NELAP	7/1/2003
Iron	EPA 6020	Metals	NELAP	8/30/2004
Iron	SM 3500-Fe D (18th/19th Ed.)/UV-VIS	General Chemistry	NELAP	2/5/2002
Iron-(II) (Ferrous Iron)	SM 3500-Fe B (20th/21st Ed.)/UV-VIS	General Chemistry	NELAP	7/28/2009
Lead	EPA 200.7	Metals	NELAP	4/10/2002
Lead	EPA 200.8	Metals	NELAP	8/30/2004
Lead	EPA 6010	Metals	NELAP	4/10/2002
Lead	EPA 6020	Metals	NELAP	8/30/2004
Lithium	EPA 200.8	Metals	NELAP	10/6/2016

**Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.**

**Issue Date: 10/6/2020**

**Expiration Date: 6/30/2021**



**Laboratory Scope of Accreditation**

**Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.**

State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Lithium	EPA 6020	Metals	NELAP	10/6/2016
Magnesium	EPA 200.7	Metals	NELAP	4/10/2002
Magnesium	EPA 200.8	Metals	NELAP	11/6/2014
Magnesium	EPA 6010	Metals	NELAP	7/1/2003
Magnesium	EPA 6020	Metals	NELAP	8/30/2004
Manganese	EPA 200.7	Metals	NELAP	4/10/2002
Manganese	EPA 200.8	Metals	NELAP	8/30/2004
Manganese	EPA 6010	Metals	NELAP	7/1/2003
Manganese	EPA 6020	Metals	NELAP	8/30/2004
Mercury	EPA 245.1	Metals	NELAP	4/10/2002
Mercury	EPA 7470	Metals	NELAP	4/10/2002
Molybdenum	EPA 200.7	Metals	NELAP	4/10/2002
Molybdenum	EPA 200.8	Metals	NELAP	8/30/2004
Molybdenum	EPA 6010	Metals	NELAP	4/10/2002
Molybdenum	EPA 6020	Metals	NELAP	8/30/2004
Nickel	EPA 200.7	Metals	NELAP	4/10/2002
Nickel	EPA 200.8	Metals	NELAP	8/30/2004
Nickel	EPA 6010	Metals	NELAP	4/10/2002
Nickel	EPA 6020	Metals	NELAP	8/30/2004
Nitrate as N	EPA 353.2	General Chemistry	NELAP	4/17/2020
Nitrate-nitrite	EPA 353.2	General Chemistry	NELAP	4/17/2020
Nitrite as N	EPA 353.2	General Chemistry	NELAP	4/17/2020
Orthophosphate as P	SM 4500-P E	General Chemistry	NELAP	4/10/2002
Oxygen, dissolved	ASTM D888-09C	General Chemistry	NELAP	11/6/2014
Oxygen, dissolved	SM 4500-O G	General Chemistry	NELAP	4/10/2002
pH	EPA 9040	General Chemistry	NELAP	7/1/2003
pH	SM 4500-H+-B	General Chemistry	NELAP	10/15/2007
Phosphorus, total	EPA 200.7	Metals	NELAP	9/27/2002
Phosphorus, total	EPA 6010	Metals	NELAP	7/1/2003
Potassium	EPA 200.7	Metals	NELAP	4/10/2002
Potassium	EPA 200.8	Metals	NELAP	11/6/2014
Potassium	EPA 6010	Metals	NELAP	4/10/2002
Potassium	EPA 6020	Metals	NELAP	8/30/2004
Residual free chlorine	SM 4500-Cl G	General Chemistry	NELAP	11/4/2010
Residue-filterable (TDS)	SM 2540 C	General Chemistry	NELAP	10/15/2007
Residue-nonfilterable (TSS)	SM 2540 D	General Chemistry	NELAP	10/15/2007

**Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.**

**Issue Date: 10/6/2020**

**Expiration Date: 6/30/2021**



**Laboratory Scope of Accreditation**

**Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.**

State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Residue-settleable	SM 2540 F	General Chemistry	NELAP	10/15/2007
Residue-total	SM 2540 B	General Chemistry	NELAP	10/15/2007
Residue-volatile	SM 2540 E	General Chemistry	NELAP	10/6/2016
Selenium	EPA 200.7	Metals	NELAP	4/10/2002
Selenium	EPA 200.8	Metals	NELAP	8/30/2004
Selenium	EPA 6010	Metals	NELAP	4/10/2002
Selenium	EPA 6020	Metals	NELAP	8/30/2004
Silicon	EPA 200.7	Metals	NELAP	4/10/2002
Silicon	EPA 6010	Metals	NELAP	7/1/2003
Silver	EPA 200.7	Metals	NELAP	4/10/2002
Silver	EPA 200.8	Metals	NELAP	8/30/2004
Silver	EPA 6010	Metals	NELAP	7/1/2003
Silver	EPA 6020	Metals	NELAP	8/30/2004
Sodium	EPA 200.7	Metals	NELAP	4/10/2002
Sodium	EPA 200.8	Metals	NELAP	11/6/2014
Sodium	EPA 6010	Metals	NELAP	7/1/2003
Sodium	EPA 6020	Metals	NELAP	8/30/2004
Strontium	EPA 200.7	Metals	NELAP	9/27/2002
Strontium	EPA 6010	Metals	NELAP	7/1/2003
Strontium	EPA 6020	Metals	NELAP	8/30/2004
Thallium	EPA 200.7	Metals	NELAP	4/10/2002
Thallium	EPA 200.8	Metals	NELAP	8/30/2004
Thallium	EPA 6010	Metals	NELAP	7/1/2003
Thallium	EPA 6020	Metals	NELAP	8/30/2004
Tin	EPA 200.7	Metals	NELAP	4/10/2002
Tin	EPA 200.8	Metals	NELAP	11/6/2014
Tin	EPA 6010	Metals	NELAP	7/1/2003
Tin	EPA 6020	Metals	NELAP	8/30/2004
Titanium	EPA 200.7	Metals	NELAP	4/10/2002
Titanium	EPA 200.8	Metals	NELAP	11/6/2014
Titanium	EPA 6010	Metals	NELAP	7/1/2003
Titanium	EPA 6020	Metals	NELAP	8/30/2004
Total coliforms	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Total cyanide	EPA 9010/9014	General Chemistry	NELAP	7/1/2003
Total residual chlorine	SM 4500-Cl G	General Chemistry	NELAP	11/4/2010
Total, fixed, and volatile residue	SM 2540 G	General Chemistry	NELAP	9/27/2002

**Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.**

**Issue Date: 10/6/2020**

**Expiration Date: 6/30/2021**



**Laboratory Scope of Accreditation**

**Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.**

State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Turbidity	EPA 180.1	General Chemistry	NELAP	4/10/2002
Vanadium	EPA 200.7	Metals	NELAP	4/10/2002
Vanadium	EPA 200.8	Metals	NELAP	8/30/2004
Vanadium	EPA 6010	Metals	NELAP	7/1/2003
Vanadium	EPA 6020	Metals	NELAP	8/30/2004
Zinc	EPA 200.7	Metals	NELAP	4/10/2002
Zinc	EPA 200.8	Metals	NELAP	8/30/2004
Zinc	EPA 6010	Metals	NELAP	4/10/2002
Zinc	EPA 6020	Metals	NELAP	8/30/2004



**Laboratory Scope of Accreditation**

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State Laboratory ID: **E87315**

EPA Lab Code: **GA00051**

**(770) 734-4200**

**E87315**

**Pace Analytical Services, LLC- Atlanta GA**

**110 Technology Parkway**

**Peachtree Corners, GA 30092**

Matrix: **Solid and Chemical Materials**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aluminum	EPA 6010	Metals	NELAP	4/10/2002
Antimony	EPA 6010	Metals	NELAP	4/10/2002
Arsenic	EPA 6010	Metals	NELAP	4/10/2002
Barium	EPA 6010	Metals	NELAP	4/10/2002
Beryllium	EPA 6010	Metals	NELAP	4/10/2002
Boron	EPA 6010	Metals	NELAP	4/10/2002
Cadmium	EPA 6010	Metals	NELAP	4/10/2002
Calcium	EPA 6010	Metals	NELAP	4/10/2002
Chromium	EPA 6010	Metals	NELAP	4/10/2002
Cobalt	EPA 6010	Metals	NELAP	4/10/2002
Copper	EPA 6010	Metals	NELAP	4/10/2002
Fecal coliforms	SM 9222 D	Microbiology	NELAP	7/28/2009
Fixed Residue	SM 2540 G-2011	General Chemistry	NELAP	10/1/2020
Iron	EPA 6010	Metals	NELAP	4/10/2002
Lead	EPA 6010	Metals	NELAP	4/10/2002
Magnesium	EPA 6010	Metals	NELAP	4/10/2002
Manganese	EPA 6010	Metals	NELAP	4/10/2002
Mercury	EPA 7471	Metals	NELAP	4/10/2002
Molybdenum	EPA 6010	Metals	NELAP	4/10/2002
Nickel	EPA 6010	Metals	NELAP	4/10/2002
pH	EPA 9045	General Chemistry	NELAP	4/10/2002
Phosphorus, total	EPA 6010	Metals	NELAP	4/10/2002
Potassium	EPA 6010	Metals	NELAP	4/10/2002
Residue-total	SM 2540 G-2011	General Chemistry	NELAP	10/1/2020
Residue-volatile	SM 2540 G-2011	General Chemistry	NELAP	10/1/2020
Selenium	EPA 6010	Metals	NELAP	4/10/2002
Silicon	EPA 6010	Metals	NELAP	4/10/2002
Silver	EPA 6010	Metals	NELAP	4/10/2002
Sodium	EPA 6010	Metals	NELAP	7/9/2002
Strontium	EPA 6010	Metals	NELAP	4/10/2002
Thallium	EPA 6010	Metals	NELAP	4/10/2002
Tin	EPA 6010	Metals	NELAP	4/10/2002
Titanium	EPA 6010	Metals	NELAP	9/27/2002
Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311	General Chemistry	NELAP	4/10/2002
Vanadium	EPA 6010	Metals	NELAP	4/10/2002
Zinc	EPA 6010	Metals	NELAP	4/10/2002

**Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.**

**Issue Date: 10/6/2020**

**Expiration Date: 6/30/2021**



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*Laboratory Scope of Accreditation*



**COMMONWEALTH of VIRGINIA**  
*Department of General Services*

*Division of Consolidated Laboratory Services*

*600 North 5th Street  
Richmond, Virginia 23219-3691  
(804) 648-4480  
FAX (804) 692-0416*

04/14/2021

Craig Tronzo  
Pace Analytical Services, LLC - Asheville NC  
2225 Riverside Drive  
Asheville NC 28804

VELAP ID: 460222

Dear Craig Tronzo:

The Virginia Environmental Laboratory Accreditation Program has completed processing the requested revision to your certificate. Enclosed with this letter is certificate # 11256. Certificate # 11256 and the associated Scope of Accreditation must be posted in a prominent place at the laboratory.

Please contact your lead assessor, Ila Meyer-Fritzsche, at [ila.meyer-fritzsche@dgs.virginia.gov](mailto:ila.meyer-fritzsche@dgs.virginia.gov) or (804) 648-4480 x306 if you have any questions.

Sincerely yours,

Cathy Westerman  
Manager, Laboratory Certification Program

Enclosures  
cc: Felicia Grogan





**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF GENERAL SERVICES  
DIVISION OF CONSOLIDATED LABORATORY SERVICES**



**Certifies that**

**VA Laboratory ID#: 460222  
Pace Analytical Services, LLC - Asheville NC  
2225 Riverside Drive  
Asheville, NC 28804**

**Owner: PAS PARENT, LLC  
Operator: PACE ANALYTICAL SERVICES, LLC  
Responsible Official: FELICIA GROGAN**

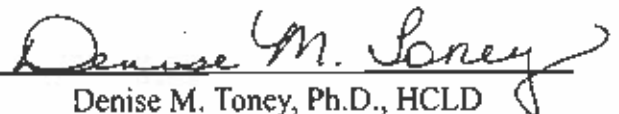
Having met the requirements of 1 VAC 30-46 and  
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute  
is hereby approved as an  
**Accredited Environmental Laboratory**

As more fully described in the attached Scope of Accreditation

**Effective Date: April 14, 2021**

**Expiration Date: June 14, 2021**

**Certificate # 11256**

  
Denise M. Toney, Ph.D., HCLD

DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.  
Certificate to be conspicuously displayed at the laboratory.  
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)  
Scope of Accreditation.  
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation



**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 11256

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: April 14, 2021  
 Expiration Date: June 14, 2021

**DRINKING WATER**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 200.8 REV 5.4	COPPER	VA	EPA 200.8 REV 5.4	LEAD	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1 A + C)	NITRATE AS N	VA	EPA 353.2 REV 2 (AS LACHAT 10-107-04-1-A)	NITRITE AS N	VA
SM 2320 B-2011	ALKALINITY AS CaCO3	VA	SM 9223 COLISURE®	ESCHERICHIA COLI	VA
SM 9223 COLISURE®	TOTAL COLIFORMS	VA			

**NON-POTABLE WATER**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 1010 B	FLASHPOINT	VA	EPA 120.1	CONDUCTIVITY	VA
EPA 160.4	RESIDUE-VOLATILE	VA	EPA 1631 E	MERCURY	VA
EPA 180.1 REV 2	TURBIDITY	VA	EPA 200.7 REV 4.4	ALUMINUM	VA
EPA 200.7 REV 4.4	ANTIMONY	VA	EPA 200.7 REV 4.4	ARSENIC	VA
EPA 200.7 REV 4.4	BARIUM	VA	EPA 200.7 REV 4.4	BERYLLIUM	VA
EPA 200.7 REV 4.4	BORON	VA	EPA 200.7 REV 4.4	CADMIUM	VA
EPA 200.7 REV 4.4	CALCIUM	VA	EPA 200.7 REV 4.4	CHROMIUM	VA
EPA 200.7 REV 4.4	COBALT	VA	EPA 200.7 REV 4.4	COPPER	VA
EPA 200.7 REV 4.4	IRON	VA	EPA 200.7 REV 4.4	LEAD	VA
EPA 200.7 REV 4.4	MAGNESIUM	VA	EPA 200.7 REV 4.4	MANGANESE	VA
EPA 200.7 REV 4.4	MOLYBDENUM	VA	EPA 200.7 REV 4.4	NICKEL	VA
EPA 200.7 REV 4.4	POTASSIUM	VA	EPA 200.7 REV 4.4	SELENIUM	VA
EPA 200.7 REV 4.4	SILICA AS SiO2	VA	EPA 200.7 REV 4.4	SILVER	VA
EPA 200.7 REV 4.4	SODIUM	VA	EPA 200.7 REV 4.4	THALLIUM	VA
EPA 200.7 REV 4.4	TIN	VA	EPA 200.7 REV 4.4	TITANIUM	VA
EPA 200.7 REV 4.4	VANADIUM	VA	EPA 200.7 REV 4.4	ZINC	VA
EPA 200.8 REV 5.4	ALUMINUM	VA	EPA 200.8 REV 5.4	ANTIMONY	VA
EPA 200.8 REV 5.4	ARSENIC	VA	EPA 200.8 REV 5.4	BARIUM	VA
EPA 200.8 REV 5.4	BERYLLIUM	VA	EPA 200.8 REV 5.4	CADMIUM	VA
EPA 200.8 REV 5.4	CHROMIUM	VA	EPA 200.8 REV 5.4	COBALT	VA
EPA 200.8 REV 5.4	COPPER	VA	EPA 200.8 REV 5.4	LEAD	VA
EPA 200.8 REV 5.4	MANGANESE	VA	EPA 200.8 REV 5.4	MOLYBDENUM	VA
EPA 200.8 REV 5.4	NICKEL	VA	EPA 200.8 REV 5.4	SELENIUM	VA
EPA 200.8 REV 5.4	SILVER	VA	EPA 200.8 REV 5.4	THALLIUM	VA
EPA 200.8 REV 5.4	VANADIUM	VA	EPA 200.8 REV 5.4	ZINC	VA
EPA 200.8 REV 5.4 - EXTENDED	BORON	VA	EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	VA
EPA 200.8 REV 5.4 - EXTENDED	IRON	VA	EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	VA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	VA	EPA 200.8 REV 5.4 - EXTENDED	SODIUM	VA

This Scope of Accreditation must accompany the Certificate Issued by Virginia DCLS with the same Certificate Number indicated above.



**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 11256

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: April 14, 2021  
 Expiration Date: June 14, 2021

**NON-POTABLE WATER**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>	<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 200.8 REV 5.4 - EXTENDED	TIN	VA	EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	VA
EPA 218.6 REV 3.3	CHROMIUM VI	VA	EPA 245.1 REV 3	MERCURY	VA
EPA 300.0 REV 2.1	BROMIDE	VA	EPA 300.0 REV 2.1	CHLORIDE	VA
EPA 300.0 REV 2.1	FLUORIDE	VA	EPA 300.0 REV 2.1	NITRATE AS N	VA
EPA 300.0 REV 2.1	NITRATE/NITRITE	VA	EPA 300.0 REV 2.1	NITRITE AS N	VA
EPA 300.0 REV 2.1	SULFATE	VA	EPA 3005 A	PREP. ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	VA
EPA 3010 A	PREP. ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	VA	EPA 350.1 REV 2	AMMONIA AS N	VA
EPA 351.2 MINUS EPA 350.1	ORGANIC NITROGEN	VA	EPA 351.2 REV 2 (AS LACHAT 10-107-06-2-D)	KJELDAHL NITROGEN - TOTAL (TKN)	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1 A + C)	NITRATE AS N	VA	EPA 353.2 REV 2 (AS LACHAT 10-107-04-1-A)	NITRATE/NITRITE	VA
EPA 353.2 REV 2 (AS LACHAT 10-107-04-1-A)	NITRITE AS N	VA	EPA 365.1 REV 2 (AS LACHAT 10-115-01-1-E)	PHOSPHORUS, TOTAL	VA
EPA 420.4 REV 1 (AS LACHAT 10-210-00-1-X)	TOTAL PHENOLICS	VA	EPA 6010 D	ALUMINUM	VA
EPA 6010 D	ANTIMONY	VA	EPA 6010 D	ARSENIC	VA
EPA 6010 D	BARIUM	VA	EPA 6010 D	BERYLLIUM	VA
EPA 6010 D	BORON	VA	EPA 6010 D	CADMIUM	VA
EPA 6010 D	CALCIUM	VA	EPA 6010 D	CHROMIUM	VA
EPA 6010 D	COBALT	VA	EPA 6010 D	COPPER	VA
EPA 6010 D	IRON	VA	EPA 6010 D	LEAD	VA
EPA 6010 D	LITHIUM	VA	EPA 6010 D	MAGNESIUM	VA
EPA 6010 D	MANGANESE	VA	EPA 6010 D	MOLYBDENUM	VA
EPA 6010 D	NICKEL	VA	EPA 6010 D	POTASSIUM	VA
EPA 6010 D	SELENIUM	VA	EPA 6010 D	SILICA AS SiO2	VA
EPA 6010 D	SILVER	VA	EPA 6010 D	SODIUM	VA
EPA 6010 D	STRONTIUM	VA	EPA 6010 D	THALLIUM	VA
EPA 6010 D	TIN	VA	EPA 6010 D	TITANIUM	VA
EPA 6010 D	VANADIUM	VA	EPA 6010 D	ZINC	VA
EPA 6010 D - EXTENDED	SILICON	VA	EPA 6020 B	ALUMINUM	VA
EPA 6020 B	ANTIMONY	VA	EPA 6020 B	ARSENIC	VA
EPA 6020 B	BARIUM	VA	EPA 6020 B	BERYLLIUM	VA
EPA 6020 B	CADMIUM	VA	EPA 6020 B	CALCIUM	VA
EPA 6020 B	CHROMIUM	VA	EPA 6020 B	COBALT	VA
EPA 6020 B	COPPER	VA	EPA 6020 B	IRON	VA
EPA 6020 B	LEAD	VA	EPA 6020 B	MAGNESIUM	VA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.





**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 11256

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: April 14, 2021  
 Expiration Date: June 14, 2021

**NON-POTABLE WATER**

METHOD	ANALYTE	PRIMARY
EPA 6020 B	MANGANESE	VA
EPA 6020 B	NICKEL	VA
EPA 6020 B	SELENIUM	VA
EPA 6020 B	SODIUM	VA
EPA 6020 B	TIN	VA
EPA 6020 B	ZINC	VA
EPA 6020 B - EXTENDED	BORON	VA
EPA 6020 B - EXTENDED	STRONTIUM	VA
EPA 6020 B - EXTENDED	URANIUM	VA
EPA 7470 A	MERCURY	VA
EPA 9012 B	AMENABLE CYANIDE	VA
EPA 9040 C	PH	VA
EPA 9056 A	CHLORIDE	VA
EPA 9056 A	NITRATE AS N	VA
EPA 9056 A	SULFATE	VA
EPA 9080 A	TOTAL ORGANIC CARBON (TOC)	VA
LACHAT QUIKCHEM 10-204-00-1-X	CYANIDE	VA
SM 2320 B-2011	ALKALINITY AS CaCO3	VA
SM 2540 B-2011	RESIDUE-TOTAL (TS)	VA
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	VA
SM 3500-CR B-2011	CHROMIUM VI	VA
SM 4500-CN <sup>-</sup> E-2011	CYANIDE	VA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	VA
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	VA
SM 5220 D-2011	CHEMICAL OXYGEN DEMAND (COD)	VA

METHOD	ANALYTE	PRIMARY
EPA 6020 B	MOLYBDENUM	VA
EPA 6020 B	POTASSIUM	VA
EPA 6020 B	SILVER	VA
EPA 6020 B	THALLIUM	VA
EPA 6020 B	VANADIUM	VA
EPA 6020 B - EXTENDED	BISMUTH	VA
EPA 6020 B - EXTENDED	LITHIUM	VA
EPA 6020 B - EXTENDED	TITANIUM	VA
EPA 7196 A	CHROMIUM VI	VA
EPA 9010 C	PREP: CYANIDE DISTILLATION	VA
EPA 9012 B	TOTAL CYANIDE	VA
EPA 9056 A	BROMIDE	VA
EPA 9056 A	FLUORIDE	VA
EPA 9056 A	NITRITE AS N	VA
EPA 9056 A - EXTENDED	NITRATE/NITRITE	VA
EPA 9095 B	FREE LIQUID	VA
SM 2130 B-2011	TURBIDITY	VA
SM 2340 B-2011	TOTAL HARDNESS AS CaCO3	VA
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	VA
SM 2540 F-2011	RESIDUE-SETTLABLE	VA
SM 4500-CL <sup>-</sup> E-2011	CHLORIDE	VA
SM 4500-CN <sup>-</sup> G-2011	AMENABLE CYANIDE	VA
SM 4500-S2 <sup>-</sup> D-2011	SULFIDE	VA
SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	VA
SM 5310 B-2011	TOTAL ORGANIC CARBON (TOC)	VA

**SOLID AND CHEMICAL MATERIALS**

METHOD	ANALYTE	PRIMARY
EPA 1010 B	FLASHPOINT	VA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	VA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	VA
EPA 6010 D	ANTIMONY	VA
EPA 6010 D	BARIUM	VA
EPA 6010 D	BORON	VA
EPA 6010 D	CALCIUM	VA

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	VA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	VA
EPA 6010 D	ALUMINUM	VA
EPA 6010 D	ARSENIC	VA
EPA 6010 D	BERYLLIUM	VA
EPA 6010 D	CADMIUM	VA
EPA 6010 D	CHROMIUM	VA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.



**Commonwealth of Virginia**  
 Department of General Services  
 Division of Consolidated Laboratory Services



**Scope of Accreditation**

VELAP Certificate No.: 11256

**Pace Analytical Services, LLC - Asheville NC**  
 2225 Riverside Drive  
 Asheville, NC 28804

**Virginia Laboratory ID: 460222**  
 Effective Date: April 14, 2021  
 Expiration Date: June 14, 2021

**SOLID AND CHEMICAL MATERIALS**

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 D	COBALT	VA
EPA 6010 D	IRON	VA
EPA 6010 D	MAGNESIUM	VA
EPA 6010 D	MOLYBDENUM	VA
EPA 6010 D	POTASSIUM	VA
EPA 6010 D	SILVER	VA
EPA 6010 D	STRONTIUM	VA
EPA 6010 D	TITANIUM	VA
EPA 6010 D	ZINC	VA
EPA 7471 B	MERCURY	VA
EPA 9060	TOTAL ORGANIC CARBON (TOC)	VA
EPA 9095 B	FREE LIQUID	VA

<u>METHOD</u>	<u>ANALYTE</u>	<u>PRIMARY</u>
EPA 6010 D	COPPER	VA
EPA 6010 D	LEAD	VA
EPA 6010 D	MANGANESE	VA
EPA 6010 D	NICKEL	VA
EPA 6010 D	SELENIUM	VA
EPA 6010 D	SODIUM	VA
EPA 6010 D	THALLIUM	VA
EPA 6010 D	VANADIUM	VA
EPA 6010 D - EXTENDED	SILICON	VA
EPA 9045 D	PH	VA
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	VA



State of Florida  
Department of Health, Bureau of Public Health Laboratories  
This is to certify that



E87315

PACE ANALYTICAL SERVICES, LLC- ATLANTA GA  
110 TECHNOLOGY PARKWAY  
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,  
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: October 06, 2020      Expiration Date: June 30, 2021



A handwritten signature in blue ink, appearing to read "P. Lewandowski".

Patty A. Lewandowski, MBA, MT(ASCP)  
Chief Bureau of Public Health Laboratories  
DH Form 1697, 7/04

NON-TRANSFERABLE E87315-49-10/06/2020  
Supersedes all previously issued certificates



Laboratory Scope of Accreditation

Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E87315      EPA Lab Code: GA00051      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Color	SM 2120 B	Secondary Inorganic Contaminants	NELAP	4/10/2002
Escherichia coli	SM 9223 B	Microbiology	NELAP	4/10/2002
Escherichia coli	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Heterotrophic plate count	SIMPLATE	Microbiology	NELAP	5/29/2012
Nitrate	EPA 353.2	Primary Inorganic Contaminants	NELAP	4/17/2020
Nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	4/17/2020
Orthophosphate as P	SM 4500-P E	Primary Inorganic Contaminants	NELAP	4/10/2002
pH	SM 4500-H+-B	Primary Inorganic Contaminants, Secondary Inorganic Contaminants	NELAP	4/10/2002
Residual free chlorine	SM 4500-Cl G	Primary Inorganic Contaminants	NELAP	11/4/2010
Total coliforms	SM 9223 B	Microbiology	NELAP	4/10/2002
Total coliforms	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Total nitrate-nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	4/17/2020
Total residual chlorine	SM 4500-Cl G	Primary Inorganic Contaminants	NELAP	11/4/2010
Turbidity	EPA 180.1	Secondary Inorganic Contaminants	NELAP	4/10/2002



Laboratory Scope of Accreditation

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State Laboratory ID: E87315                      EPA Lab Code: GA00051                      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aluminum	EPA 200.7	Metals	NELAP	4/10/2002
Aluminum	EPA 200.8	Metals	NELAP	8/30/2004
Aluminum	EPA 6010	Metals	NELAP	7/1/2003
Aluminum	EPA 6020	Metals	NELAP	8/30/2004
Amenable cyanide	EPA 9010/9014	General Chemistry	NELAP	7/1/2003
Amenable cyanide	SM 4500-CN- G	General Chemistry	NELAP	10/15/2007
Antimony	EPA 200.7	Metals	NELAP	4/10/2002
Antimony	EPA 200.8	Metals	NELAP	8/30/2004
Antimony	EPA 6010	Metals	NELAP	7/1/2003
Antimony	EPA 6020	Metals	NELAP	8/30/2004
Arsenic	EPA 200.7	Metals	NELAP	4/10/2002
Arsenic	EPA 200.8	Metals	NELAP	8/30/2004
Arsenic	EPA 6010	Metals	NELAP	4/10/2002
Arsenic	EPA 6020	Metals	NELAP	8/30/2004
Barium	EPA 200.7	Metals	NELAP	4/10/2002
Barium	EPA 200.8	Metals	NELAP	8/30/2004
Barium	EPA 6010	Metals	NELAP	7/1/2003
Barium	EPA 6020	Metals	NELAP	8/30/2004
Beryllium	EPA 200.7	Metals	NELAP	4/10/2002
Beryllium	EPA 200.8	Metals	NELAP	8/30/2004
Beryllium	EPA 6010	Metals	NELAP	7/1/2003
Beryllium	EPA 6020	Metals	NELAP	8/30/2004
Biochemical oxygen demand	SM 5210 B	General Chemistry	NELAP	4/10/2002
Boron	EPA 200.7	Metals	NELAP	4/10/2002
Boron	EPA 200.8	Metals	NELAP	11/6/2014
Boron	EPA 6010	Metals	NELAP	7/1/2003
Boron	EPA 6020	Metals	NELAP	8/30/2004
Cadmium	EPA 200.7	Metals	NELAP	4/10/2002
Cadmium	EPA 200.8	Metals	NELAP	8/30/2004
Cadmium	EPA 6010	Metals	NELAP	4/10/2002
Cadmium	EPA 6020	Metals	NELAP	8/30/2004
Calcium	EPA 200.7	Metals	NELAP	4/10/2002
Calcium	EPA 200.8	Metals	NELAP	11/6/2014
Calcium	EPA 6010	Metals	NELAP	7/1/2003
Calcium	EPA 6020	Metals	NELAP	8/30/2004
Carbonaceous BOD (CBOD)	SM 5210 B	General Chemistry	NELAP	4/10/2002

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 10/6/2020

Expiration Date: 6/30/2021





Laboratory Scope of Accreditation

Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E87315                      EPA Lab Code:            GA00051                      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Chromium	EPA 200.7	Metals	NELAP	4/10/2002
Chromium	EPA 200.8	Metals	NELAP	8/30/2004
Chromium	EPA 6010	Metals	NELAP	7/1/2003
Chromium	EPA 6020	Metals	NELAP	8/30/2004
Chromium VI	SM 3500-Cr B (20th/21st/22nd Ed.)/UV-VIS	General Chemistry	NELAP	7/28/2009
Cobalt	EPA 200.7	Metals	NELAP	4/10/2002
Cobalt	EPA 200.8	Metals	NELAP	8/30/2004
Cobalt	EPA 6010	Metals	NELAP	7/1/2003
Cobalt	EPA 6020	Metals	NELAP	8/30/2004
Color	SM 2120 B	General Chemistry	NELAP	4/10/2002
Copper	EPA 200.7	Metals	NELAP	4/10/2002
Copper	EPA 200.8	Metals	NELAP	8/30/2004
Copper	EPA 6010	Metals	NELAP	4/10/2002
Copper	EPA 6020	Metals	NELAP	8/30/2004
Corrosivity (pH)	EPA 9040	General Chemistry	NELAP	7/1/2003
Cyanide	SM 4500-CN E	General Chemistry	NELAP	10/15/2007
Escherichia coli	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Fecal coliforms	COLILERT®-18 (Fecal Coliforms)	Microbiology	NELAP	11/6/2014
Fecal coliforms	SM 9222 D	Microbiology	NELAP	2/21/2002
Hardness	SM 2340 B	General Chemistry	NELAP	7/28/2009
Hardness (calc.)	EPA 200.7	Metals	NELAP	6/6/2002
Heterotrophic plate count	SIMPLATE	Microbiology	NELAP	5/29/2012
Iron	EPA 200.7	Metals	NELAP	4/10/2002
Iron	EPA 200.8	Metals	NELAP	11/6/2014
Iron	EPA 6010	Metals	NELAP	7/1/2003
Iron	EPA 6020	Metals	NELAP	8/30/2004
Iron	SM 3500-Fe D (18th/19th Ed.)/UV-VIS	General Chemistry	NELAP	2/5/2002
Iron-(II) (Ferrous Iron)	SM 3500-Fe B (20th/21st Ed.)/UV-VIS	General Chemistry	NELAP	7/28/2009
Lead	EPA 200.7	Metals	NELAP	4/10/2002
Lead	EPA 200.8	Metals	NELAP	8/30/2004
Lead	EPA 6010	Metals	NELAP	4/10/2002
Lead	EPA 6020	Metals	NELAP	8/30/2004
Lithium	EPA 200.8	Metals	NELAP	10/6/2016

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Issue Date: 10/6/2020

Expiration Date: 6/30/2021



Laboratory Scope of Accreditation

Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E87315                      EPA Lab Code:            GA00051                      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Lithium	EPA 6020	Metals	NELAP	10/6/2016
Magnesium	EPA 200.7	Metals	NELAP	4/10/2002
Magnesium	EPA 200.8	Metals	NELAP	11/6/2014
Magnesium	EPA 6010	Metals	NELAP	7/1/2003
Magnesium	EPA 6020	Metals	NELAP	8/30/2004
Manganese	EPA 200.7	Metals	NELAP	4/10/2002
Manganese	EPA 200.8	Metals	NELAP	8/30/2004
Manganese	EPA 6010	Metals	NELAP	7/1/2003
Manganese	EPA 6020	Metals	NELAP	8/30/2004
Mercury	EPA 245.1	Metals	NELAP	4/10/2002
Mercury	EPA 7470	Metals	NELAP	4/10/2002
Molybdenum	EPA 200.7	Metals	NELAP	4/10/2002
Molybdenum	EPA 200.8	Metals	NELAP	8/30/2004
Molybdenum	EPA 6010	Metals	NELAP	4/10/2002
Molybdenum	EPA 6020	Metals	NELAP	8/30/2004
Nickel	EPA 200.7	Metals	NELAP	4/10/2002
Nickel	EPA 200.8	Metals	NELAP	8/30/2004
Nickel	EPA 6010	Metals	NELAP	4/10/2002
Nickel	EPA 6020	Metals	NELAP	8/30/2004
Nitrate as N	EPA 353.2	General Chemistry	NELAP	4/17/2020
Nitrate-nitrite	EPA 353.2	General Chemistry	NELAP	4/17/2020
Nitrite as N	EPA 353.2	General Chemistry	NELAP	4/17/2020
Orthophosphate as P	SM 4500-P E	General Chemistry	NELAP	4/10/2002
Oxygen, dissolved	ASTM D888-09C	General Chemistry	NELAP	11/6/2014
Oxygen, dissolved	SM 4500-O G	General Chemistry	NELAP	4/10/2002
pH	EPA 9040	General Chemistry	NELAP	7/1/2003
pH	SM 4500-H+-B	General Chemistry	NELAP	10/15/2007
Phosphorus, total	EPA 200.7	Metals	NELAP	9/27/2002
Phosphorus, total	EPA 6010	Metals	NELAP	7/1/2003
Potassium	EPA 200.7	Metals	NELAP	4/10/2002
Potassium	EPA 200.8	Metals	NELAP	11/6/2014
Potassium	EPA 6010	Metals	NELAP	4/10/2002
Potassium	EPA 6020	Metals	NELAP	8/30/2004
Residual free chlorine	SM 4500-Cl G	General Chemistry	NELAP	11/4/2010
Residue-filterable (TDS)	SM 2540 C	General Chemistry	NELAP	10/15/2007
Residue-nonfilterable (TSS)	SM 2540 D	General Chemistry	NELAP	10/15/2007

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 10/6/2020

Expiration Date: 6/30/2021



Laboratory Scope of Accreditation

Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E87315                      EPA Lab Code: GA00051                      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Residue-settleable	SM 2540 F	General Chemistry	NELAP	10/15/2007
Residue-total	SM 2540 B	General Chemistry	NELAP	10/15/2007
Residue-volatile	SM 2540 E	General Chemistry	NELAP	10/6/2016
Selenium	EPA 200.7	Metals	NELAP	4/10/2002
Selenium	EPA 200.8	Metals	NELAP	8/30/2004
Selenium	EPA 6010	Metals	NELAP	4/10/2002
Selenium	EPA 6020	Metals	NELAP	8/30/2004
Silicon	EPA 200.7	Metals	NELAP	4/10/2002
Silicon	EPA 6010	Metals	NELAP	7/1/2003
Silver	EPA 200.7	Metals	NELAP	4/10/2002
Silver	EPA 200.8	Metals	NELAP	8/30/2004
Silver	EPA 6010	Metals	NELAP	7/1/2003
Silver	EPA 6020	Metals	NELAP	8/30/2004
Sodium	EPA 200.7	Metals	NELAP	4/10/2002
Sodium	EPA 200.8	Metals	NELAP	11/6/2014
Sodium	EPA 6010	Metals	NELAP	7/1/2003
Sodium	EPA 6020	Metals	NELAP	8/30/2004
Strontium	EPA 200.7	Metals	NELAP	9/27/2002
Strontium	EPA 6010	Metals	NELAP	7/1/2003
Strontium	EPA 6020	Metals	NELAP	8/30/2004
Thallium	EPA 200.7	Metals	NELAP	4/10/2002
Thallium	EPA 200.8	Metals	NELAP	8/30/2004
Thallium	EPA 6010	Metals	NELAP	7/1/2003
Thallium	EPA 6020	Metals	NELAP	8/30/2004
Tin	EPA 200.7	Metals	NELAP	4/10/2002
Tin	EPA 200.8	Metals	NELAP	11/6/2014
Tin	EPA 6010	Metals	NELAP	7/1/2003
Tin	EPA 6020	Metals	NELAP	8/30/2004
Titanium	EPA 200.7	Metals	NELAP	4/10/2002
Titanium	EPA 200.8	Metals	NELAP	11/6/2014
Titanium	EPA 6010	Metals	NELAP	7/1/2003
Titanium	EPA 6020	Metals	NELAP	8/30/2004
Total coliforms	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	11/4/2010
Total cyanide	EPA 9010/9014	General Chemistry	NELAP	7/1/2003
Total residual chlorine	SM 4500-Cl G	General Chemistry	NELAP	11/4/2010
Total, fixed, and volatile residue	SM 2540 G	General Chemistry	NELAP	9/27/2002

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 10/6/2020

Expiration Date: 6/30/2021



### Laboratory Scope of Accreditation

Attachment to Certificate #: E87315-49, expiration date June 30, 2021. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E87315                      EPA Lab Code: GA00051                      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Turbidity	EPA 180.1	General Chemistry	NELAP	4/10/2002
Vanadium	EPA 200.7	Metals	NELAP	4/10/2002
Vanadium	EPA 200.8	Metals	NELAP	8/30/2004
Vanadium	EPA 6010	Metals	NELAP	7/1/2003
Vanadium	EPA 6020	Metals	NELAP	8/30/2004
Zinc	EPA 200.7	Metals	NELAP	4/10/2002
Zinc	EPA 200.8	Metals	NELAP	8/30/2004
Zinc	EPA 6010	Metals	NELAP	4/10/2002
Zinc	EPA 6020	Metals	NELAP	8/30/2004



Laboratory Scope of Accreditation

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State Laboratory ID: E87315                      EPA Lab Code:            GA00051                      (770) 734-4200

E87315  
Pace Analytical Services, LLC- Atlanta GA  
110 Technology Parkway  
Peachtree Corners, GA 30092

Matrix:    Solid and Chemical Materials

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aluminum	EPA 6010	Metals	NELAP	4/10/2002
Antimony	EPA 6010	Metals	NELAP	4/10/2002
Arsenic	EPA 6010	Metals	NELAP	4/10/2002
Barium	EPA 6010	Metals	NELAP	4/10/2002
Beryllium	EPA 6010	Metals	NELAP	4/10/2002
Boron	EPA 6010	Metals	NELAP	4/10/2002
Cadmium	EPA 6010	Metals	NELAP	4/10/2002
Calcium	EPA 6010	Metals	NELAP	4/10/2002
Chromium	EPA 6010	Metals	NELAP	4/10/2002
Cobalt	EPA 6010	Metals	NELAP	4/10/2002
Copper	EPA 6010	Metals	NELAP	4/10/2002
Fecal coliforms	SM 9222 D	Microbiology	NELAP	7/28/2009
Fixed Residue	SM 2540 G-2011	General Chemistry	NELAP	10/1/2020
Iron	EPA 6010	Metals	NELAP	4/10/2002
Lead	EPA 6010	Metals	NELAP	4/10/2002
Magnesium	EPA 6010	Metals	NELAP	4/10/2002
Manganese	EPA 6010	Metals	NELAP	4/10/2002
Mercury	EPA 7471	Metals	NELAP	4/10/2002
Molybdenum	EPA 6010	Metals	NELAP	4/10/2002
Nickel	EPA 6010	Metals	NELAP	4/10/2002
pH	EPA 9045	General Chemistry	NELAP	4/10/2002
Phosphorus, total	EPA 6010	Metals	NELAP	4/10/2002
Potassium	EPA 6010	Metals	NELAP	4/10/2002
Residue-total	SM 2540 G-2011	General Chemistry	NELAP	10/1/2020
Residue-volatile	SM 2540 G-2011	General Chemistry	NELAP	10/1/2020
Selenium	EPA 6010	Metals	NELAP	4/10/2002
Silicon	EPA 6010	Metals	NELAP	4/10/2002
Silver	EPA 6010	Metals	NELAP	4/10/2002
Sodium	EPA 6010	Metals	NELAP	7/9/2002
Strontium	EPA 6010	Metals	NELAP	4/10/2002
Thallium	EPA 6010	Metals	NELAP	4/10/2002
Tin	EPA 6010	Metals	NELAP	4/10/2002
Titanium	EPA 6010	Metals	NELAP	9/27/2002
Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311	General Chemistry	NELAP	4/10/2002
Vanadium	EPA 6010	Metals	NELAP	4/10/2002
Zinc	EPA 6010	Metals	NELAP	4/10/2002

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 10/6/2020

Expiration Date: 6/30/2021



**APPENDIX A**

# FIELD DATA FORMS

Product Name: Low-Flow System

Date: 2020-08-18 10:48:15

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 61.96 ft

Pump placement from TOC 61.96 ft

Well Information:

Well ID BRGWA-2I  
Well diameter 2 in  
Well Total Depth 66.96 ft  
Screen Length 10 ft  
Depth to Water 14.51 ft

Pumping Information:

Final Pumping Rate 140 mL/min  
Total System Volume 0.5698708 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 12.72 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:25:28	300.03	21.69	6.45	177.10	6.49	15.95	0.42	90.36
Last 5	10:30:28	600.02	21.74	6.51	174.19	3.55	16.17	0.21	91.14
Last 5	10:35:28	900.02	21.91	6.59	173.69	2.21	16.18	0.15	87.65
Last 5	10:40:28	1200.03	22.31	6.60	174.62	1.50	16.09	0.12	86.54
Last 5	10:45:31	1503.03	22.54	6.59	174.99	1.68	15.57	0.11	85.00
Variance 0			0.17	0.08	-0.50			-0.06	-3.49
Variance 1			0.40	0.01	0.93			-0.02	-1.11
Variance 2			0.23	-0.01	0.37			-0.01	-1.54

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2020-08-18 11:39:38

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 42.39 ft

Pump placement from TOC 42.39 ft

Well Information:

Well ID BRGWA-2S  
Well diameter 2 in  
Well Total Depth 47.39 ft  
Screen Length 10 ft  
Depth to Water 14.67 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4825216 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.44 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:17:52	300.03	23.54	6.19	62.00	3.09	14.73	1.37	44.07
Last 5	11:22:52	600.02	22.46	6.05	62.42	2.25	14.76	0.73	43.15
Last 5	11:27:52	900.03	22.18	6.06	62.43	2.07	14.76	0.39	39.67
Last 5	11:32:52	1200.03	22.00	6.02	62.21	1.26	14.79	0.31	40.09
Last 5	11:37:52	1500.03	21.63	6.06	61.63	0.78	14.79	0.28	39.15
Variance 0			-0.29	0.01	0.01			-0.34	-3.47
Variance 1			-0.18	-0.04	-0.22			-0.09	0.42
Variance 2			-0.36	0.04	-0.58			-0.03	-0.95

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-18 09:43:36

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 58.82 ft

Pump placement from TOC 58.82 ft

Well Information:

Well ID BRGWA-5I  
Well diameter 2 in  
Well Total Depth 63.82 ft  
Screen Length 10 ft  
Depth to Water 11.24 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5558556 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.92 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:20:01	300.06	21.08	6.30	148.13	1.31	11.40	5.14	72.08
Last 5	09:25:01	600.02	21.10	6.24	147.10	1.90	11.40	5.89	68.32
Last 5	09:30:01	900.02	20.75	6.29	146.37	1.40	11.40	5.36	64.03
Last 5	09:35:01	1200.03	21.03	6.29	146.58	0.81	11.40	5.20	63.14
Last 5	09:40:01	1500.03	20.88	6.29	146.46	0.39	11.40	5.14	62.33
Variance 0			-0.35	0.05	-0.73			-0.53	-4.29
Variance 1			0.28	-0.01	0.21			-0.16	-0.90
Variance 2			-0.15	0.01	-0.12			-0.06	-0.81

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-18 10:14:55

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 38 ft

Pump placement from TOC 38 ft

Well Information:

Well ID BRGWA-5S  
Well diameter 2 in  
Well Total Depth 43.01 ft  
Screen Length 10 ft  
Depth to Water 11.31 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.271 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.44 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:52:47	1800.02	21.63	6.40	158.28	4.91	11.43	2.38	65.53
Last 5	09:57:47	2100.02	21.99	6.39	133.54	5.37	11.43	2.48	62.66
Last 5	10:02:48	2401.02	22.23	6.38	159.50	5.68	11.43	2.20	61.68
Last 5	10:07:48	2701.02	21.90	6.40	159.53	5.12	11.43	2.29	60.21
Last 5	10:12:48	3001.02	21.89	6.41	159.64	4.36	11.43	2.22	61.14
Variance 0			0.23	-0.01	25.96			-0.28	-0.98
Variance 1			-0.33	0.02	0.03			0.09	-1.47
Variance 2			-0.01	0.00	0.10			-0.07	0.94

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-18 12:51:27

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 47.90 ft

Pump placement from TOC 47.90 ft

Well Information:

Well ID BRGWA-6S  
Well diameter 2 in  
Well Total Depth 52.90 ft  
Screen Length 10 ft  
Depth to Water 24.67 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5071151 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.2 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:28:27	300.06	21.68	6.32	56.31	2.84	25.21	6.95	47.49
Last 5	12:33:27	600.02	21.48	6.33	55.13	1.97	25.30	7.00	48.68
Last 5	12:38:27	900.03	21.66	6.30	55.01	2.68	25.27	6.88	51.37
Last 5	12:43:28	1201.03	21.73	6.35	54.96	2.73	25.28	6.84	51.09
Last 5	12:48:29	1502.03	21.82	6.33	55.30	3.15	25.27	6.75	52.98
Variance 0			0.18	-0.03	-0.12			-0.12	2.69
Variance 1			0.07	0.04	-0.06			-0.05	-0.28
Variance 2			0.09	-0.02	0.34			-0.09	1.89

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-18 13:09:30

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 75 ft

Pump placement from TOC 75 ft

Well Information:

Well ID BRGWA-12I  
Well diameter 2 in  
Well Total Depth 80.54 ft  
Screen Length 10 ft  
Depth to Water 51.06 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.6057567 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 62.04 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:44:08	4800.01	30.35	6.22	143.59	0.73	56.20	3.10	50.87
Last 5	12:49:08	5100.01	30.72	6.23	141.28	0.84	56.23	3.27	51.83
Last 5	12:54:12	5404.01	30.58	6.23	141.74	0.74	56.22	3.54	52.94
Last 5	12:59:12	5704.01	30.33	6.25	139.34	1.03	56.22	3.71	54.06
Last 5	13:04:12	6004.00	30.26	6.25	144.01	1.00	56.23	3.92	55.76
Variance 0			-0.14	-0.00	0.46			0.26	1.12
Variance 1			-0.25	0.02	-2.40			0.17	1.12
Variance 2			-0.07	0.00	4.67			0.22	1.70

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-18 16:27:48

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 56 ft

Pump placement from TOC 56 ft

Well Information:

Well ID BRGWA-12S  
Well diameter 2 in  
Well Total Depth 61.01 ft  
Screen Length 10 ft  
Depth to Water 51.23 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.5209517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.24 in  
Total Volume Pumped 19.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:05:17	6600.00	28.17	5.97	88.98	--	--	6.25	69.05
Last 5	16:10:17	6900.00	31.43	5.87	82.77	0.87	51.38	6.12	69.49
Last 5	16:15:17	7200.00	25.10	5.94	88.96	0.78	51.49	6.39	73.08
Last 5	16:20:17	7500.00	24.40	5.96	88.11	0.69	51.49	6.46	72.12
Last 5	16:25:17	7800.00	24.62	5.95	88.96	0.60	51.50	6.54	70.67
Variance 0			-6.33	0.07	6.19			0.27	3.60
Variance 1			-0.71	0.02	-0.85			0.07	-0.96
Variance 2			0.22	-0.01	0.84			0.07	-1.45

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-18 15:31:58

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 37.80 ft

Pump placement from TOC 37.80 ft

Well Information:

Well ID BRGWA-23S  
Well diameter 2 in  
Well Total Depth 43.80 ft  
Screen Length 10 ft  
Depth to Water 33.77 ft

Pumping Information:

Final Pumping Rate 165 mL/min  
Total System Volume 0.4664979 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 31.56 in  
Total Volume Pumped 18.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:08:01	5403.04	23.52	5.56	129.67	0.37	36.27	3.62	95.00
Last 5	15:13:01	5703.04	23.43	5.55	130.85	0.19	36.30	3.63	95.91
Last 5	15:18:01	6003.04	23.48	5.52	131.15	0.05	36.34	3.65	97.92
Last 5	15:23:02	6304.04	23.12	5.57	131.25	0.10	36.33	3.64	95.72
Last 5	15:28:02	6604.04	23.39	5.56	133.00	0.03	36.40	3.66	96.44
Variance 0			0.04	-0.03	0.30			0.02	2.01
Variance 1			-0.36	0.05	0.10			-0.02	-2.20
Variance 2			0.27	-0.01	1.74			0.02	0.72

Notes

Purged three well volumes prior to sampling

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-19 09:50:24

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 19 ft

Pump placement from TOC 19 ft

Well Information:

Well ID BRGWC-251  
Well diameter 2 in  
Well Total Depth 24.41 ft  
Screen Length 10 ft  
Depth to Water 8.79 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.355805 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.08 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:28:22	300.09	20.57	6.41	462.63	10.41	8.86	0.90	81.85
Last 5	09:33:22	600.02	20.57	6.38	459.43	5.66	8.87	0.34	70.31
Last 5	09:38:22	900.02	20.52	6.35	463.69	3.25	8.87	0.21	65.51
Last 5	09:43:22	1200.01	20.54	6.33	467.67	2.72	8.87	0.16	62.52
Last 5	09:48:24	1502.01	20.52	6.32	469.65	1.24	8.88	0.13	60.25
Variance 0			-0.05	-0.03	4.26			-0.13	-4.80
Variance 1			0.02	-0.02	3.98			-0.05	-2.99
Variance 2			-0.02	-0.01	1.98			-0.04	-2.27

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2020-08-19 12:09:20

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 28 ft

Pump placement from TOC 28 ft

Well Information:

Well ID BRGWC-271  
Well diameter 2 in  
Well Total Depth 33.41 ft  
Screen Length 10 ft  
Depth to Water 4.32 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.3959758 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:46:36	600.02	21.82	5.67	483.18	0.96	4.37	1.21	87.38
Last 5	11:51:36	900.02	21.67	5.71	485.32	0.77	4.37	1.14	83.55
Last 5	11:56:36	1200.01	21.59	5.75	485.25	0.93	4.36	0.97	80.20
Last 5	12:01:36	1499.99	21.55	5.79	487.89	1.65	4.37	0.93	77.27
Last 5	12:06:36	1800.01	21.51	5.81	483.99	0.79	4.37	0.97	74.95
Variance 0			-0.08	0.04	-0.07			-0.17	-3.34
Variance 1			-0.04	0.03	2.65			-0.03	-2.93
Variance 2			-0.04	0.02	-3.90			0.03	-2.32

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-19 10:51:12

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 18 ft

Pump placement from TOC 18 ft

Well Information:

Well ID BRGWC-291  
Well diameter 2 in  
Well Total Depth 23.63 ft  
Screen Length 10 ft  
Depth to Water 9.88 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.3513416 L 300  
Calculated Sample Rate sec  
Stabilization Drawdown 0.72 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:28:42	300.04	21.74	4.31	571.26	1.45	9.93	1.82	109.54
Last 5	10:33:42	600.02	21.59	4.55	553.91	0.92	9.94	1.04	101.83
Last 5	10:38:42	900.05	21.55	4.66	550.74	1.05	9.93	0.92	95.93
Last 5	10:43:42	1200.04	21.48	4.68	551.90	0.91	9.94	0.86	92.61
Last 5	10:48:42	1500.01	21.46	4.67	551.92	0.93	9.94	0.87	90.52
Variance 0			-0.04	0.12	-3.17			-0.12	-5.90
Variance 1			-0.07	0.02	1.15			-0.05	-3.33
Variance 2			-0.02	-0.01	0.03			0.01	-2.09

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-19 15:08:37

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 17 ft

Pump placement from TOC 17 ft

Well Information:

Well ID BRGWC-301  
Well diameter 2 in  
Well Total Depth 22.35 ft  
Screen Length 10 ft  
Depth to Water 3.96 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.3468782 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 2.16 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:46:26	1200.01	22.18	6.36	892.62	6.69	4.13	0.79	78.35
Last 5	14:51:26	1500.01	22.17	6.36	892.00	5.90	4.13	0.46	76.56
Last 5	14:56:26	1800.01	22.04	6.36	891.83	3.86	4.13	0.57	74.62
Last 5	15:01:26	2100.00	21.99	6.36	891.35	3.09	4.14	0.62	73.09
Last 5	15:06:26	2400.00	22.00	6.36	891.72	2.62	4.14	0.64	71.87
Variance 0			-0.13	0.00	-0.17			0.11	-1.94
Variance 1			-0.05	0.00	-0.48			0.05	-1.53
Variance 2			0.00	0.00	0.37			0.02	-1.22

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-19 13:25:45

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 43 ft

Pump placement from TOC 43 ft

Well Information:

Well ID BRGWC-32S  
Well diameter 2 in  
Well Total Depth 48 ft  
Screen Length 10 ft  
Depth to Water 33.88 ft

Pumping Information:

Final Pumping Rate 120 mL/min  
Total System Volume 0.4629272 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.2 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:03:43	300.03	21.66	6.00	610.57	1.60	34.38	5.48	89.68
Last 5	13:08:43	600.02	22.26	5.94	609.77	0.92	34.37	5.32	84.80
Last 5	13:13:43	900.02	21.46	5.96	614.75	1.34	34.43	4.99	81.41
Last 5	13:18:43	1200.01	21.47	5.96	617.44	1.00	34.45	4.85	79.22
Last 5	13:23:43	1500.01	21.36	5.97	619.27	0.96	34.48	4.70	77.28
Variance 0			-0.80	0.01	4.98			-0.33	-3.39
Variance 1			0.01	0.00	2.69			-0.14	-2.18
Variance 2			-0.11	0.01	1.82			-0.14	-1.94

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-20 12:17:51

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 55.53 ft

Pump placement from TOC 55.53 ft

Well Information:

Well ID BRGWC-45  
Well diameter 2 in  
Well Total Depth 60.53 ft  
Screen Length 10 ft  
Depth to Water 11.52 ft

Pumping Information:

Final Pumping Rate 180 mL/min  
Total System Volume 0.541171 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4.32 in  
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:52:58	4805.05	24.51	5.86	482.19	7.85	11.88	0.07	73.19
Last 5	11:58:01	5108.05	24.57	5.86	479.54	8.52	11.88	0.07	72.85
Last 5	12:03:01	5408.05	24.81	5.85	476.18	4.94	11.88	0.06	72.55
Last 5	12:08:01	5708.05	24.47	5.86	477.81	4.67	11.88	0.06	71.93
Last 5	12:13:01	6008.05	24.16	5.86	474.80	4.75	11.88	0.05	71.86
Variance 0			0.24	-0.01	-3.36			-0.01	-0.30
Variance 1			-0.34	0.01	1.63			-0.00	-0.62
Variance 2			-0.31	-0.00	-3.01			-0.01	-0.07

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-20 14:02:37

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 92.08 ft

Pump placement from TOC 92.08 ft

Well Information:

Well ID BRGWC-47  
Well diameter 2 in  
Well Total Depth 97.08 ft  
Screen Length 10 ft  
Depth to Water 22.81 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.7043091 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.32 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:40:30	1500.02	23.87	5.74	2229.11	7.79	23.42	0.72	85.78
Last 5	13:45:30	1800.03	23.54	5.75	2227.63	7.35	23.41	0.63	85.89
Last 5	13:50:30	2100.03	23.41	5.75	2233.53	4.48	23.42	0.52	84.88
Last 5	13:55:30	2400.04	23.43	5.75	2237.67	3.26	23.42	0.46	83.51
Last 5	14:00:30	2700.04	23.45	5.75	2243.13	2.78	23.42	0.42	82.71
Variance 0			-0.13	0.00	5.91			-0.11	-1.00
Variance 1			0.02	0.00	4.14			-0.06	-1.37
Variance 2			0.02	-0.01	5.46			-0.04	-0.80

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-20 09:34:11

Project Information:

Operator Name Travis Martinez  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 613229  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.17 in  
Tubing Length 63.76 ft

Pump placement from TOC 63.76 ft

Well Information:

Well ID BRGWC-50  
Well diameter 2 in  
Well Total Depth 68.76 ft  
Screen Length 10 ft  
Depth to Water 37.11 ft

Pumping Information:

Final Pumping Rate 180 mL/min  
Total System Volume 0.5779049 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.96 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:12:09	300.05	21.95	5.77	2225.45	3.09	37.28	0.84	108.98
Last 5	09:17:09	600.03	21.64	5.50	2242.60	4.11	37.22	0.38	104.97
Last 5	09:22:09	900.03	21.63	5.36	2247.29	2.17	37.22	0.24	103.95
Last 5	09:27:09	1200.03	21.56	5.29	2246.40	2.55	37.19	0.19	103.79
Last 5	09:32:09	1500.03	21.55	5.26	2244.36	2.65	37.19	0.16	103.45
Variance 0			-0.01	-0.14	4.69			-0.14	-1.02
Variance 1			-0.06	-0.06	-0.89			-0.05	-0.15
Variance 2			-0.01	-0.03	-2.04			-0.03	-0.34

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-20 09:46:51

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 71 ft

Pump placement from TOC 71 ft

Well Information:

Well ID BRGWC-521  
Well diameter 2 in  
Well Total Depth 76.60 ft  
Screen Length 10 ft  
Depth to Water 38.20 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5879031 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.04 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:23:58	900.02	20.85	6.61	479.83	2.58	38.55	0.25	-26.05
Last 5	09:28:58	1200.02	20.79	6.66	486.69	2.32	38.58	0.19	-31.73
Last 5	09:33:58	1500.03	20.59	6.79	497.96	2.04	38.59	0.21	-32.42
Last 5	09:38:58	1800.02	20.78	6.84	501.96	1.18	38.60	0.16	-33.05
Last 5	09:44:01	2103.02	20.61	6.85	503.53	0.82	38.62	0.14	-34.99
Variance 0			-0.20	0.13	11.27			0.02	-0.69
Variance 1			0.19	0.06	4.01			-0.05	-0.63
Variance 2			-0.16	0.01	1.57			-0.03	-1.94

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2020-08-20 11:50:15

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 65 ft

Pump placement from TOC 65 ft

Well Information:

Well ID PZ-51I  
Well diameter 2 in  
Well Total Depth 68 ft  
Screen Length 5 ft  
Depth to Water 37.58 ft

Pumping Information:

Final Pumping Rate 175 mL/min  
Total System Volume 0.5521957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 6.72 in  
Total Volume Pumped 6.65 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:36:06	300.07	22.89	5.60	1824.11	0.80	38.13	0.22	33.87
Last 5	11:41:06	600.03	22.83	5.58	1819.50	0.98	38.13	0.20	35.27
Last 5	11:46:06	900.02	22.84	5.57	1814.39	0.97	38.14	0.19	36.51
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.06	-0.02	-4.61			-0.02	1.40
Variance 2			0.01	-0.01	-5.11			-0.02	1.24

Notes

Previously purged for 23min,all parameters were stable. iPad overheated & I started over taking 3 more readings

Grab Samples

Product Name: Low-Flow System

Date: 2020-08-20 13:35:53

Project Information:

Operator Name A. McClure  
Company Name Golder  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter .17 in  
Tubing Length 44 ft

Pump placement from TOC 44 ft

Well Information:

Well ID PZ-51S  
Well diameter 2 in  
Well Total Depth 47.98 ft  
Screen Length 5 ft  
Depth to Water 37.05 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.4584638 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 11.88 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:11:08	600.03	26.00	6.15	171.06	5.34	37.81	1.46	42.63
Last 5	13:16:08	900.02	25.87	6.15	172.17	5.21	37.90	1.27	42.17
Last 5	13:21:08	1200.02	27.28	6.15	171.27	5.04	37.97	1.14	41.59
Last 5	13:26:08	1500.02	26.00	6.16	167.29	3.05	38.01	1.08	42.94
Last 5	13:31:08	1800.02	25.35	6.15	167.24	2.48	38.04	1.01	42.82
Variance 0			1.41	-0.00	-0.90			-0.13	-0.58
Variance 1			-1.28	0.01	-3.98			-0.06	1.35
Variance 2			-0.64	-0.01	-0.05			-0.07	-0.12

Notes

Edit screen at 42.98' per B.Steele

Grab Samples

# Low-Flow Test Report:

Test Date / Time: 9/15/2020 3:22:54 PM

Project: Plant Branch

Operator Name: Travis Martinez

<b>Location Name: BRGWA-2I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 56.96 ft</b> <b>Total Depth: 66.96 ft</b> <b>Initial Depth to Water: 14.34 ft</b>	<b>Pump Type: QED Well Wizard</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 61.96 ft</b> <b>Estimated Total Volume Pumped: 6300 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 140 ml/min</b> <b>Final Draw Down: 1.79 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/15/2020 3:22 PM	00:00	6.69 pH	24.76 °C	178.06 µS/cm	6.06 mg/L	1.38 NTU	67.0 mV	14.34 ft	180.00 ml/min
9/15/2020 3:27 PM	05:00	5.81 pH	20.36 °C	172.76 µS/cm	1.06 mg/L	1.89 NTU	29.3 mV	15.49 ft	140.00 ml/min
9/15/2020 3:32 PM	10:00	6.11 pH	20.34 °C	174.53 µS/cm	0.50 mg/L	2.85 NTU	35.2 mV	15.74 ft	140.00 ml/min
9/15/2020 3:37 PM	15:00	6.24 pH	20.17 °C	175.35 µS/cm	0.32 mg/L	2.77 NTU	38.8 mV	15.88 ft	140.00 ml/min
9/15/2020 3:42 PM	20:00	6.38 pH	20.04 °C	176.45 µS/cm	0.22 mg/L	2.32 NTU	35.0 mV	16.04 ft	140.00 ml/min
9/15/2020 3:47 PM	25:00	6.45 pH	20.05 °C	177.37 µS/cm	0.16 mg/L	0.73 NTU	26.5 mV	16.13 ft	140.00 ml/min
9/15/2020 3:52 PM	30:00	6.51 pH	20.09 °C	178.42 µS/cm	0.13 mg/L	0.79 NTU	14.0 mV	16.15 ft	140.00 ml/min
9/15/2020 3:57 PM	35:00	6.58 pH	19.95 °C	185.19 µS/cm	0.10 mg/L	0.67 NTU	5.1 mV	16.13 ft	140.00 ml/min
9/15/2020 4:02 PM	40:00	6.63 pH	19.77 °C	191.33 µS/cm	0.09 mg/L	0.67 NTU	-17.3 mV	16.13 ft	140.00 ml/min
9/15/2020 4:07 PM	45:00	6.64 pH	19.89 °C	188.68 µS/cm	0.07 mg/L	0.91 NTU	2.2 mV	16.13 ft	140.00 ml/min

## Samples

Sample ID:	Description:
BRGWA-2I	

# Low-Flow Test Report:

Test Date / Time: 9/15/2020 2:30:26 PM

Project: Plant Branch

Operator Name: Travis Martinez

<b>Location Name: BRGWA-2S</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 37.39 ft</b> <b>Total Depth: 47.39 ft</b> <b>Initial Depth to Water: 14.53 ft</b>	<b>Pump Type: QED Well Wizard</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 42.39 ft</b> <b>Estimated Total Volume Pumped: 6801.667 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 220 ml/min</b> <b>Final Draw Down: 0.12 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/15/2020 2:30 PM	00:00	5.25 pH	21.39 °C	66.23 µS/cm	2.74 mg/L	0.46 NTU	68.8 mV	14.53 ft	220.00 ml/min
9/15/2020 2:35 PM	05:00	5.62 pH	18.97 °C	67.73 µS/cm	1.38 mg/L	1.35 NTU	53.7 mV	14.74 ft	220.00 ml/min
9/15/2020 2:40 PM	10:00	5.91 pH	18.80 °C	67.11 µS/cm	0.77 mg/L	0.83 NTU	50.2 mV	14.65 ft	220.00 ml/min
9/15/2020 2:45 PM	15:00	5.99 pH	18.88 °C	66.37 µS/cm	0.57 mg/L	0.91 NTU	48.5 mV	14.65 ft	220.00 ml/min
9/15/2020 2:51 PM	20:55	6.02 pH	19.04 °C	66.51 µS/cm	0.64 mg/L	0.79 NTU	49.3 mV	14.65 ft	220.00 ml/min
9/15/2020 2:56 PM	25:55	5.97 pH	19.06 °C	65.86 µS/cm	0.55 mg/L	0.80 NTU	49.8 mV	14.65 ft	220.00 ml/min
9/15/2020 3:01 PM	30:55	6.01 pH	19.11 °C	65.68 µS/cm	0.58 mg/L	0.52 NTU	47.3 mV	14.65 ft	220.00 ml/min

## Samples

Sample ID:	Description:
BRGWA-2S	

# Low-Flow Test Report:

Test Date / Time: 9/15/2020 1:42:18 PM

Project: Plant Branch

Operator Name: Travis Martinez

<b>Location Name: BRGWA-5I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 53.82 ft</b> <b>Total Depth: 63.82 ft</b> <b>Initial Depth to Water: 11.63 ft</b>	<b>Pump Type: QED Well Wizard</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 58.82 ft</b> <b>Estimated Total Volume Pumped: 4600 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 230 ml/min</b> <b>Final Draw Down: 0.11 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/15/2020 1:42 PM	00:00	5.50 pH	20.57 °C	157.12 µS/cm	2.89 mg/L	1.30 NTU	59.7 mV	11.63 ft	230.00 ml/min
9/15/2020 1:47 PM	05:00	5.91 pH	19.41 °C	158.48 µS/cm	5.32 mg/L	0.86 NTU	54.4 mV	11.77 ft	230.00 ml/min
9/15/2020 1:52 PM	10:00	6.19 pH	19.19 °C	158.79 µS/cm	5.52 mg/L	0.50 NTU	53.9 mV	11.74 ft	230.00 ml/min
9/15/2020 1:57 PM	15:00	6.23 pH	19.19 °C	159.27 µS/cm	5.57 mg/L	0.61 NTU	55.0 mV	11.74 ft	230.00 ml/min
9/15/2020 2:02 PM	20:00	6.27 pH	19.14 °C	159.23 µS/cm	5.53 mg/L	0.62 NTU	54.6 mV	11.74 ft	230.00 ml/min

## Samples

Sample ID:	Description:
BRGWA-5I	

# Low-Flow Test Report:

Test Date / Time: 9/15/2020 12:59:46 PM

Project: Plant Branch

Operator Name: Travis Martinez

<b>Location Name: BRGWA-5S</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 33.01 ft</b> <b>Total Depth: 43.01 ft</b> <b>Initial Depth to Water: 11.68 ft</b>	<b>Pump Type: QED Well Wizard</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 38.01 m</b> <b>Estimated Total Volume Pumped: 4600 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 230 ml/min</b> <b>Final Draw Down: 0.06 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/15/2020 12:59 PM	00:00	6.18 pH	19.64 °C	163.98 µS/cm	1.97 mg/L	3.99 NTU	44.7 mV	11.68 ft	230.00 ml/min
9/15/2020 1:04 PM	05:00	6.19 pH	19.34 °C	159.39 µS/cm	1.84 mg/L	2.92 NTU	45.4 mV	11.85 ft	230.00 ml/min
9/15/2020 1:09 PM	10:00	6.24 pH	19.32 °C	165.69 µS/cm	1.77 mg/L	1.90 NTU	42.4 mV	11.74 ft	230.00 ml/min
9/15/2020 1:14 PM	15:00	6.24 pH	19.32 °C	165.18 µS/cm	1.80 mg/L	3.13 NTU	43.1 mV	11.74 ft	230.00 ml/min
9/15/2020 1:19 PM	20:00	6.25 pH	19.31 °C	164.34 µS/cm	1.78 mg/L	2.44 NTU	43.0 mV	11.74 ft	230.00 ml/min

## Samples

Sample ID:	Description:
BRGWA-5S	

Product Name: Low-Flow System

Date: 2020-09-15 09:46:57

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 47.9 ft

Pump placement from TOC 47.9 ft

Well Information:

Well ID BRGWA-6S  
Well diameter 2 in  
Well Total Depth 52.90 ft  
Screen Length 10 ft  
Depth to Water 25.23 ft

Pumping Information:

Final Pumping Rate 300 mL/min  
Total System Volume 0.4937809 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 10.92 in  
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:24:50	300.09	19.59	6.00	57.62	2.58	26.09	6.48	87.49
Last 5	09:29:49	600.00	19.63	6.30	56.99	0.89	26.09	6.64	73.88
Last 5	09:34:49	900.00	19.54	6.37	57.07	1.21	26.11	6.66	69.33
Last 5	09:39:49	1199.99	19.51	6.41	57.30	1.51	26.12	6.61	67.03
Last 5	09:44:52	1502.98	19.54	6.43	57.69	1.27	26.14	6.56	65.62
Variance 0			-0.09	0.07	0.09			0.02	-4.55
Variance 1			-0.03	0.04	0.22			-0.05	-2.30
Variance 2			0.03	0.02	0.39			-0.05	-1.41

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-15 11:15:33

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 75.54 ft

Pump placement from TOC 75.54 ft

Well Information:

Well ID BRGWA-12I  
Well diameter 2 in  
Well Total Depth 80.54 ft  
Screen Length 10 ft  
Depth to Water 51.09 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.6187567 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 28.32 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:52:59	1199.99	21.10	5.99	169.12	0.17	53.02	2.39	56.09
Last 5	10:57:59	1499.98	21.54	6.01	168.95	0.13	53.05	3.28	59.13
Last 5	11:02:59	1799.97	21.86	5.99	166.02	0.09	53.20	2.82	59.50
Last 5	11:07:59	2099.97	21.68	6.00	167.72	0.19	53.31	2.81	60.52
Last 5	11:12:59	2399.96	21.65	6.01	167.58	0.44	53.45	2.76	58.14
Variance 0			0.32	-0.02	-2.94			-0.46	0.37
Variance 1			-0.18	0.01	1.71			-0.01	1.02
Variance 2			-0.03	0.00	-0.15			-0.04	-2.38

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2020-09-15 13:17:48

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 56.01 ft

Pump placement from TOC 56.01 ft

Well Information:

Well ID BRGWA-12S  
Well diameter 2 in  
Well Total Depth 61.01 ft  
Screen Length 10 ft  
Depth to Water 51.31 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.5339516 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.88 in  
Total Volume Pumped 18 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:55:05	3602.92	20.12	6.00	83.90	0.32	51.79	6.83	64.34
Last 5	13:00:08	3905.92	20.12	6.01	83.79	0.26	51.79	6.83	65.22
Last 5	13:05:08	4205.91	20.11	6.01	84.88	0.10	51.80	6.80	63.92
Last 5	13:10:08	4505.90	20.08	6.00	85.50	0.12	51.80	6.81	67.56
Last 5	13:15:08	4805.87	20.13	6.00	85.22	0.05	51.80	6.79	64.06
Variance 0			-0.02	-0.00	1.09			-0.02	-1.29
Variance 1			-0.03	-0.01	0.62			0.01	3.63
Variance 2			0.05	0.00	-0.29			-0.01	-3.50

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-15 16:13:18

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 38.8 ft

Pump placement from TOC 38.8 ft

Well Information:

Well ID BRGWA-23S  
Well diameter 2 in  
Well Total Depth 43.80 ft  
Screen Length 10 ft  
Depth to Water 34.44 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.4536101 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 24.72 in  
Total Volume Pumped 18.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:50:26	6300.85	21.45	5.72	157.98	0.18	36.44	4.03	62.61
Last 5	15:55:26	6600.84	21.37	5.72	157.73	0.30	36.45	4.04	69.82
Last 5	16:00:26	6900.83	21.23	5.72	158.13	0.24	36.47	4.05	63.98
Last 5	16:05:26	7200.82	21.37	5.72	158.45	0.22	36.49	4.11	65.54
Last 5	16:10:26	7500.82	21.46	5.72	159.40	0.40	36.50	4.14	66.48
Variance 0			-0.13	0.00	0.40			0.01	-5.84
Variance 1			0.13	-0.00	0.32			0.05	1.56
Variance 2			0.09	0.00	0.95			0.03	0.94

Notes

Grab Samples

# Low-Flow Test Report:

Test Date / Time: 9/15/2020 5:00:35 PM

Project: Plant Branch

Operator Name: Travis Martinez

<b>Location Name: BRGWC-25I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 14.41 ft</b> <b>Total Depth: 24.41 ft</b> <b>Initial Depth to Water: 8.99 ft</b>	<b>Pump Type: QED Well Wizard</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 19.41 ft</b> <b>Estimated Total Volume Pumped: 4400 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 220 ml/min</b> <b>Final Draw Down: 0.1 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/15/2020 5:00 PM	00:00	5.79 pH	22.40 °C	440.82 µS/cm	3.06 mg/L	2.27 NTU	7.7 mV	8.99 ft	220.00 ml/min
9/15/2020 5:05 PM	05:00	5.94 pH	20.51 °C	438.55 µS/cm	0.80 mg/L	2.58 NTU	25.9 mV	8.99 ft	220.00 ml/min
9/15/2020 5:10 PM	10:00	6.00 pH	20.44 °C	434.83 µS/cm	0.29 mg/L	1.91 NTU	26.9 mV	9.09 ft	220.00 ml/min
9/15/2020 5:15 PM	15:00	5.99 pH	20.43 °C	439.04 µS/cm	0.18 mg/L	1.39 NTU	31.5 mV	9.11 ft	220.00 ml/min
9/15/2020 5:20 PM	20:00	6.00 pH	20.36 °C	442.14 µS/cm	0.15 mg/L	0.69 NTU	33.1 mV	9.09 ft	220.00 ml/min

## Samples

Sample ID:	Description:
BRGWC-25I	

Product Name: Low-Flow System

Date: 2020-09-16 14:37:49

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 28.41 ft

Pump placement from TOC 28.41 ft

Well Information:

Well ID BRGWC-271  
Well diameter 2 in  
Well Total Depth 33.41 ft  
Screen Length 10 ft  
Depth to Water 4.85 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.4089758 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 5.63 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	14:15:00	300.02	20.79	5.53	484.14	0.40	4.89	1.59	49.30
Last 5	14:20:00	600.01	20.79	5.66	481.87	0.70	4.90	1.76	42.61
Last 5	14:25:00	900.00	20.75	5.73	483.19	0.62	4.90	1.46	39.73
Last 5	14:30:00	1199.99	20.76	5.78	484.11	0.13	4.90	1.26	38.69
Last 5	14:35:00	1499.98	20.77	5.81	484.18	0.12	4.90	1.38	38.44
Variance 0			-0.04	0.07	1.32			-0.31	-2.88
Variance 1			0.02	0.05	0.92			-0.20	-1.04
Variance 2			0.00	0.03	0.07			0.12	-0.25

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-15 17:43:48

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 17.35 ft

Pump placement from TOC 17.35 ft

Well Information:

Well ID BRGWC-29I  
Well diameter 2 in  
Well Total Depth 23.63 ft  
Screen Length 10 ft  
Depth to Water 10.07 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.3643416 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.72 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	17:21:27	1200.00	21.73	4.49	554.69	0.20	10.12	0.60	63.13
Last 5	17:26:27	1499.98	21.69	4.51	553.03	0.21	10.12	0.79	57.77
Last 5	17:31:27	1799.98	21.66	4.53	556.45	0.11	10.12	0.49	55.77
Last 5	17:36:27	2099.97	21.64	4.53	557.30	0.76	10.12	0.67	54.44
Last 5	17:41:27	2399.96	21.59	4.53	555.43	0.40	10.13	0.51	55.06
Variance 0			-0.04	0.02	3.41			-0.30	-2.00
Variance 1			-0.02	0.00	0.85			0.18	-1.33
Variance 2			-0.04	-0.00	-1.87			-0.16	0.61

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-16 10:18:32

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 17.35 ft

Pump placement from TOC 17.35 ft

Well Information:

Well ID BRGWC-301  
Well diameter 2 in  
Well Total Depth 22.35 ft  
Screen Length 10 ft  
Depth to Water 3.90 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.3598782 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.92 in  
Total Volume Pumped 5.63 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:01:18	600.02	20.94	6.23	864.78	4.05	4.05	0.40	39.46
Last 5	10:06:18	900.00	20.75	6.26	863.74	2.06	4.05	0.28	37.78
Last 5	10:11:18	1199.99	20.70	6.28	870.18	2.83	4.05	0.21	34.76
Last 5	10:16:18	1499.98	20.68	6.29	867.65	3.11	4.06	0.20	34.25
Last 5									
Variance 0			-0.19	0.03	-1.04			-0.12	-1.68
Variance 1			-0.05	0.02	6.44			-0.07	-3.02
Variance 2			-0.02	0.01	-2.53			-0.01	-0.51

Notes

first reading skipped; DUP-1 taken here

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-16 09:18:53

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 43 ft

Pump placement from TOC 43 ft

Well Information:

Well ID BRGWC-32S  
Well diameter 2 in  
Well Total Depth 48 ft  
Screen Length 10 ft  
Depth to Water 34.68 ft

Pumping Information:

Final Pumping Rate 120 mL/min  
Total System Volume 0.4759272 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.32 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:56:21	300.10	19.39	5.53	598.26	0.74	35.22	5.34	84.83
Last 5	09:01:21	600.01	19.27	5.61	600.12	0.26	35.25	5.12	70.92
Last 5	09:06:21	900.00	19.23	5.71	604.22	0.16	35.27	4.86	63.65
Last 5	09:11:21	1200.02	19.17	5.77	604.84	0.24	35.28	4.69	59.65
Last 5	09:16:23	1502.01	19.18	5.79	607.34	0.19	35.29	4.63	57.89
Variance 0			-0.04	0.09	4.10			-0.25	-7.27
Variance 1			-0.06	0.06	0.62			-0.17	-4.00
Variance 2			0.01	0.02	2.50			-0.06	-1.75

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-16 13:09:55

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 55.53 ft

Pump placement from TOC 55.53 ft

Well Information:

Well ID BRGWC-45  
Well diameter 2 in  
Well Total Depth 60.53 ft  
Screen Length 10 ft  
Depth to Water 11.44 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5294883 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.12 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:47:25	600.01	21.51	5.51	525.78	8.15	11.69	0.72	33.87
Last 5	12:52:25	900.00	21.43	5.42	515.34	5.64	11.69	0.51	27.94
Last 5	12:57:25	1199.99	21.50	5.36	505.17	4.90	11.70	0.37	24.98
Last 5	13:02:25	1499.99	21.54	5.31	497.53	5.06	11.70	0.29	23.53
Last 5	13:07:25	1799.98	21.47	5.27	491.56	3.78	11.70	0.23	23.30
Variance 0			0.07	-0.06	-10.17			-0.14	-2.97
Variance 1			0.05	-0.05	-7.64			-0.09	-1.44
Variance 2			-0.08	-0.05	-5.97			-0.06	-0.23

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2020-09-16 11:41:26

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 92 ft

Pump placement from TOC 92 ft

Well Information:

Well ID BRGWC-47  
Well diameter 2 in  
Well Total Depth 97.08 ft  
Screen Length 10 ft  
Depth to Water 23.58 ft

Pumping Information:

Final Pumping Rate 120 mL/min  
Total System Volume 0.6946349 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.2 in  
Total Volume Pumped 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:18:43	600.01	20.10	5.80	2181.78	31.70	24.06	0.83	43.68
Last 5	11:23:43	900.00	19.99	5.78	2190.66	27.10	24.11	0.43	40.26
Last 5	11:28:43	1199.99	19.86	5.77	2197.89	13.22	24.14	0.27	41.07
Last 5	11:33:43	1499.99	19.77	5.77	2208.32	6.53	24.17	0.20	39.83
Last 5	11:38:43	1799.97	19.72	5.76	2213.55	4.23	24.18	0.16	39.89
Variance 0			-0.13	-0.01	7.24			-0.16	0.81
Variance 1			-0.09	-0.00	10.43			-0.08	-1.24
Variance 2			-0.05	-0.00	5.22			-0.04	0.06

Notes

Grab Samples

# Low-Flow Test Report:

**Test Date / Time:** 9/17/2020 9:14:57 AM

**Project:** Plant Branch

**Operator Name:** Travis Martinez

<p><b>Location Name: BRGWC-50</b>  <b>Well Diameter: 2 in</b>  <b>Casing Type: PVC</b>  <b>Screen Length: 10 ft</b>  <b>Top of Screen: 58.76 ft</b>  <b>Total Depth: 68.76 ft</b>  <b>Initial Depth to Water: 36.85 ft</b></p>	<p><b>Pump Type: QED Sample Pro</b>  <b>Tubing Type: Polyethylene</b>  <b>Pump Intake From TOC: 63.76 ft</b>  <b>Estimated Total Volume Pumped: 10850 ml</b>  <b>Flow Cell Volume: 90 ml</b>  <b>Final Flow Rate: 155 ml/min</b>  <b>Final Draw Down: -0.07 ft</b></p>	<p><b>Instrument Used: Aqua TROLL 400</b>  <b>Serial Number: 728550</b></p>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/17/2020 9:14 AM	00:00	5.44 pH	23.08 °C	2,172.7 µS/cm	4.18 mg/L	4.80 NTU	50.0 mV	36.85 ft	155.00 ml/min
9/17/2020 9:19 AM	05:00	4.93 pH	21.94 °C	2,283.4 µS/cm	1.47 mg/L	17.10 NTU	66.9 mV	36.90 ft	155.00 ml/min
9/17/2020 9:24 AM	10:00	5.04 pH	21.76 °C	2,296.4 µS/cm	0.87 mg/L	8.09 NTU	98.3 mV	36.90 ft	155.00 ml/min
9/17/2020 9:29 AM	15:00	5.05 pH	21.73 °C	2,295.9 µS/cm	0.70 mg/L	6.59 NTU	99.7 mV	36.92 ft	155.00 ml/min
9/17/2020 9:34 AM	20:00	4.92 pH	21.78 °C	2,296.0 µS/cm	0.64 mg/L	9.00 NTU	97.3 mV	36.92 ft	155.00 ml/min
9/17/2020 9:39 AM	25:00	4.74 pH	21.79 °C	2,292.3 µS/cm	0.52 mg/L	10.11 NTU	81.1 mV	36.92 ft	155.00 ml/min
9/17/2020 9:44 AM	30:00	4.59 pH	21.75 °C	2,287.5 µS/cm	0.42 mg/L	10.38 NTU	45.4 mV	36.90 ft	155.00 ml/min
9/17/2020 9:49 AM	35:00	4.47 pH	21.82 °C	2,303.1 µS/cm	0.29 mg/L	11.10 NTU	55.0 mV	36.83 ft	155.00 ml/min
9/17/2020 9:54 AM	40:00	4.42 pH	21.96 °C	2,283.7 µS/cm	0.22 mg/L	9.97 NTU	48.5 mV	36.76 ft	155.00 ml/min
9/17/2020 9:59 AM	45:00	4.40 pH	22.00 °C	2,245.4 µS/cm	0.17 mg/L	8.61 NTU	34.6 mV	36.76 ft	155.00 ml/min
9/17/2020 10:04 AM	50:00	4.40 pH	22.02 °C	2,295.4 µS/cm	0.12 mg/L	11.66 NTU	28.9 mV	36.78 ft	155.00 ml/min
9/17/2020 10:09 AM	55:00	4.40 pH	22.05 °C	2,288.2 µS/cm	0.10 mg/L	6.67 NTU	27.8 mV	36.78 ft	155.00 ml/min
9/17/2020 10:14 AM	01:00:00	4.40 pH	21.94 °C	2,250.2 µS/cm	0.09 mg/L	4.88 NTU	24.3 mV	36.78 ft	155.00 ml/min
9/17/2020 10:19 AM	01:05:00	4.41 pH	21.74 °C	2,316.1 µS/cm	0.09 mg/L	4.69 NTU	25.8 mV	36.78 ft	155.00 ml/min
9/17/2020 10:24 AM	01:10:00	4.41 pH	21.69 °C	2,304.9 µS/cm	0.08 mg/L	4.12 NTU	26.0 mV	36.78 ft	155.00 ml/min

9/17/2020 10:25 AM	01:11:01	4.41 pH	21.69 °C	2,291.3 µS/cm	0.08 mg/L		27.1 mV	36.78 ft	155.00 ml/min
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## Samples

Sample ID:	Description:
BRGWC-50	

Product Name: Low-Flow System

Date: 2020-09-17 10:09:00

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 71 ft

Pump placement from TOC 71 ft

Well Information:

Well ID BRGWC-521  
Well diameter 2 in  
Well Total Depth 76.6 ft  
Screen Length 10 ft  
Depth to Water 37.93 ft

Pumping Information:

Final Pumping Rate 220 mL/min  
Total System Volume 0.6009031 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.88 in  
Total Volume Pumped 13.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:41:56	2099.97	20.38	6.45	508.85	0.78	38.41	0.09	-34.83
Last 5	09:51:56	2699.95	20.35	6.30	500.29	0.56	38.41	0.07	-16.81
Last 5	09:56:56	2999.94	20.43	6.21	491.65	0.40	38.42	0.06	-13.18
Last 5	10:01:56	3299.93	20.52	6.17	487.07	0.39	38.42	0.06	-5.76
Last 5	10:06:56	3599.93	20.66	6.12	484.89	0.32	38.42	0.05	-0.50
Variance 0			0.08	-0.09	-8.64			-0.01	3.63
Variance 1			0.08	-0.05	-4.57			-0.01	7.42
Variance 2			0.14	-0.05	-2.18			-0.01	5.26

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2020-09-17 13:04:18

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name Plant Branch  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 63 ft

Pump placement from TOC 63 ft

Well Information:

Well ID PZ-51I  
Well diameter 2 in  
Well Total Depth 68 ft  
Screen Length 5 ft  
Depth to Water 37.16 ft

Pumping Information:

Final Pumping Rate 160 mL/min  
Total System Volume 0.5651957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.64 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	12:42:05	300.03	21.73	5.46	1809.15	11.23	37.57	0.78	57.00
Last 5	12:47:05	600.01	21.49	5.17	1821.21	8.12	37.59	0.61	55.51
Last 5	12:52:05	900.01	21.46	5.03	1824.66	6.92	37.60	0.49	51.86
Last 5	12:57:05	1200.00	21.45	4.97	1825.51	5.38	37.62	0.41	47.15
Last 5	13:02:05	1499.99	21.46	4.93	1821.79	3.99	37.63	0.35	42.34
Variance 0			-0.03	-0.15	3.46			-0.12	-3.65
Variance 1			-0.01	-0.06	0.84			-0.09	-4.71
Variance 2			0.00	-0.03	-3.72			-0.06	-4.81

Notes

Grab Samples

# Low-Flow Test Report:

Test Date / Time: 9/17/2020 12:09:03 PM

Project: Plant Branch

Operator Name: Travis Martinez

<b>Location Name: PZ-51S</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 5 ft</b> <b>Top of Screen: 42.98 ft</b> <b>Total Depth: 47.98 ft</b> <b>Initial Depth to Water: 37.19 ft</b>	<b>Pump Type: QED Sample Pro</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 45 ft</b> <b>Estimated Total Volume Pumped: 3450 ml</b> <b>Flow Cell Volume: 90 ml</b> <b>Final Flow Rate: 115 ml/min</b> <b>Final Draw Down: 1.41 ft</b>	<b>Instrument Used: Aqua TROLL 400</b> <b>Serial Number: 728550</b>
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## Test Notes:

Started purge at 1205

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 5	+/- 5 %	+/- 10 %	+/- 5	+/- 25	+/- 0.3	
9/17/2020 12:09 PM	00:00	6.04 pH	23.38 °C	187.20 µS/cm	1.52 mg/L	11.70 NTU	59.5 mV	37.19 ft	115.00 ml/min
9/17/2020 12:14 PM	05:00	5.95 pH	22.00 °C	186.31 µS/cm	0.90 mg/L	10.89 NTU	73.6 mV	38.02 ft	115.00 ml/min
9/17/2020 12:19 PM	10:00	5.88 pH	21.81 °C	185.51 µS/cm	0.75 mg/L	6.50 NTU	74.3 mV	38.33 ft	115.00 ml/min
9/17/2020 12:24 PM	15:00	5.84 pH	21.55 °C	183.99 µS/cm	0.52 mg/L	3.79 NTU	60.3 mV	38.48 ft	115.00 ml/min
9/17/2020 12:29 PM	20:00	5.81 pH	21.56 °C	182.37 µS/cm	0.35 mg/L	3.25 NTU	72.7 mV	38.52 ft	115.00 ml/min
9/17/2020 12:34 PM	25:00	5.77 pH	21.57 °C	181.78 µS/cm	0.32 mg/L	2.91 NTU	58.7 mV	38.60 ft	115.00 ml/min

## Samples

Sample ID:	Description:
PZ-51S	

Product Name: Low-Flow System

Date: 2020-10-26 17:05:39

Project Information:

Operator Name K. Minkara  
Company Name Golder  
Project Name 166625418  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 105 ft

Pump placement from TOC 105 ft

Well Information:

Well ID PZ-50D  
Well diameter 2 in  
Well Total Depth 109.00 ft  
Screen Length 10 ft  
Depth to Water 36.95 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6836594 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 751.08 in  
Total Volume Pumped 47 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:40:48	14714.08	20.87	6.65	1400.48	3.21	95.69	1.32	-270.29
Last 5	16:45:48	15014.08	20.88	6.65	1402.15	1.11	96.96	1.36	-264.37
Last 5	16:50:48	15314.08	20.88	6.66	1404.54	2.12	97.93	1.40	-252.38
Last 5	16:55:48	15614.09	20.86	6.66	1406.76	2.25	99.17	1.45	-240.95
Last 5	17:00:48	15914.09	20.89	6.66	1408.42	1.20	99.54	1.51	-230.95
Variance 0			-0.01	0.00	2.39			0.05	11.99
Variance 1			-0.02	0.01	2.23			0.05	11.43
Variance 2			0.03	0.00	1.65			0.05	10.00

Notes

NO SAMPLE TAKEN. Purged to top of screen. Initial WL = 36.95'. See purge form for flow rate changes for volume removed calculation.

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-27 09:43:36

Project Information:

Operator Name K. Minkara  
Company Name Golder  
Project Name 166625418  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 105 ft

Pump placement from TOC 105 ft

Well Information:

Well ID PZ-50D  
Well diameter 2 in  
Well Total Depth 109.00 ft  
Screen Length 10 ft  
Depth to Water 76.95 ft

Pumping Information:

Final Pumping Rate 0 mL/min  
Total System Volume 0.6836594 L  
Calculated Sample Rate 45 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:41:51	45.05	20.93	6.47	1346.80	1.46	76.95	7.89	308.14
Last 5	09:42:36	90.03	20.94	6.53	1340.23	--	--	7.80	294.32
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.02	0.06	-6.57			-0.09	-13.82
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Sampled at 940. Purged to top of screen (99.54ft) on 10/26/2020, 17:00.

Grab Samples



Product Name: Low-Flow System

Date: 2020-10-27 12:48:29

Project Information:

Operator Name K. Minkara  
Company Name Golder  
Project Name 166625418  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 105 ft

Pump placement from TOC 105 ft

Well Information:

Well ID PZ-51D  
Well diameter 2 in  
Well Total Depth 110.15 ft  
Screen Length 10 ft  
Depth to Water 39.65 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.6836594 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 161.64 in  
Total Volume Pumped 17.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:25:02	5704.05	22.09	6.78	973.67	1.13	52.43	0.59	29.05
Last 5	12:30:04	6006.05	21.94	6.79	976.58	2.14	52.68	0.54	46.54
Last 5	12:35:04	6306.05	22.26	6.79	984.87	1.70	52.84	0.55	60.56
Last 5	12:40:05	6607.05	22.23	6.78	989.23	1.52	53.03	0.52	70.51
Last 5	12:45:05	6907.05	22.16	6.79	988.42	1.73	53.12	0.50	80.90
Variance 0			0.32	-0.00	8.29			0.01	14.02
Variance 1			-0.04	-0.00	4.36			-0.03	9.95
Variance 2			-0.07	0.00	-0.81			-0.03	10.40

Notes

Sampled at 1245. See purge form for volume calculation

Grab Samples

Product Name: Low-Flow System

Date: 2020-10-27 14:13:51

Project Information:

Operator Name K. Minkara  
Company Name Golder  
Project Name 166625418  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 597519  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 60 ft

Pump placement from TOC 60 ft

Well Information:

Well ID PZ-51I  
Well diameter 2 in  
Well Total Depth 65 ft  
Screen Length 10 ft  
Depth to Water 38.32 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4828054 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.56 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:50:57	1200.03	22.51	5.54	1807.77	1.89	38.95	1.18	206.64
Last 5	13:55:58	1501.03	22.86	5.52	1805.17	1.67	38.95	0.97	209.74
Last 5	14:00:58	1801.04	22.90	5.50	1803.92	1.33	38.95	0.83	214.20
Last 5	14:05:58	2101.04	22.94	5.49	1808.67	1.43	38.95	0.71	223.54
Last 5	14:10:58	2401.04	22.22	5.49	1810.39	0.78	38.95	0.63	231.21
Variance 0			0.04	-0.01	-1.24			-0.14	4.46
Variance 1			0.04	-0.01	4.74			-0.12	9.34
Variance 2			-0.71	-0.00	1.73			-0.08	7.68

Notes

Sampled at 1410. FD here

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 15:51:13

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 92.08 ft

Pump placement from TOC 92.08 ft

Well Information:

Well ID BRGWC-47  
Well diameter 2 in  
Well Total Depth 97.08 ft  
Screen Length 10 ft  
Depth to Water 22.68 ft

Pumping Information:

Final Pumping Rate 125 mL/min  
Total System Volume 0.716952 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 6.48 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:28:51	3599.96	17.16	5.46	2251.26	4.76	23.22	0.99	-49.06
Last 5	15:33:51	3899.96	16.98	5.50	2256.74	3.98	23.22	1.01	-48.11
Last 5	15:38:51	4199.95	16.92	5.53	2245.10	3.93	23.22	1.31	-47.19
Last 5	15:43:52	4500.94	16.92	5.56	2245.26	3.38	23.22	1.37	-46.98
Last 5	15:48:52	4800.94	16.96	5.59	2251.86	3.49	23.22	1.22	-47.17
Variance 0			-0.06	0.03	-11.64			0.30	0.91
Variance 1			0.00	0.03	0.16			0.06	0.21
Variance 2			0.04	0.03	6.60			-0.15	-0.19

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-04 12:23:43

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 71.60 ft

Pump placement from TOC 71.60 ft

Well Information:

Well ID BRGWC-521  
Well diameter 2 in  
Well Total Depth 76.60 ft  
Screen Length 10 ft  
Depth to Water 38.43 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.6232202 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.84 in  
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:00:43	300.05	19.66	6.71	508.44	3.05	38.81	1.88	-106.88
Last 5	12:05:43	600.03	19.69	6.09	513.75	3.95	38.71	0.82	-66.06
Last 5	12:10:43	900.03	19.83	5.84	511.08	2.82	38.71	0.47	-69.96
Last 5	12:15:43	1200.03	19.90	5.83	509.22	2.47	38.75	0.38	-82.74
Last 5	12:20:43	1500.03	20.02	5.87	511.36	2.49	38.75	0.34	-91.82
Variance 0			0.14	-0.25	-2.67			-0.35	-3.91
Variance 1			0.07	-0.01	-1.87			-0.09	-12.78
Variance 2			0.12	0.04	2.14			-0.03	-9.08

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 15:57:18

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 38 ft

Pump placement from TOC 38 ft

Well Information:

Well ID BRGWA-23S  
Well diameter 2 in  
Well Total Depth 43.80 ft  
Screen Length 10 ft  
Depth to Water 36.23 ft

Pumping Information:

Final Pumping Rate 125 mL/min  
Total System Volume 0.6546101 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 15.96 in  
Total Volume Pumped 14.38 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:35:19	5707.51	14.46	5.76	204.93	0.67	37.56	3.94	56.26
Last 5	15:40:23	6011.51	14.94	5.73	205.83	0.60	37.56	3.96	56.73
Last 5	15:45:23	6311.51	14.74	5.75	203.66	0.49	37.56	3.92	56.44
Last 5	15:50:23	6611.51	14.83	5.75	205.10	0.72	37.56	3.98	56.29
Last 5	15:55:23	6911.51	14.55	5.75	204.95	0.63	37.56	3.94	56.68
Variance 0			-0.20	0.02	-2.17			-0.04	-0.29
Variance 1			0.08	-0.00	1.44			0.06	-0.15
Variance 2			-0.27	-0.00	-0.15			-0.03	0.39

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 13:42:00

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 55 ft

Pump placement from TOC 55 ft

Well Information:

Well ID BRGWC-45  
Well diameter 2 in  
Well Total Depth 60.53 ft  
Screen Length 10 ft  
Depth to Water 10.00 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.284 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 2.76 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:19:58	1500.00	18.36	6.25	383.64	2.77	10.23	1.48	-143.98
Last 5	13:24:58	1799.99	18.39	6.23	384.86	4.31	10.23	1.31	-139.98
Last 5	13:29:58	2099.99	18.46	6.21	389.34	2.11	10.24	1.05	-135.03
Last 5	13:34:58	2399.98	18.52	6.19	388.56	2.79	10.23	0.99	-128.78
Last 5	13:39:58	2699.97	18.47	6.17	388.13	2.74	10.23	0.87	-123.26
Variance 0			0.07	-0.02	4.48			-0.26	4.95
Variance 1			0.06	-0.02	-0.78			-0.06	6.25
Variance 2			-0.04	-0.02	-0.43			-0.12	5.53

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-01 16:32:59

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 47.90 ft

Pump placement from TOC 47.90 ft

Well Information:

Well ID BRGWA-6S  
Well diameter 2 in  
Well Total Depth 52.90 ft  
Screen Length 10.00 ft  
Depth to Water 23.15 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 0.7211151 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 8.88 in  
Total Volume Pumped 5.63 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:10:46	300.06	18.48	6.80	60.48	3.95	23.76	5.55	135.63
Last 5	16:15:46	600.00	18.43	6.73	61.07	2.73	23.84	5.38	121.16
Last 5	16:20:46	900.01	18.43	6.72	60.56	2.78	23.88	5.47	117.03
Last 5	16:25:46	1200.00	18.40	6.71	60.11	3.02	23.83	5.51	117.31
Last 5	16:30:46	1500.00	18.39	6.70	59.96	2.95	23.89	5.48	115.01
Variance 0			-0.00	-0.01	-0.51			0.09	-4.13
Variance 1			-0.03	-0.01	-0.45			0.04	0.28
Variance 2			-0.01	-0.01	-0.15			-0.03	-2.30

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-04 17:09:48

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 60.82 ft

Pump placement from TOC 60.82 ft

Well Information:

Well ID BRGWC-50  
Well diameter 2 in  
Well Total Depth 65.82 ft  
Screen Length 10 ft  
Depth to Water 37.25 ft

Pumping Information:

Final Pumping Rate 170 mL/min  
Total System Volume 0.5777825 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown -3.72 in  
Total Volume Pumped 6.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	16:47:43	1200.03	20.75	4.26	2270.53	9.29	36.81	0.05	134.37
Last 5	16:52:43	1500.03	20.65	4.27	2282.24	6.96	36.81	0.06	130.02
Last 5	16:57:43	1800.04	20.62	4.27	2297.87	6.54	36.81	0.03	123.25
Last 5	17:02:43	2100.04	20.60	4.32	2289.97	5.19	36.93	0.07	120.90
Last 5	17:07:43	2400.04	20.58	4.34	2279.95	4.74	36.94	0.07	118.02
Variance 0			-0.03	0.01	15.63			-0.03	-6.76
Variance 1			-0.01	0.05	-7.90			0.03	-2.36
Variance 2			-0.02	0.01	-10.03			0.00	-2.88

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2021-03-02 08:58:54

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 75 ft

Pump placement from TOC 75 ft

Well Information:

Well ID BRGWA-12I  
Well diameter 2 in  
Well Total Depth 80.54 ft  
Screen Length 10 ft  
Depth to Water 51.26 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.8197567 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 50.52 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:36:36	900.11	17.21	6.10	158.80	0.56	54.75	1.37	46.31
Last 5	08:41:37	1201.11	16.39	6.12	153.41	0.72	54.94	1.86	47.54
Last 5	08:46:37	1501.11	15.37	6.14	155.44	0.64	55.20	2.05	47.95
Last 5	08:51:37	1801.11	15.00	6.12	155.25	0.72	55.32	1.98	49.50
Last 5	08:56:43	2107.11	15.19	6.11	154.94	0.48	55.47	1.96	49.13
Variance 0			-1.02	0.01	2.03			0.20	0.41
Variance 1			-0.37	-0.01	-0.19			-0.07	1.55
Variance 2			0.19	-0.02	-0.31			-0.02	-0.37

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-04 11:13:30

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 43 ft

Pump placement from TOC 43 ft

Well Information:

Well ID BRGWC-32S  
Well diameter 2 in  
Well Total Depth 48.00 ft  
Screen Length 10 ft  
Depth to Water 35.48 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.6992443 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 10.08 in  
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:51:45	900.03	17.85	5.91	493.77	2.30	36.35	7.19	54.61
Last 5	10:56:45	1200.03	17.84	5.95	501.45	2.37	36.33	6.37	54.32
Last 5	11:01:45	1500.03	17.86	5.97	509.02	1.92	36.33	5.86	54.77
Last 5	11:06:45	1800.03	17.89	5.98	512.00	1.68	36.33	5.70	54.96
Last 5	11:11:45	2100.03	17.90	5.98	515.01	1.91	36.32	5.88	56.63
Variance 0			0.02	0.02	7.57			-0.50	0.46
Variance 1			0.04	0.02	2.98			-0.16	0.18
Variance 2			0.01	-0.00	3.01			0.18	1.68

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 11:31:24

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 56 ft

Pump placement from TOC 56 ft

Well Information:

Well ID BRGWA-12S  
Well diameter 2 in  
Well Total Depth 61.01 ft  
Screen Length 10 ft  
Depth to Water 51.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7349517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.76 in  
Total Volume Pumped 19 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:20:45	1500.02	17.89	5.85	80.47	0.80	51.94	6.60	35.91
Last 5	10:30:51	2105.97	17.92	5.90	81.92	0.42	51.95	6.71	36.11
Last 5	10:35:51	2405.97	17.93	5.90	82.50	0.44	51.95	6.74	36.63
Last 5	10:40:51	2705.97	17.96	5.90	82.72	0.47	51.95	6.73	36.95
Last 5	10:45:51	3005.97	17.87	5.91	83.21	0.42	51.96	6.75	37.33
Variance 0			0.01	0.00	0.58			0.03	0.52
Variance 1			0.04	0.00	0.21			-0.01	0.32
Variance 2			-0.09	0.01	0.49			0.02	0.38

Notes

Purged for 95 minutes, but smartroll stopped recording readings. Will start new file to show stabiliz & then sample

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 11:53:22

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 56 ft

Pump placement from TOC 56 ft

Well Information:

Well ID BRGWA-12S  
Well diameter 2 in  
Well Total Depth 61.01 ft  
Screen Length 10 ft  
Depth to Water 51.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7349517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 6.24 in  
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:40:40	300.02	18.01	5.93	84.75	0.21	51.99	6.81	39.97
Last 5	11:45:40	600.02	17.83	5.92	84.99	0.44	52.00	6.83	40.47
Last 5	11:50:40	900.02	17.91	5.92	85.27	0.21	52.00	6.85	40.71
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.19	-0.00	0.24			0.02	0.50
Variance 2			0.08	-0.00	0.28			0.03	0.24

Notes

Changed battery pack, took 3 readings to show stabiliz. Purged 22L total when 3 well vol only required 17.66L

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-01 16:42:56

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 62 ft

Pump placement from TOC 62 ft

Well Information:

Well ID BRGWA-2I  
Well diameter 2 in  
Well Total Depth 66.96 ft  
Screen Length 10 ft  
Depth to Water 10.94 ft

Pumping Information:

Final Pumping Rate 145 mL/min  
Total System Volume 0.7617322 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 23.04 in  
Total Volume Pumped 3.63 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:19:28	300.11	17.45	6.54	163.33	1.24	12.00	0.81	46.79
Last 5	16:24:28	600.02	17.56	6.63	168.01	1.27	12.42	0.43	48.86
Last 5	16:29:28	900.02	17.61	6.66	169.63	1.03	12.68	0.44	53.93
Last 5	16:34:29	1201.02	17.56	6.66	170.36	0.78	12.79	0.36	53.87
Last 5	16:39:34	1506.02	17.65	6.66	170.90	0.68	12.86	0.28	46.17
Variance 0			0.04	0.03	1.62			0.00	5.07
Variance 1			-0.05	-0.00	0.73			-0.07	-0.06
Variance 2			0.09	-0.00	0.54			-0.09	-7.70

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 12:06:54

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 42.39 ft

Pump placement from TOC 42.39 ft

Well Information:

Well ID BRGWA-2S  
Well diameter 2 in  
Well Total Depth 47.39 ft  
Screen Length 10 ft  
Depth to Water 11.12 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6965216 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.44 in  
Total Volume Pumped 16.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:45:12	2704.98	16.92	6.19	59.59	2.12	11.24	1.00	57.81
Last 5	11:50:12	3004.97	16.87	6.22	59.50	1.92	11.24	0.73	52.70
Last 5	11:55:12	3304.96	16.92	6.21	59.51	2.06	11.24	0.51	43.97
Last 5	12:00:12	3604.96	16.88	6.18	59.22	2.08	11.24	0.59	43.08
Last 5	12:05:12	3904.94	16.90	6.20	59.28	2.11	11.24	0.56	40.75
Variance 0			0.05	-0.01	0.01			-0.22	-8.73
Variance 1			-0.04	-0.03	-0.29			0.07	-0.90
Variance 2			0.02	0.02	0.06			-0.02	-2.32

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 10:14:03

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 58.82 ft

Pump placement from TOC 58.82 ft

Well Information:

Well ID BRGWA-5I  
Well diameter 2 in  
Well Total Depth 63.82 ft  
Screen Length 10 ft  
Depth to Water 10.86 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.7661957 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.8 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:56:26	300.02	16.74	6.38	144.34	1.91	11.00	5.87	130.11
Last 5	10:01:26	600.01	16.83	6.44	144.41	1.99	11.01	6.41	121.58
Last 5	10:06:26	899.99	16.83	6.47	144.17	1.95	11.01	6.25	118.15
Last 5	10:11:27	1201.00	16.87	6.47	145.48	1.95	11.01	5.90	116.77
Last 5									
Variance 0			0.09	0.06	0.07			0.54	-8.53
Variance 1			0.00	0.03	-0.24			-0.16	-3.42
Variance 2			0.04	0.00	1.31			-0.35	-1.38

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-02 09:31:31

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 38.61 ft

Pump placement from TOC 38.61 ft

Well Information:

Well ID BRGWA-5S  
Well diameter 2 in  
Well Total Depth 43.61 ft  
Screen Length 10 ft  
Depth to Water 10.90 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6796499 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.96 in  
Total Volume Pumped 11.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:08:56	1502.00	16.87	6.46	145.52	3.80	10.98	3.26	96.76
Last 5	09:13:56	1801.99	16.90	6.44	145.66	3.69	10.98	3.19	93.59
Last 5	09:18:56	2101.99	16.92	6.45	145.32	2.97	10.98	2.48	88.33
Last 5	09:23:56	2401.98	16.93	6.43	145.09	2.98	10.98	2.48	87.10
Last 5	09:28:56	2701.98	16.95	6.42	145.03	3.51	10.98	2.41	86.19
Variance 0			0.02	0.00	-0.34			-0.70	-5.26
Variance 1			0.01	-0.02	-0.23			-0.00	-1.23
Variance 2			0.02	-0.01	-0.05			-0.07	-0.91

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2021-03-02 17:10:09

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 19 ft

Pump placement from TOC 19 ft

Well Information:

Well ID BRGWC-251  
Well diameter 2 in  
Well Total Depth 24.41 ft  
Screen Length 10 ft  
Depth to Water 7.35 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.569805 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.2 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:48:02	300.02	13.20	6.07	463.45	8.29	7.40	1.17	51.74
Last 5	16:53:02	600.02	15.37	6.07	457.40	17.30	7.44	1.05	60.24
Last 5	16:58:02	900.27	14.93	6.10	458.23	8.45	7.45	0.35	64.18
Last 5	17:03:02	1200.27	15.11	6.10	459.20	4.14	7.45	0.26	65.79
Last 5	17:08:02	1500.27	15.14	6.10	458.58	2.82	7.45	0.22	67.04
Variance 0			-0.44	0.02	0.83			-0.70	3.94
Variance 1			0.17	0.01	0.96			-0.09	1.61
Variance 2			0.04	-0.00	-0.62			-0.04	1.25

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-03 14:15:21

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 28 ft

Pump placement from TOC 28 ft

Well Information:

Well ID BRGWC-271  
Well diameter 2 in  
Well Total Depth 33.41 ft  
Screen Length 10 ft  
Depth to Water 4.94 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6099758 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:58:27	300.03	17.52	5.90	449.51	1.41	4.99	1.29	52.02
Last 5	14:03:27	600.02	17.78	5.86	444.66	0.68	4.99	0.57	53.60
Last 5	14:08:27	900.02	17.82	5.89	441.96	0.64	4.99	0.32	55.71
Last 5	14:13:29	1202.02	17.91	5.90	440.79	0.74	4.99	0.22	57.45
Last 5									
Variance 0			0.27	-0.03	-4.85			-0.72	1.58
Variance 1			0.03	0.02	-2.70			-0.25	2.11
Variance 2			0.09	0.01	-1.18			-0.10	1.74

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-03 16:14:07

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 18 ft

Pump placement from TOC 18 ft

Well Information:

Well ID BRGWC-29I  
Well diameter 2 in  
Well Total Depth 23.63 ft  
Screen Length 10 ft  
Depth to Water 9.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5653416 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.48 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:51:41	1500.62	18.63	4.47	704.87	0.89	9.17	0.89	74.57
Last 5	15:56:41	1800.62	18.55	4.46	724.95	0.75	9.17	0.68	75.01
Last 5	16:01:41	2100.62	18.45	4.47	723.27	0.63	9.17	0.84	75.30
Last 5	16:06:41	2400.62	18.45	4.47	723.38	0.88	9.17	0.92	75.44
Last 5	16:11:47	2706.62	18.50	4.46	721.07	0.95	9.17	0.72	75.83
Variance 0			-0.10	0.00	-1.68			0.16	0.28
Variance 1			-0.00	0.00	0.11			0.09	0.14
Variance 2			0.05	-0.00	-2.30			-0.20	0.38

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-03 13:10:13

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Well Wizard  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 17 ft

Pump placement from TOC 17 ft

Well Information:

Well ID BRGWC-301  
Well diameter 2 in  
Well Total Depth 22.35 ft  
Screen Length 10 ft  
Depth to Water 3.74 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.5608782 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.68 in  
Total Volume Pumped 24.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:46:13	5708.09	15.32	6.31	937.62	10.04	3.88	0.18	71.77
Last 5	12:51:13	6008.09	15.18	6.47	945.31	8.69	3.88	4.15	68.82
Last 5	12:56:13	6308.09	15.86	6.31	928.32	8.67	3.88	0.42	72.09
Last 5	13:01:13	6608.09	15.64	6.30	931.39	6.22	3.88	0.30	72.61
Last 5	13:06:22	6917.09	15.52	6.29	929.29	4.56	3.88	0.27	72.64
Variance 0			0.68	-0.16	-16.99			-3.73	3.27
Variance 1			-0.22	-0.02	3.07			-0.11	0.53
Variance 2			-0.12	-0.01	-2.09			-0.03	0.03

Notes

Started turbid, flushed SmarTroll flow cell at 600sec and 5700sec

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-04 09:59:20

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 104 ft

Pump placement from TOC 104 ft

Well Information:

Well ID PZ-50D  
Well diameter 2 in  
Well Total Depth 109 ft  
Screen Length 10 ft  
Depth to Water 37.41 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.748196 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 113.8 in  
Total Volume Pumped 8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:32:20	3310.34	17.07	6.43	1584.73	2.17	43.20	0.26	82.20
Last 5	09:37:20	3610.34	17.16	6.43	1581.24	2.13	43.60	0.24	81.88
Last 5	09:42:34	3924.34	17.30	6.43	1572.58	2.30	44.02	0.23	81.92
Last 5	09:47:34	4224.34	18.48	6.41	1647.22	1.85	44.75	0.20	80.97
Last 5	09:52:34	4524.34	19.41	6.41	1611.74	1.50	46.90	0.12	81.80
Variance 0			0.13	0.00	-8.65			-0.01	0.04
Variance 1			1.19	-0.02	74.64			-0.02	-0.95
Variance 2			0.93	-0.00	-35.48			-0.08	0.83

Notes

Ran out of CO2 with the MP-15, meeting AIR for MP-50, will return today to do full evac purge

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-04 16:29:04

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 104 ft

Pump placement from TOC 104 ft

Well Information:

Well ID PZ-50D  
Well diameter 2 in  
Well Total Depth 109 ft  
Screen Length 10 ft  
Depth to Water 37.41 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.748196 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 745.08 in  
Total Volume Pumped 58 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:01:57	13034.80	20.68	6.62	1323.77	6.21	96.27	0.19	80.38
Last 5	16:06:57	13334.80	20.68	6.62	1328.13	6.58	97.63	0.23	85.04
Last 5	16:11:57	13634.80	20.68	6.63	1331.02	6.54	98.57	0.29	90.61
Last 5	16:16:57	13934.80	20.64	6.63	1340.24	5.94	99.12	0.34	95.85
Last 5	16:21:57	14234.80	20.66	6.62	1347.01	5.98	99.50	0.70	103.39
Variance 0			0.00	0.00	2.89			0.06	5.57
Variance 1			-0.04	0.00	9.22			0.04	5.24
Variance 2			0.02	-0.00	6.77			0.36	7.54

Notes

NO SAMPLE TAKEN. purged to top of screen. Initial WL=37.41'. See purge form for flow rate changes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-05 08:04:37

Project Information:

Operator Name A. McClure  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethelene  
Tubing Diameter 0.170 in  
Tubing Length 104 ft

Pump placement from TOC 104 ft

Well Information:

Well ID PZ-50D  
Well diameter 2 in  
Well Total Depth 109 ft  
Screen Length 10 ft  
Depth to Water 78.21 ft

Pumping Information:

Final Pumping Rate 0 mL/min  
Total System Volume 0.748196 L  
Calculated Sample Rate 60 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:02:53	60.12	14.33	7.06	1550.77	5.28	78.58	8.19	66.16
Last 5	08:03:53	120.02	15.96	6.97	1526.43	--	--	7.11	65.31
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			1.63	-0.09	-24.34			-1.08	-0.85
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Sampled at 08:02, ignore second reading

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-03 11:03:33

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 105 ft

Pump placement from TOC 105 ft

Well Information:

Well ID PZ-51D  
Well diameter 2 in  
Well Total Depth 110.15 ft  
Screen Length 10 ft  
Depth to Water 37.33 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.7749765 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 33.36 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:35:33	1199.97	18.57	6.92	1010.13	6.52	39.31	0.87	-103.59
Last 5	10:40:32	1499.96	18.36	6.99	1006.98	5.64	39.62	0.59	-103.88
Last 5	10:45:32	1799.94	18.03	7.04	1005.80	5.00	39.91	0.50	-103.05
Last 5	10:50:32	2099.93	18.01	7.06	1005.24	4.86	40.05	0.43	-102.11
Last 5	10:55:32	2399.91	17.94	7.10	999.49	4.83	40.11	0.40	-98.59
Variance 0			-0.33	0.05	-1.18			-0.09	0.84
Variance 1			-0.03	0.03	-0.55			-0.07	0.94
Variance 2			-0.07	0.04	-5.75			-0.04	3.52

Notes

Grab Samples



Product Name: Low-Flow System

Date: 2021-03-04 09:36:50

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Sample Pro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 63 ft

Pump placement from TOC 63 ft

Well Information:

Well ID PZ-51I  
Well diameter 2 in  
Well Total Depth 68.00 ft  
Screen Length 10 ft  
Depth to Water 37.75 ft

Pumping Information:

Final Pumping Rate 185 mL/min  
Total System Volume 0.5875128 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown -0.72 in  
Total Volume Pumped 6.48 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:15:34	900.03	19.10	4.56	1788.79	10.61	37.78	0.09	12.48
Last 5	09:20:34	1200.03	19.23	4.54	1790.27	6.62	37.86	0.06	7.36
Last 5	09:25:34	1500.03	19.31	4.54	1790.05	7.07	37.59	0.04	4.40
Last 5	09:30:34	1800.03	19.40	4.56	1795.71	5.30	37.68	0.02	1.50
Last 5	09:35:34	2100.03	19.41	4.57	1773.11	4.62	37.69	0.02	-0.09
Variance 0			0.07	0.00	-0.22			-0.02	-2.96
Variance 1			0.10	0.01	5.66			-0.01	-2.90
Variance 2			0.01	0.01	-22.60			-0.00	-1.59

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2021-03-03 09:28:45

Project Information:

Operator Name T. Martinez  
Company Name Golder Associates  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 642531  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED SamplePro  
Tubing Type polyethylene  
Tubing Diameter 0.170 in  
Tubing Length 44.00 ft

Pump placement from TOC 44.00 ft

Well Information:

Well ID PZ-51S  
Well diameter 2 in  
Well Total Depth 47.98 ft  
Screen Length 5 ft  
Depth to Water 38.01 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.498155 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 14.52 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:03:49	1199.97	16.28	5.54	160.97	7.25	39.05	1.37	69.86
Last 5	09:08:49	1499.96	17.32	5.50	161.86	6.75	39.10	1.11	66.35
Last 5	09:13:49	1799.94	16.72	5.46	161.02	6.43	39.15	0.96	64.17
Last 5	09:18:49	2099.93	16.40	5.43	164.05	5.62	39.20	0.87	61.38
Last 5	09:23:49	2399.96	16.52	5.41	161.42	4.98	39.22	0.76	58.27
Variance 0			-0.60	-0.04	-0.84			-0.15	-2.17
Variance 1			-0.32	-0.03	3.03			-0.09	-2.79
Variance 2			0.12	-0.03	-2.64			-0.12	-3.11

Notes

Grab Samples

# Low-Flow Test Report:

Test Date / Time: 4/12/2021 1:25:03 PM

Project: Plant Branch 166625421

Operator Name: Jude Waguespack

<b>Location Name: PZ-571</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 70.2 ft</b> <b>Total Depth: 80.2 ft</b> <b>Initial Depth to Water: 34.85 ft</b>	<b>Pump Type: Sample Pro Bladder</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 75 ft</b> <b>Estimated Total Volume Pumped: 13500 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 300 ml/min</b> <b>Final Draw Down: 0.49 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750176</b>
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## Test Notes:

EB-1 collected

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/12/2021 1:25 PM	00:00	5.76 pH	19.80 °C	0.93 mS/cm	2.82 mg/L	158.8 NTU	-52.4 mV	34.85 ft	300.00 ml/min
4/12/2021 1:30 PM	05:00	5.37 pH	21.32 °C	0.90 mS/cm	0.41 mg/L	36.5 NTU	-72.1 mV	35.34 ft	300.00 ml/min
4/12/2021 1:35 PM	10:00	5.38 pH	21.28 °C	0.89 mS/cm	0.26 mg/L	22.6 NTU	-86.7 mV	35.34 ft	300.00 ml/min
4/12/2021 1:40 PM	15:00	5.41 pH	21.36 °C	0.89 mS/cm	0.20 mg/L	20.0 NTU	-95.6 mV	35.34 ft	300.00 ml/min
4/12/2021 1:45 PM	20:00	5.40 pH	21.27 °C	0.89 mS/cm	0.19 mg/L	17.2 NTU	-99.9 mV	35.34 ft	300.00 ml/min
4/12/2021 1:50 PM	25:00	5.40 pH	21.06 °C	0.89 mS/cm	0.16 mg/L	15.8 NTU	-104.0 mV	35.34 ft	300.00 ml/min
4/12/2021 1:55 PM	30:00	5.39 pH	21.08 °C	0.89 mS/cm	0.16 mg/L	14.4 NTU	-107.2 mV	35.34 ft	300.00 ml/min
4/12/2021 2:00 PM	35:00	5.39 pH	21.17 °C	0.89 mS/cm	0.15 mg/L	12.7 NTU	-108.4 mV	35.34 ft	300.00 ml/min
4/12/2021 2:05 PM	40:00	5.39 pH	20.97 °C	0.89 mS/cm	0.14 mg/L	10.1 NTU	-110.4 mV	35.34 ft	300.00 ml/min
4/12/2021 2:10 PM	45:00	5.38 pH	20.84 °C	0.89 mS/cm	0.15 mg/L	8.72 NTU	-112.1 mV	35.34 ft	300.00 ml/min

## Samples

Sample ID:	Description:
PZ-571	

# Low-Flow Test Report:

Test Date / Time: 4/12/2021 2:20:52 PM

Project: Plant Branch 166625421

Operator Name: C. Tidwell

<b>Location Name: PZ-58I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 57.8 ft</b> <b>Total Depth: 67.8 ft</b> <b>Initial Depth to Water: 37.28 ft</b>	<b>Pump Type: QED bladder</b> <b>Tubing Type: Poly</b> <b>Pump Intake From TOC: 59 ft</b> <b>Estimated Total Volume Pumped: 5250 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 150 ml/min</b> <b>Final Draw Down: 0.17 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750148</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/12/2021 2:20 PM	00:00	5.38 pH	34.28 °C	0.13 mS/cm	3.55 mg/L	155.7 NTU	180.5 mV	37.30 ft	150.00 ml/min
4/12/2021 2:25 PM	05:00	4.83 pH	30.65 °C	1.33 mS/cm	4.89 mg/L	101.5 NTU	199.2 mV	37.33 ft	150.00 ml/min
4/12/2021 2:30 PM	10:00	4.87 pH	30.85 °C	0.05 mS/cm	7.05 mg/L	86.6 NTU	212.1 mV	37.35 ft	150.00 ml/min
4/12/2021 2:35 PM	15:00	4.88 pH	31.22 °C	0.95 mS/cm	7.49 mg/L	80.9 NTU	203.1 mV	37.38 ft	150.00 ml/min
4/12/2021 2:40 PM	20:00	4.94 pH	28.87 °C	1.34 mS/cm	8.50 mg/L	73.7 NTU	208.2 mV	37.42 ft	150.00 ml/min
4/12/2021 2:45 PM	25:00	5.08 pH	28.47 °C	1.32 mS/cm	8.97 mg/L	32.5 NTU	205.5 mV	37.45 ft	150.00 ml/min
4/12/2021 2:50 PM	30:00	5.12 pH	28.54 °C	1.31 mS/cm	9.70 mg/L	16.6 NTU	202.0 mV	37.45 ft	150.00 ml/min
4/12/2021 2:55 PM	35:00	5.15 pH	28.92 °C	1.31 mS/cm	9.72 mg/L	4.29 NTU	199.2 mV	37.45 ft	150.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

Test Date / Time: 4/12/2021 11:37:32 AM

Project: Plant Branch 166625421

Operator Name: C. Tidwell

<b>Location Name: PZ-60I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: Pvc</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 54.05 ft</b> <b>Total Depth: 64.05 ft</b> <b>Initial Depth to Water: 37.23 ft</b>	<b>Pump Type: QED bladder</b> <b>Tubing Type: Poly</b> <b>Pump Intake From TOC: 59 ft</b> <b>Estimated Total Volume Pumped: 10516.667 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 150 ml/min</b> <b>Final Draw Down: 0.1 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750148</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/12/2021 11:37 AM	00:00	5.38 pH	26.04 °C	3.48 mS/cm	6.19 mg/L	1000 NTU	144.7 mV	37.25 ft	200.00 ml/min
4/12/2021 11:42 AM	05:00	5.17 pH	23.15 °C	3.48 mS/cm	6.98 mg/L	1000 NTU	169.2 mV	37.28 ft	200.00 ml/min
4/12/2021 11:47 AM	10:00	5.05 pH	22.93 °C	3.47 mS/cm	5.32 mg/L	1000 NTU	180.8 mV	37.31 ft	200.00 ml/min
4/12/2021 11:52 AM	15:00	5.09 pH	22.72 °C	3.47 mS/cm	5.59 mg/L	363.2 NTU	186.9 mV	37.33 ft	200.00 ml/min
4/12/2021 11:57 AM	20:00	5.01 pH	22.67 °C	3.41 mS/cm	4.52 mg/L	295.6 NTU	194.2 mV	37.33 ft	200.00 ml/min
4/12/2021 12:02 PM	25:00	4.97 pH	22.92 °C	3.39 mS/cm	3.47 mg/L	151.8 NTU	199.1 mV	37.33 ft	200.00 ml/min
4/12/2021 12:07 PM	30:00	5.00 pH	22.66 °C	3.38 mS/cm	3.79 mg/L	46.5 NTU	202.5 mV	37.33 ft	200.00 ml/min
4/12/2021 12:12 PM	35:00	4.96 pH	22.71 °C	3.32 mS/cm	3.32 mg/L	15.6 NTU	206.4 mV	37.33 ft	200.00 ml/min
4/12/2021 12:17 PM	40:00	5.01 pH	22.71 °C	3.32 mS/cm	3.86 mg/L	7.83 NTU	208.9 mV	37.33 ft	200.00 ml/min
4/12/2021 12:20 PM	42:35	5.04 pH	22.85 °C	3.32 mS/cm	4.23 mg/L	5.23 NTU	210.3 mV	37.33 ft	150.00 ml/min
4/12/2021 12:25 PM	47:35	5.06 pH	22.94 °C	3.29 mS/cm	4.35 mg/L	5.05 NTU	212.5 mV	37.33 ft	150.00 ml/min
4/12/2021 12:30 PM	52:35	5.05 pH	23.01 °C	3.27 mS/cm	4.06 mg/L	4.11 NTU	213.7 mV	37.33 ft	150.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

Test Date / Time: 4/12/2021 9:41:12 AM

Project: Plant Branch 166625421

Operator Name: C. Tidwell

<b>Location Name: PZ-611</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 67.95 ft</b> <b>Total Depth: 77.95 ft</b> <b>Initial Depth to Water: 47.57 ft</b>	<b>Pump Type: QED bladder</b> <b>Tubing Type: Poly</b> <b>Pump Intake From TOC: 73 ft</b> <b>Estimated Total Volume Pumped: 8000 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 200 ml/min Final Draw Down: 0.32 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750148</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/12/2021 9:41 AM	00:00	7.99 pH	21.65 °C	0.06 mS/cm	8.90 mg/L	115.6 NTU	219.6 mV	47.70 ft	200.00 ml/min
4/12/2021 9:46 AM	05:00	5.70 pH	20.63 °C	2.91 mS/cm	2.13 mg/L	94.3 NTU	101.0 mV	47.75 ft	200.00 ml/min
4/12/2021 9:51 AM	10:00	5.51 pH	19.65 °C	2.92 mS/cm	0.79 mg/L	94.7 NTU	-27.2 mV	47.76 ft	200.00 ml/min
4/12/2021 9:56 AM	15:00	5.46 pH	19.78 °C	2.95 mS/cm	0.53 mg/L	92.4 NTU	-34.4 mV	47.76 ft	200.00 ml/min
4/12/2021 10:01 AM	20:00	5.44 pH	19.92 °C	2.97 mS/cm	0.47 mg/L	69.3 NTU	-57.1 mV	47.81 ft	200.00 ml/min
4/12/2021 10:06 AM	25:00	5.43 pH	20.06 °C	2.97 mS/cm	0.43 mg/L	55.6 NTU	-81.4 mV	47.85 ft	200.00 ml/min
4/12/2021 10:11 AM	30:00	5.42 pH	20.25 °C	2.98 mS/cm	0.44 mg/L	21.3 NTU	-100.9 mV	47.87 ft	200.00 ml/min
4/12/2021 10:16 AM	35:00	5.41 pH	20.43 °C	2.98 mS/cm	0.44 mg/L	15.5 NTU	-117.6 mV	47.88 ft	200.00 ml/min
4/12/2021 10:21 AM	40:00	5.40 pH	20.56 °C	2.98 mS/cm	0.42 mg/L	4.88 NTU	-130.5 mV	47.89 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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Product Name: Low-Flow System

Date: 2021-05-19 14:30:10

Project Information:

Operator Name Jude Waguespack  
Company Name Golder  
Project Name 166625421  
Site Name Plant Branch  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 553835  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type SamplePro Bladder  
Tubing Type polyethylene  
Tubing Diameter .017 in  
Tubing Length 73 ft

Pump placement from TOC 73 ft

Well Information:

Well ID PZ-61I  
Well diameter 2 in  
Well Total Depth 77.95 ft  
Screen Length 10 ft  
Depth to Water 47.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.2182583 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 6 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:57:22	300.03	20.22	5.38	2502.74	15.50	48.10	0.95	76.76
Last 5	14:02:22	600.02	19.41	5.37	2525.20	8.04	48.20	0.66	70.38
Last 5	14:07:22	900.02	19.19	5.37	2525.54	5.62	48.20	0.54	65.75
Last 5	14:12:22	1200.00	19.33	5.36	2535.18	4.31	48.20	0.50	61.84
Last 5									
Variance 0			-0.80	-0.01	22.46			-0.29	-6.39
Variance 1			-0.22	0.00	0.34			-0.12	-4.62
Variance 2			0.14	-0.00	9.63			-0.04	-3.91

Notes

Grab Samples

Project Plant Branch  
 Field Staff A. McClure/T. Martinez

August App IV Event

Instrument Calibration

Date: 8/18 Date: 8/19 Date: 8/20 Date:  
 Time: 0805 Time: 0750 Time: 0750 Time:

Parameter	Units	Standard	SmarTROLL SN <u>612531</u>	SmarTROLL SN <u>612531</u>	SmarTROLL SN <u>612531</u>	SmarTROLL SN _____
DO	% saturation	100	93.6	92.7	92.8	
Conductivity	us/cm	4490	4483	4469	4460	
pH	S.U.	4.00	4.17	4.16	4.19	
pH	S.U.	7.00	7.07	6.98	7.01	
pH	S.U.	10.00	9.87	9.57	9.54	
ORP	mV	228.00	218.40	219.80	219.80	

Turbidity	Units	Standard	LaMotte SN <u>2283-2612</u>	LaMotte SN <u>2283-2612</u>	LaMotte SN <u>2283-2612</u>	LaMotte SN _____
	NTU	0.0	0.0	-0.0	0.0	
	NTU	1.0	0.97	1.62	0.98	
	NTU	10.0	10.02	10.01	10.00	

Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_  
 Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_

Parameter	Units	Standard	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated



Project Plant Branch  
 Field Staff A. McClure/ T. Martinez

August App IV Event

Instrument Calibration

Date: 8-18-20 Date: 8-19-20 Date: 8-20-20 Date:  
 Time: 0800 Time: 0815 Time: 0815 Time:

Parameter	Units	Standard	SmarTROLL SN 613229	SmarTROLL SN 613229	SmarTROLL SN 613229	SmarTROLL SN _____
DO	% saturation	100	91.1	91.0	91.5	
Conductivity	us/cm	4490	4823	4409	4490.32	
pH	S.U.	4.00	3.92	3.94	3.92	
pH	S.U.	7.00	6.89	6.90	6.90	
pH	S.U.	10.00	9.85	9.79	9.79	
ORP	mV	228.00	220.7	221.1	218.7	

Turbidity	Units	Standard	LaMotte SN 1510-4111	LaMotte SN 1510-4111	LaMotte SN 1510-4111	LaMotte SN _____
	NTU	0.0	0.00	0.06	0.00	
	NTU	1.0	1.09	1.22	0.92	
	NTU	10.0	9.17	9.49	10.33	

Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_  
 Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_

Parameter	Units	Standard	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

Project Plant Branch  
 Field Staff A. McClure/ T. Martinez

September App III/IV Event

Instrument Calibration

Date: 9-15-2020 Date: 9-16-20 Date: 9-17 Date:  
 Time: 0748 Time: 0700 Time: 0700 Time:

Parameter	Units	Standard	SmarTROLL SN 728550	SmarTROLL SN 728550	SmarTROLL SN 728550	SmarTROLL SN _____
DO	% saturation	100	101	98.44	98.54	
Conductivity	us/cm	4490	4217	4421	4450	
pH	S.U.	4.00	3.99	3.99	4.05	
pH	S.U.	7.00	7.37	7.00	6.98	
pH	S.U.	10.00	10.67	9.99	10.02	
ORP	mV	228.00	263.0	234.5	227.4	

Turbidity	Units	Standard	LaMotte SN 7007-1416	LaMotte SN 7007-1416	LaMotte SN 7007-1416	LaMotte SN _____
	NTU	0.0	0.01	0.00	0.00	
	NTU	1.0	0.90	1.03	0.98	
	NTU	10.0	10.86	9.95	10.21	

Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_  
 Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_

Parameter	Units	Standard	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential;  
 mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated



Project Plant Branch  
 Field Staff A. McClure / T. Martinez

September App III/IV Event

**Instrument Calibration**

Date: 9/15/20 Date: 9/16/20 Date: 9/17/20 Date:  
 Time: 0755 Time: 0755 Time: 0755 Time:

Parameter	Units	Standard	SmarTROLL SN <u>465016</u>	SmarTROLL SN <u>465016</u>	SmarTROLL SN <u>465016</u>	SmarTROLL SN _____
DO	% saturation	100	96.3	94.3	96.2	
Conductivity	us/cm	4490	4548	4483	4482	
pH	S.U.	4.00	4.04	4.09	4.12	
pH	S.U.	7.00	7.00	6.98	6.98	
pH	S.U.	10.00	9.95	9.87	9.86	
ORP	mV	228.00	219.3	224.0	224.0	

Turbidity	Units	Standard	LaMotte SN <u>2279-2612</u>	LaMotte SN <u>2279-2612</u>	LaMotte SN <u>2279-2612</u>	LaMotte SN _____
	NTU	0.0	0.00	0.00	0.00	
	NTU	1.0	1.07	1.04	1.12	
	NTU	10.0	9.90	9.86	10.03	

Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_  
 Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_ Time: \_\_\_\_\_

Parameter	Units	Standard	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential;  
 mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

Project Plant Branch  
 Field Staff D.Thomas

**Instrument Calibration**

Date: 10-13-20 Time: 1200

Parameter	Units	Standard	SmarTROLL SN 643819 iPad # 79	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	92.7			
Conductivity	us/cm	4490	4485			
pH	S.U.	4.00	4.00 4.13			
pH	S.U.	7.00	7.02			
pH	S.U.	10.00	9.89			
ORP	mV	228.00	228.00			

	Units	Standard	LaMotte SN 2953-0413	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
Turbidity	NTU	0.0	0.0			
	NTU	1.0	1.0			
	NTU	10.0	10.0			

Date: 10-14-20 Time: 0810

Parameter	Units	Standard	SmarTROLL SN 643819 iPad # 79	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	91.3			
Conductivity	us/cm	4490	4255			
pH	S.U.	4.00	4.20			
pH	S.U.	7.00	7.04			
pH	S.U.	10.00	9.86			
ORP	mV	228.00	232.2			

	Units	Standard	LaMotte SN 2953-0413	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
Turbidity	NTU	0.0	0.0			
	NTU	1.0	1.0			
	NTU	10.0	10.0			

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

2.30



Project Plant Branch  
 Field Staff D.Thomas

**Instrument Calibration**

Date: <sup>D1</sup> ~~0830-1015-20~~ Time: <sup>DT</sup> ~~1015-20~~ 0830

Parameter	Units	Standard	SmarTROLL SN <u>643819</u> iPad # <u>79</u>	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	<u>92.30</u>			
Conductivity	us/cm	4490	<u>4288</u>			
pH	S.U.	4.00	<u>4.16</u>			
pH	S.U.	7.00	<u>7.02</u>			
pH	S.U.	10.00	<u>9.90</u>			
ORP	mV	228.00	<u>224.4</u>			

Turbidity	Units	Standard	LaMotte SN <u>2953-043</u>	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0	<u>0.0</u>			
	NTU	1.0	<u>1.0</u>			
	NTU	10.0	<u>10.0</u>			

Date:

Time:

Parameter	Units	Standard	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated



# Instrument Calibration Log



Personnel: A. McClure

Project Name: Plant Branch

Project Number: 166625418.021A

Device Names: SmarTroll / Lamotte2020we

Serial Numbers: 541714 ; 1859-0912

Date: <u>3/1/21</u>	Time: <u>1505</u>	Location: <u>Office</u> <input type="checkbox"/> <u>Field</u> <input checked="" type="checkbox"/> <u>Other:</u> <input type="checkbox"/>				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	<u>19340057</u>	<u>08/21</u>	7.0	<u>7.11</u>	<u>7.0</u>	<u>—</u>
pH 4.0 (S.U.)	<u>20010025</u>	<u>08/21</u>	4.0	<u>4.27</u>	<u>4</u>	<u>—</u>
pH 10.0 (S.U.)	<u>19320102</u>	<u>08/21</u>	10.0	<u>9.94</u>	<u>10</u>	<u>—</u>
Sp. Conductance (µS/cm)	<u>20010025</u>	<u>08/21</u>	4490 µS/cm	<u>4465</u>	<u>4490</u>	
ORP (mV)	<u>19460167</u>	<u>08/21</u>	228 mV	<u>228</u>	<u>228</u>	
Dissolved Oxygen	<u>—</u>	<u>—</u>	100%	<u>100.6</u>	<u>100</u>	
0.00 NTU	<u>—</u>	<u>—</u>	0	<u>0.0</u>	<u>0.0</u>	
1.0 NTU	<u>—</u>	<u>—</u>	1	<u>0.99</u>	<u>1.0</u>	
10.0 NTU	<u>—</u>	<u>—</u>	10	<u>10.0</u>	<u>10.0</u>	

Date: <u>3/2/21</u>	Time: <u>0730</u>	Location: <u>Office</u> <input type="checkbox"/> <u>Field</u> <input checked="" type="checkbox"/> <u>Other:</u> <input type="checkbox"/>				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	<u>Refer to</u> <u>3/1/21</u>		7.0	<u>7.10</u>	<u>7.0</u>	<u>7.09</u>
pH 4.0 (S.U.)			4.0	<u>4.36</u>	<u>4.0</u>	<u>—</u>
pH 10.0 (S.U.)			10.0	<u>9.97</u>	<u>10.0</u>	<u>—</u>
Sp. Conductance (µS/cm)			4490 µS/cm	<u>4403</u>	<u>4490</u>	
ORP (mV)			228 mV	<u>233.9</u>	<u>228</u>	
Dissolved Oxygen			100%	<u>99.9</u>	<u>100</u>	
0.00 NTU			0	<u>0.0</u>	<u>0.0</u>	
1.0 NTU	1	<u>0.92</u>	<u>1.0</u>			
10.0 NTU	10	<u>10.03</u>	<u>10.0</u>			

Date: <u>3/3/21</u>	Time: <u>0720</u>	Location: <u>Office</u> <input type="checkbox"/> <u>Field</u> <input checked="" type="checkbox"/> <u>Other:</u> <input type="checkbox"/>				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	<u>Refer to</u> <u>3/1/21</u>		7.0	<u>7.12</u>	<u>7.0</u>	<u>7.10</u>
pH 4.0 (S.U.)			4.0	<u>4.44</u>	<u>4.0</u>	<u>—</u>
pH 10.0 (S.U.)			10.0	<u>10.98</u>	<u>10.0</u>	<u>—</u>
Sp. Conductance (µS/cm)			4490 µS/cm	<u>4417</u>	<u>4490</u>	
ORP (mV)			228 mV	<u>240.7</u>	<u>228</u>	
Dissolved Oxygen			100%	<u>99.5</u>	<u>100</u>	
0.00 NTU			0	<u>0.0</u>	<u>0.0</u>	
1.0 NTU	1	<u>0.99</u>	<u>1.0</u>			
10.0 NTU	10	<u>10.0</u>	<u>10.0</u>			

Signature: A. McClure

# Instrument Calibration Log



Personnel: Andrea McCreure

Project Name: \_\_\_\_\_ Plant Branch \_\_\_\_\_

Project Number: 166625418.021A

Device Names: SmarTroll / Lamotte2020we

Serial Numbers: 541714 ; 1859-0412

Date: <u>0715</u>	Time: <u>3/4/21</u>	Location: _____ Office _____ <input checked="" type="checkbox"/> Field _____ Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	} Refer to 3/1/21		7.0	7.10	7.0	7.08
pH 4.0 (S.U.)			4.0	4.47	4.0	—
pH 10.0 (S.U.)			10.0	9.80	10.0	—
Sp. Conductance (µS/cm)			4490 µS/cm	4427	4490	
ORP (mV)			228 mV	237.6	228	
Dissolved Oxygen			100%	99.2	100	
0.00 NTU			0	0.0	0.0	
1.0 NTU			1	0.91	1.0	
10.0 NTU	10	9.97	10.0			

Date: <u>3/5/21</u>	Time: <u>0715</u>	Location: _____ Office _____ <input checked="" type="checkbox"/> Field _____ Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	} Refer to 3/1/21		7.0	7.07	7.0	—
pH 4.0 (S.U.)			4.0	4.44	4.0	—
pH 10.0 (S.U.)			10.0	9.82	10.0	—
Sp. Conductance (µS/cm)			4490 µS/cm	4408	4490	
ORP (mV)			228 mV	233.6	228	
Dissolved Oxygen			100%	99.4	100	
0.00 NTU			0	0.0	0.0	
1.0 NTU			1	0.99	1.0	
10.0 NTU	10	9.95	10.0			

Date: _____	Time: _____	Location: _____ Office _____ <input type="checkbox"/> Field _____ Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)			7.0			
pH 4.0 (S.U.)			4.0			
pH 10.0 (S.U.)			10.0			
Sp. Conductance (µS/cm)			4490 µS/cm			
ORP (mV)			228 mV			
Dissolved Oxygen			100%			
0.00 NTU			0			
1.0 NTU			1			
10.0 NTU			10			

Signature: Andrea McCreure

# Instrument Calibration Log



Personnel: T-Martinez

Project Name: \_\_\_\_\_ Plant Branch \_\_\_\_\_

Project Number: 166625421

Device Names: \_\_\_\_\_ SmarTroll / Lamotte2020we

Serial Numbers: 642531 / 2283-2612

Date: <u>3-4-21</u>	Time: <u>0715</u>	Location: _____ Office _____ <input checked="" type="checkbox"/> Field _____ Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	<u>19340057</u>	<u>8/21</u>	7.0	<u>6.99</u>	<u>7.04</u>	<u>7.21</u>
pH 4.0 (S.U.)	<u>20010025</u>	<u>8/21</u>	4.0	<u>4.42</u>	<u>4.00</u>	-
pH 10.0 (S.U.)	<u>19320162</u>	<u>8/21</u>	10.0	<u>9.68</u>	<u>10.04</u>	-
Sp. Conductance (µS/cm)	<u>20010025</u>	<u>8/21</u>	4490 µS/cm	<u>4394</u>	<u>4400</u>	
ORP (mV)	<u>19460167</u>	<u>8/27</u>	228 mV	<u>241.1</u>	<u>228</u>	
Dissolved Oxygen	-	-	100%	<u>90.2</u>	<u>100</u>	
0.00 NTU	-	-	0	<u>0.13</u>	<u>-0.04</u>	
1.0 NTU	-	-	1	<u>0.94</u>	<u>1.00</u>	
10.0 NTU	-	-	10	<u>9.79</u>	<u>10.00</u>	

Date: _____	Time: _____	Location: _____ Office _____ <input type="checkbox"/> Field _____ Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)			7.0			
pH 4.0 (S.U.)			4.0			
pH 10.0 (S.U.)			10.0			
Sp. Conductance (µS/cm)			4490 µS/cm			
ORP (mV)			228 mV			
Dissolved Oxygen			100%			
0.00 NTU			0			
1.0 NTU			1			
10.0 NTU			10			

Date: _____	Time: _____	Location: _____ Office _____ <input type="checkbox"/> Field _____ Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)			7.0			
pH 4.0 (S.U.)			4.0			
pH 10.0 (S.U.)			10.0			
Sp. Conductance (µS/cm)			4490 µS/cm			
ORP (mV)			228 mV			
Dissolved Oxygen			100%			
0.00 NTU			0			
1.0 NTU			1			
10.0 NTU			10			

Signature:



# Instrument Calibration Log



Personnel: T. Martinez

Project Name: Plant Branch

Project Number: 166625421

Device Names: SmarTroll / Lamotte2020we

Serial Numbers: 642531 / 2283-2612

Date: <u>3-1-21</u>	Time: <u>1459</u>	Location: <input type="checkbox"/> Office <input checked="" type="checkbox"/> Field <input type="checkbox"/> Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	<u>19340057</u>	<u>8/21</u>	7.0	<u>6.94</u>	<u>7.02</u>	<u>7.16</u>
pH 4.0 (S.U.)	<u>20010025</u>	<u>8/21</u>	4.0	<u>4.22</u>	<u>4.00</u>	-
pH 10.0 (S.U.)	<u>19320102</u>	<u>8/21</u>	10.0	<u>9.76</u>	<u>10.04</u>	-
Sp. Conductance (µS/cm)	<u>20010025</u>	<u>8/21</u>	4490 µS/cm	<u>4664</u>	<u>4490</u>	
ORP (mV)	<u>19460167</u>	<u>8/21</u>	228 mV	<u>231.6</u>	<u>228</u>	
Dissolved Oxygen	-	-	100%	<u>90.2</u>	<u>100</u>	
0.00 NTU	-	-	0	<u>-0.00</u>	<u>0.00</u>	
1.0 NTU	-	-	1	<u>1.07</u>	<u>1.00</u>	
10.0 NTU	-	-	10	<u>9.40</u>	<u>10.00</u>	

Date: <u>3-2-21</u>	Time: <u>0727</u>	Location: <input type="checkbox"/> Office <input checked="" type="checkbox"/> Field <input type="checkbox"/> Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)	<u>see</u>		7.0	<u>7.00</u>	<u>7.02</u>	<u>7.14</u>
pH 4.0 (S.U.)	<u>3-1-21</u>		4.0	<u>4.37</u>	<u>4.00</u>	-
pH 10.0 (S.U.)			10.0	<u>9.73</u>	<u>10.04</u>	-
Sp. Conductance (µS/cm)			4490 µS/cm	<u>4346</u>	<u>4490</u>	
ORP (mV)			228 mV	<u>241.1</u>	<u>228</u>	
Dissolved Oxygen			100%	<u>90.2</u>	<u>100</u>	
0.00 NTU			0	<u>0.00</u>	<u>0.00</u>	
1.0 NTU			1	<u>1.13</u>	<u>1.00</u>	
10.0 NTU			10	<u>9.41</u>	<u>10.00</u>	

Date: <u>3-3-21</u>	Time: <u>715</u>	Location: <input type="checkbox"/> Office <input checked="" type="checkbox"/> Field <input type="checkbox"/> Other: _____				
Standard	Lot Number	Expiration Date	Concentration	Initial	Final	Mid Day pH Check
pH 7.0 (S.U.)			7.0	<u>6.99</u>	<u>7.04</u>	<u>7.19</u>
pH 4.0 (S.U.)	<u>see</u>		4.0	<u>4.41</u>	<u>4.00</u>	-
pH 10.0 (S.U.)	<u>3-1-21</u>		10.0	<u>9.66</u>	<u>10.04</u>	-
Sp. Conductance (µS/cm)			4490 µS/cm	<u>4390</u>	<u>4490</u>	
ORP (mV)			228 mV	<u>246.7</u>	<u>228</u>	
Dissolved Oxygen			100%	<u>90.7</u>	<u>100</u>	
0.00 NTU			0	<u>-0.02</u>	<u>0.00</u>	
1.0 NTU			1	<u>1.07</u>	<u>1.00</u>	
10.0 NTU			10	<u>9.97</u>	<u>10.00</u>	

Signature:

Project Pant Branch  
 Field Staff JUDE WAGUEPACK

**Instrument Calibration**

Date: 05/19/21 Time: 08:50

Parameter	Units	Standard	SmarTROLL SN <u>553835</u> iPad # <u>79</u>	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	<u>99.7</u>			
Conductivity	us/cm	4490	<u>4520</u>			
pH	S.U.	4.00	<u>4.14</u>			
pH	S.U.	7.00	<u>7.02</u>			
pH	S.U.	10.00	<u>9.86</u>			
ORP	mV	228.00	<u>226.0</u>			

Turbidity	Units	Standard	LaMotte SN <u>2915-0913</u>	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0	<u>0.09</u>			
	NTU	1.0	<u>1.19</u>			
	NTU	10.0	<u>8.83</u>			

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Parameter	Units	Standard	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

**APPENDIX A**

# CERTIFIED WELL SURVEY REPORT



1469 Highway 20 West • McDonough, GA 30253  
phone 770-707-0777 fax 770-707-0755  
WWW.METRO-ENGINEERING.COM

## SURVEYOR'S REPORT

### SCOPE OF WORK:

Field survey of existing monitoring wells at Georgia Power Company, Plant Branch in Milledgeville, GA.

Horizontal and vertical datum were derived from RTK GPS observations with corrections from the eGPS network and conventional surveying equipment. Horizontal datum is Georgia State Plane, West Zone, NAD83(2011) and vertical datum is NAVD88.

### EQUIPMENT USED TO ESTABLISH THE MONITORING WELL LOCATIONS:

Trimble R8 Dual Frequency GPS Receiver  
Leica TS16 Total Station  
Leica DNA10 Digital Level

### CERTIFICATION:

I hereby certify that the center of well casing (PVC) has a horizontal accuracy of 0.5+/- feet or better using a Trimble R8 Dual Frequency RTK (survey-grade) global positioning system receiver referencing the Georgia State Plane, west zone, NAD83(2011) coordinate system in US survey feet. The top of well casing (PVC) elevation data was determined in feet above mean sea level based on the NAVD88 vertical datum. Vertical data was confirmed to be accurate within 0.01 foot through establishment of a closed level check loop with a Leica DNA10 digital level having a published accuracy of 0.9mm per dual-traverse kilometer.

  
James R. Green R.L.S. No. 2543

Date: 11/4/20



Plant Branch  
Monitoring Well Locations  
November 3, 2020

Well ID	LATITUDE	LONGITUDE	NAIL NORTH-ING	NAIL EASTING	NAIL ELEVATION	PVC NORTH-ING	PVC EASTING	PVC ELEVATION	ELEV AT BASE CONC/GRC
IWA-E-1	N33.196117	W83.327753	1164319.1	2553139.5	436.39	1164318.5	2553200.4	436.49	436.4
IWA-D-2	N33.192791	W83.311136	1162422.3	2556238.6	407.12	1162422.3	2553297.5	409.93	407.1
IWA-D-1	N33.191073	W83.310119	1161301.4	2556814.9	403.61	1161201.5	2558614.9	406.44	403.6
IWA-C-2	N33.190235	W83.305639	1161524.2	2559917.4	395.11	1161523.0	2559917.3	397.64	395.1
IWA-C-1	N33.190367	W83.306256	1161547.4	2559187.0	395.35	1161548.3	2559186.6	395.66	395.4
IWA-B-2	N33.193317	W83.304804	1162629.5	2560234.0	378.60	1162630.0	2560233.2	381.32	378.6
PZ-50D	N33.190410	W83.297817	1161589.4	2562380.3	378.32	1161588.9	2562381.2	380.58	378.3
PZ-51D	N33.190548	W83.297543	1161640.3	2562433.0	378.12	1161638.8	2562434.0	380.78	378.1
IWA-B-1	N33.199055	W83.300739	1161099.7	2561472.0	378.29	1161100.8	2561471.6	378.91	378.3







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## SURVEYOR'S REPORT

### SCOPE OF WORK:

Field survey of existing monitoring wells at Georgia Power Company, Plant Branch in Milledgeville, GA.

Horizontal and vertical datum were derived from RTK GPS observations with corrections from the eGPS network and conventional surveying equipment. Horizontal datum is Georgia State Plane, West Zone, NAD83(2011) and vertical datum is NAVD88.

### EQUIPMENT USED TO ESTABLISH THE MONITORING WELL LOCATIONS:

Trimble R8 Dual Frequency GPS Receiver  
Leica TS16 Total Station  
Leica DNA10 Digital Level

### CERTIFICATION:

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James R. Green R.L.S. No. 2543



Date: 4/21/2021

Plant Branch  
Monitoring Well Locations  
April 12, 2021

Well ID	LATITUDE	LONGITUDE	NAIL NORTH	NAIL EAST	NAIL ELEV	PVC NORTHING	PVC EASTING	TOP PVC ELEVATION	ELEV AT BASE CONC/GRD
PZ-60I	N33.190407	W83.297979	1161588.37	2562329.15	379.43	1161588.0	2562330.6	382.61	379.5
PZ-58I	N33.190383	W83.298087	1161579.97	2562295.77	379.30	1161579.1	2562297.9	382.27	379.3
PZ-58I/CCPAD	N33.190399	W83.298134	1161584.69	2562283.39	379.76	N.A.	N.A.	N.A.	N.A.
PZ-59I	N33.190591	W83.297981	1161655.77	2562327.66	379.87	1161654.9	2562329.8	383.49	379.9
PZ-59I/CC PAD	N33.190610	W83.298029	1161661.89	2562314.80	379.63	N.A.	N.A.	N.A.	N.A.
PZ-57I	N33.190395	W83.298504	1161581.71	2562171.02	379.38	1161582.2	2562170.2	382.50	379.4
PZ-61I	N33.190498	W83.297655	1161621.67	2562430.28	377.77	1161621.9	2562429.7	380.64	377.7
PZ-61I/CC PAD	N33.190449	W83.297545	1161604.38	2562463.39	366.54	N.A.	N.A.	N.A.	N.A.

**APPENDIX A**

# WELL INSPECTION LOGS



**WELL INSPECTION FORM**  
**PLANT BRANCH**

Well-ID	POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)				
		a. Is the well visible and accessible? b. Is the well properly identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debris and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well properly vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)				
PZ-49		✓	✓	✓	✓	NA				
<del>IW-C-1</del> IW-B-2		✓	✓	Slightly overgrown	✓	NA				
IW-B-1		✓	✓	✓	✓	NA				
IW-D-1		✓	✓	✓	✓	NA				
IW-E-1		✓	✓	✓	✓	NA				
<del>IW-C-1</del> IW-C-2	Access difficult - path overgrown Access difficult - driveway	✓	✓	✓	✓	NA				
IW-D-2		✓	✓	✓	✓	NA				
DW-01		Did not check during this event	Did not check during this event	Did not check during this event	Did not check during this event	NA				
DW-02		Did not check during this event	Did not check during this event	Did not check during this event	Did not check during this event	NA				
PB-15	NOTE: All of the PB wells are just the 2" PVC. No concrete pads, no well casings, no locks.					NA				
PB-2D										NA
PB-45										NA
PB-4D										NA
PB-75										NA
PB-8D										NA
PB-85										NA
PB-10D										NA
PB-10S					NA					
PB-13D					NA					
PB-13S					NA					

NOTES:  
1. Provide pictures of any deficiencies.

# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Is the well visible and accessible? b. Is the well property identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debris and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well property vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
	↑ or ↓					
BRGWA-25	↑E	✓	✓	✓	✓	✓
BRGWA-21	↑E	✓	✓	✓	✓	✓
BRGWA-55	↑E	✓	✓	✓	✓	✓
BRGWA-51	↑E	✓	✓	✓	✓	✓
BRGWA-65	↑E	✓	✓	✓	✓	✓
BRGWA-125	↑BCD	✓	✓	✓	✓	✓
BRGWA-121	↑BCD	✓	✓	✓	✓	✓
BRGWA-235	↑BCD	✓	✓	✓	✓	✓
BRGWC-251	↓BCD	✓	✓	✓	✓	✓
BRGWC-271	↓BCD	✓	✓	✓	✓	✓
BRGWC-291	↓BCD	✓	✓	✓	✓	✓
BRGWC-301	↓BCD	✓	✓	✓	✓	✓
BRGWC-325	↓BCD	✓	✓	✓	✓	✓
BRGWC-335	↓E	✓	✓	✓	✓	✓
BRGWC-345	↓E	✓	✓	✓	✓	✓
BRGWC-355	↓E	✓	✓	✓	✓	✓
BRGWC-175	↓E	✓	✓	✓	✓	✓ no pump dedicated
BRGWC-365	↓E	✓	✓	✓	✓	✓ no pump dedicated
BRGWC-375	↓E	✓	✓	✓	✓	✓
BRGWC-385	↓E	✓	✓	✓	✓	✓
BRGWC-45	↓BCD	✓	✓	✓	✓	✓ no pump dedicated
BRGWC-47	↓BCD	✓	✓	Small CRACK in Pad	✓	✓
BRGWC-50	↓BCD	✓	✓	✓	✓	✓
PZ-515	↓E	✓	✓	✓	Depth=47.98 (5000 1.3kd)	✓



# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION  ↑ or ↓	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Is the well visible and accessible? b. Is the well properly identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debris and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well properly vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
PZ-51I	↓ E	✓	✓	✓	depth = 68.00 (not 65.00)	✓ No pump dedicated
BRGWC-52I	↓ BCD	✓	✓	✓	✓	✓
PZ-52D	↓ E	✓	✓	✓	✓	✓
PZ-53D	↓ E	✓	✓	✓	✓	✓
PZ-54	↓ E	✓	✓	✓	✓	✓
PZ-15		✓	✓	✓	✓	✓
PZ-1I		✓	✓	✓	✓	✓
PZ-1D		✓	✓	✓	✓	✓
PZ-35		✓	✓	✓	✓	✓
PZ-3I		✓	✓	✓	✓	✓
PZ-3D		✓	✓	✓	✓	✓
PZ-45		✓	✓	✓	✓	✓
PZ-4I		✓	✓	✓	✓	✓
PZ-75		✓	✓	✓	✓	✓
PZ-85		✓	✓	✓	✓	✓
PZ-95		✓	✓	✓	✓	✓
PZ-105		✓	✓	✓	✓	✓
PZ-115		✓	✓	✓	✓	✓
PZ-12D		✓	✓	✓	✓	✓
PZ-135		✓	✓	✓	✓	✓
PZ-145		✓	✓	✓	No Cap	✓
PZ-14I		✓	✓	✓	✓	✓
PZ-155		✓	✓	✓	✓	✓
PZ-15I		✓	✓	✓	✓	✓
PZ-55		✓	✓	✓	✓	✓ N/A
PZ-56		✓	✓	✓	✓	✓ N/A

# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION  ↑ or ↓	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Is the well visible and accessible? b. Is the well properly identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annular space clear of debris and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well properly vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
PZ-16S		✓	✓	Pad not Stable	✓	/
PZ-16I		✓	✓	Pad not Stable	✓	/
PZ-17I		✓	✓	✓	✓	/
PZ-18S		✓	✓	✓	✓	/
PZ-18I		✓	✓	✓	✓	/
PZ-19S		✓	✓	✓	✓	/
PZ-19I		✓	✓	✓	✓	/
PZ-20S		✓	✓	✓	✓	/
PZ-20I		✓	✓	✓	✓	/
PZ-21S		✓	✓	✓	✓	/
PZ-21I		✓	✓	✓	✓	/
PZ-22S		✓	✓	✓	✓	/
PZ-24S		✓	✓	✓	✓	/
PZ-26I		✓	✓	✓	✓	/
PZ-28I		✓	✓	✓	✓	/
PZ-31S		✓	✓	✓	✓	/
PZ-23I		✓	✓	✓	✓	/
PZ-40S		✓	✓	✓	✓	/
PZ-41S		✓	✓	✓	✓	/
PZ-42S		✓	✓	✓	✓	/
PZ-43		✓	No casing	No Pad	Not vented	/
PZ-44		✓	✓	✓	✓	/
PZ-46		✓	✓	✓	✓	/
PZ-48		✓	✓	✓	✓	/

# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION  ↑ or ↓	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Is the well visible and accessible? b. Is the well property identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debris and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well property vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
BRGWA-2S	↑E	ok	ok	ok	ok	ok
BRGWA-2I	↑E	ok	ok	ok	ok	ok
BRGWA-5S	↑E	ok	ok	ok	ok	ok
BRGWA-5I	↑E	ok	ok	ok	ok	ok
BRGWA-6S	↑E	ok	ok	ok	ok	ok
BRGWA-12S	↑BCD	ok	ok	ok	ok	ok
BRGWA-12I	↑BCD	ok	ok	ok	ok	ok
BRGWA-23S	↑BCD	ok	ok	ok	ok	ok
BRGWC-25I	↓BCD	ok	ok	ok	ok	ok
BRGWC-27I	↓BCD	ok	ok	ok	ok	ok
BRGWC-29I	↓BCD	ok	ok	ok	ok	ok
BRGWC-30I	↓BCD	ok	ok	ok	ok	ok
BRGWC-32S	↓BCD	ok	ok	ok	ok	ok
BRGWC-33S	↓E	ok	ok	ok	ok	ok
BRGWC-34S	↓E	ok	ok	ok	ok	ok
BRGWC-35S	↓E	ok	ok	ok	ok	ok
BRGWC-17S	↓E	ok	ok	ok	ok	no dedicated pump - sampled via peri
BRGWC-36S	↓E	ok	ok	ok	ok	no dedicated pump - sampled via peri
BRGWC-37S	↓E	ok	ok	ok	ok	ok
BRGWC-38S	↓E	ok	ok	ok	ok	ok
BRGWC-45	↓BCD	ok	ok	ok	ok	no dedicated pump - samplepro
BRGWC-47	↓BCD	ok	ok	ok	ok	no dedicated pump - samplepro
BRGWC-50	↓BCD	ok	ok	ok	ok	no dedicated pump - samplepro

# WELL INSPECTION FORM

## PLANT BRANCH

Well-ID	POSITION  ↑ or ↓	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Is the well visible and accessible? b. Is the well property identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debirs and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well property vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
PZ-51S	↓E	ok	ok	ok	ok	no dedicated pump - samplepro
PZ-51I	↓E	ok	ok	ok	ok	no dedicated pump - samplepro
BRGWC-52I	↓BCD	ok	ok	ok	ok	no dedicated pump - samplepro
PZ-1S		ok	ok	ok	ok	N/A
PZ -1I		ok	ok	ok	ok	N/A
PZ-1D		ok	ok	ok	ok	N/A
PZ -3S		ok	ok	ok	ok	N/A
PZ - 3I		ok	ok	ok	ok	N/A
PZ- 3D		ok	ok	ok	ok	N/A
PZ- 4S		ok	ok	ok	ok	N/A
PZ - 4I		ok	ok	ok	ok	N/A
PZ-7S		ok	ok	ok	ok	N/A
PZ- 8S		ok	ok	ok	ok	N/A
PZ-9S		ok	ok	ok	ok	N/A
PZ-10S		ok	ok	ok	ok	N/A
PZ-11S		ok	ok	ok	ok	N/A
PZ-12D		ok	ok	ok	ok	N/A
PZ-13S		ok	ok	ok	ok	N/A
PZ-14S		ok	ok	ok	ok	N/A
PZ -14I		ok	ok	ok	ok	N/A
PZ-15S		ok	ok	ok	ok	N/A
PZ -15I		ok	ok	ok	ok	N/A
PZ-16S		ok	ok	ok	ok	N/A
PZ -16I		ok	ok	ok	ok	N/A
PZ -17I		ok	ok	ok	ok	N/A

# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION  ↑ or ↓	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Is the well visible and accessible? b. Is the well property identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debirs and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well property vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
PZ-18S		ok	ok	ok	ok	N/A
PZ -18I		ok	ok	ok	ok	N/A
PZ-19S		ok	ok	ok	ok	N/A
PZ -19I		ok	ok	ok	ok	N/A
PZ-20S		ok	ok	ok	ok	N/A
PZ -20I		ok	ok	ok	ok	N/A
PZ-21S		ok	ok	ok	ok	N/A
PZ -21I		ok	ok	ok	ok	N/A
PZ-22S		ok	ok	ok	ok	N/A
PZ-24S		ok	ok	ok	ok	N/A
PZ-26I		ok	ok	ok	ok	N/A
PZ-28I		ok	ok	ok	ok	N/A
PZ-31S		ok	ok	ok	ok	N/A
PZ-23I		ok	ok	ok	ok	N/A
PZ-40S		ok	ok	ok	ok	N/A
PZ-41S		ok	ok	ok	ok	N/A
PZ-42S		ok	ok	ok	ok	N/A
PZ-43		ok	no casing	no pad	ok	N/A
PZ-44		ok	ok	ok	ok	N/A
PZ-46		ok	ok	ok	ok	N/A
PZ-48		ok	ok	ok	ok	N/A
PZ-49		ok	ok	ok	ok	N/A
PZ-52D	↓E	ok	ok	ok	ok	N/A
PZ-53D	↓E	ok	ok	ok	ok	N/A
PZ-54	↓E	ok	ok	ok	ok	N/A

# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION  ↑ or ↓	<b>LOCATION / IDENTIFICATION</b>	<b>PROTECTIVE CASING</b>	<b>SURFACE PAD</b>	<b>INTERNAL CASING</b>	<b>SAMPLING (Groundwater Wells Only)</b>
		a. Is the well visible and accessible? b. Is the well property identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debris and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreign objects? c. Is the well property vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)
PZ-55		ok	ok	ok	ok	N/A
PZ-56		ok	ok	ok	ok	N/A
IW-C-1		Path to well overgrown	ok	ok	ok	N/A
IW-B-1		ok	ok	ok	ok	N/A
IW-D-1		ok	ok	ok	ok	N/A
IW-E-1		ok	ok	ok	ok	N/A
IW-B-2		ok	ok	Pad partially overgrown	ok	N/A
IW-C-2		Path to well overgrown	ok	ok	ok	N/A
IW-D-2		ok	ok	ok	ok	N/A
PB-1S		no well tag	no well casing	no pad	ok	N/A
PB-2D		no well tag	no well casing	no pad	ok	N/A
PB-4S		no well tag	no well casing	no pad	ok	N/A
PB-4D		no well tag	no well casing	no pad	ok	N/A
PB-7S		no well tag	no well casing	no pad	ok	N/A
PB-8D		no well tag	no well casing	no pad	ok	N/A
PB-8S		no well tag	no well casing	no pad	ok	N/A
PB-10D		no well tag	no well casing	no pad	ok	N/A
PB-10S		no well tag	no well casing	no pad	ok	N/A
PB-13D		no well tag	no well casing	no pad	ok	N/A
PB-13S		no well tag	no well casing	no pad	ok	N/A



# WELL INSPECTION FORM PLANT BRANCH

Well-ID	POSITION	<b>LOCATION / IDENTIFICATION</b>	<b>PROTECTIVE CASING</b>	<b>SURFACE PAD</b>	<b>INTERNAL CASING</b>	<b>SAMPLING (Groundwater Wells Only)</b>
	↑ or ↓	a. Is the well visible and accessible? b. Is the well property identified/Correct Well ID? c. Is the well in high traffic area require traffic Protection? d. Is the drainage around the well acceptable (No standing water)? (Y / N / NA)	a. Is protective casing free from damage/ b. Is casing free of degradation or deterioration/ c. Does casing have functioning weep hole? d. Is the annual space clear of debirs and water, or filled with pea gravel? e. Is the well locked and in good condition? (Y / N / NA)	a. Pad in Good Condition b. Pad Sloped away from Well? c. In contact with Protective Casing? d. In Contact with Ground Surface and Stable? e. Free of Debris? (Y / N / NA)	a. Does the cap prevent entry of foreign material? b. Is the casing free of kinks or bends or any obstruction from foreigh objects? c. Is the well property vented for equilibrium of air pressure? d. Is the survey point clearly marked on the inner casing? e. Is the depth of the well consistent with the well log? f. Is the casing stable? (Y / N / NA)	a. Does well recharge adequately when purged? b. If dedicated sampling equipment installed, is it in good condition and specified in the approved groundater plan for the facility? c. Does the well require redevelopment? (Y / N / NA)

NOTES:

- 1) Provide pictures of any deficiencies.
- 2) Notify SCS /GPC of any noted deficiencies.
- 3) Provide additional comments as necessary to address any deficiencies.
- 4) -- = no information provided.
- 5) Well depths not checked during the September 2020 event.

**WELL INSPECTION FORM**  
**PLANT Branch**

WELL-ID	MONITORING WELL POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Visible and accessible b. Properly identified with correct ID c. Not in a high traffic area that requires traffic protection d. No standing water nearby, adequate surrounding drainage  (S) for Satisfactory Discrepancies identified below	a. Free from damage, degradation, or deterioration b. Functioning weep hole c. Annular space free of debris and water, and has enough pea gravel d. Functioning cap and lock and in good condition  (S) for Satisfactory Discrepancies identified below	a. In good condition b. Sloped away from the well c. In contact with protective casing d. Stable and in contact with ground surface e. Free of debris f. Survey pin clearly identified  (S) for Satisfactory Discrepancies identified below	a. Cap prevents entry of foreign material b. Free of kinks or bends or any obstruction from foreign objects c. Weephole present and cap not too tight to allow equilibrium for air pressure d. Survey point clearly marked on the inner casing e. Stable/immobile  (S) for Satisfactory Discrepancies identified below	a. Well recharges adequately when purged b. If dedicated sampling equipment installed, it is in good condition and specified in the approved groundwater plan for the facility c. Does not require redevelopment d. Other (please specify)  (S) for Satisfactory Discrepancies identified below
	↑ or ↓					
BRGWA-2S	↑BOTH	S	S	S	S	S
BRGWA-2I	↑BOTH	S	S	S	S	S
BRGWA-5S	↑BOTH	S	S	S	S	S
BRGWA-5I	↑BOTH	S	S	S	S	S
BRGWA-6S	↑BOTH	S	S	S	S	S
BRGWA-12S	↑BCD	S	S	S	S	S
BRGWA-12I	↑BCD	S	S	S	S	S
BRGWA-23S	↑BCD	S	S	S	S	S
BRGWC-25I	↓BCD	S	S	S	S	S
BRGWC-27I	↓BCD	S	S	S	S	S
BRGWC-29I	↓BCD	S	S	S	S	S
BRGWC-30I	↓BCD	S	S	S	S	S
BRGWC-32S	↓BCD	S	S	S	S	S
BRGWC-33S	↓E	S	S	S	S	S
BRGWC-34S	↓E	S	S	S	S	S
BRGWC-35S	↓E	S	S	S	S	S
BRGWC-17S	↓E	S	S	S	S	no pump (9 ft deep)
BRGWC-36S	↓E	S	S	S	S	no pump (perched)
BRGWC-37S	↓E	S	S	S	S	S
BRGWC-38S	↓E	S	S	S	S	S
BRGWC-45	↓BCD	S	S	S	S	no pump
BRGWC-47	↓BCD	S	S	S	S	no pump
BRGWC-50	↓BCD	S	S	S	S	no pump

**WELL INSPECTION FORM**  
**PLANT Branch**

WELL-ID	MONITORING WELL POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Visible and accessible b. Properly identified with correct ID c. Not in a high traffic area that requires traffic protection d. No standing water nearby, adequate surrounding drainage  (S) for Satisfactory Discrepancies identified below	a. Free from damage, degradation, or deterioration b. Functioning weep hole c. Annular space free of debris and water, and has enough pea gravel d. Functioning cap and lock and in good condition  (S) for Satisfactory Discrepancies identified below	a. In good condition b. Sloped away from the well c. In contact with protective casing d. Stable and in contact with ground surface e. Free of debris f. Survey pin clearly identified  (S) for Satisfactory Discrepancies identified below	a. Cap prevents entry of foreign material b. Free of kinks or bends or any obstruction from foreign objects c. Weep hole present and cap not too tight to allow equilibrium for air pressure d. Survey point clearly marked on the inner casing e. Stable/immobile  (S) for Satisfactory Discrepancies identified below	a. Well recharges adequately when purged b. If dedicated sampling equipment installed, it is in good condition and specified in the approved groundwater plan for the facility c. Does not require redevelopment d. Other (please specify)  (S) for Satisfactory Discrepancies identified below
	↑ or ↓					
BRGWC-52I	↓BCD	S	S	S	S	no pump
PZ-50D	↓BCD	S	S	S	S	no pump, inadequate recharge to perform low flow
PZ-51S	↓BCD	S	S	S	S	no pump
PZ-51I	↓BCD	S	S	S	S	no pump
PZ-51D	↓BCD	S	S	S	S	no pump
PZ-1S		S	S	S	S	--
PZ-1I		S	S	S	S	--
PZ-1D		S	S	S	S	--
PZ-3S		S	S	S	S	--
PZ-3I		S	S	S	S	--
PZ-3D		S	S	S	S	--
PZ-4S		S	S	S	S	--
PZ-4I		S	S	S	S	--
PZ-7S		S	S	S	S	--
PZ-8S		S	S	S	S	--
PZ-9S		S	S	S	S	--
PZ-10S		S	S	S	S	--
PZ-11S		S	S	S	S	--
PZ-12D		S	S	S	S	--
PZ-13S		S	S	S	S	--
PZ-14S		S	S	S	S	--
PZ-14I		S	S	S	S	--

**WELL INSPECTION FORM**  
**PLANT Branch**

WELL-ID	MONITORING WELL POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Visible and accessible b. Properly identified with correct ID c. Not in a high traffic area that requires traffic protection d. No standing water nearby, adequate surrounding drainage  (S) for Satisfactory Discrepancies identified below	a. Free from damage, degradation, or deterioration b. Functioning weep hole c. Annular space free of debris and water, and has enough pea gravel d. Functioning cap and lock and in good condition  (S) for Satisfactory Discrepancies identified below	a. In good condition b. Sloped away from the well c. In contact with protective casing d. Stable and in contact with ground surface e. Free of debris f. Survey pin clearly identified  (S) for Satisfactory Discrepancies identified below	a. Cap prevents entry of foreign material b. Free of kinks or bends or any obstruction from foreign objects c. Weep hole present and cap not too tight to allow equilibrium for air pressure d. Survey point clearly marked on the inner casing e. Stable/immobile  (S) for Satisfactory Discrepancies identified below	a. Well recharges adequately when purged b. If dedicated sampling equipment installed, it is in good condition and specified in the approved groundwater plan for the facility c. Does not require redevelopment d. Other (please specify)  (S) for Satisfactory Discrepancies identified below
	↑ or ↓					
PZ-15S		S	S	S	S	--
PZ -15I		S	S	S	S	--
PZ-16S		S	S	Down Tree on top of pad	S	--
PZ -16I		S	S	S	S	--
PZ -17I		S	S	S	S	--
PZ-18S		S	S	S	S	--
PZ -18I		S	S	S	S	--
PZ-19S		S	S	S	S	--
PZ -19I		S	S	S	S	--
PZ-20S		S	S	S	S	--
PZ -20I		S	S	S	S	--
PZ-21S		S	S	S	S	--
PZ -21I		S	S	S	S	--
PZ-22S		S	S	S	S	--
BRGWC-24S		S	S	S	S	--
PZ-26I		S	S	S	S	--
PZ-28I		S	S	S	S	--
PZ-31S		S	S	S	S	--
PZ-23I		S	S	S	S	--
PZ-40S		S	S	S	S	--
PZ-41S		S	S	S	S	--
PZ-42S		S	S	S	S	--
PZ-43		Needs a Label	S	S	S	--

**WELL INSPECTION FORM**  
**PLANT Branch**

WELL-ID	MONITORING WELL POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Visible and accessible b. Properly identified with correct ID c. Not in a high traffic area that requires traffic protection d. No standing water nearby, adequate surrounding drainage  (S) for Satisfactory Discrepancies identified below	a. Free from damage, degradation, or deterioration b. Functioning weep hole c. Annular space free of debris and water, and has enough pea gravel d. Functioning cap and lock and in good condition  (S) for Satisfactory Discrepancies identified below	a. In good condition b. Sloped away from the well c. In contact with protective casing d. Stable and in contact with ground surface e. Free of debris f. Survey pin clearly identified  (S) for Satisfactory Discrepancies identified below	a. Cap prevents entry of foreign material b. Free of kinks or bends or any obstruction from foreign objects c. Weep hole present and cap not too tight to allow equilibrium for air pressure d. Survey point clearly marked on the inner casing e. Stable/immobile  (S) for Satisfactory Discrepancies identified below	a. Well recharges adequately when purged b. If dedicated sampling equipment installed, it is in good condition and specified in the approved groundwater plan for the facility c. Does not require redevelopment d. Other (please specify)  (S) for Satisfactory Discrepancies identified below
	↑ or ↓					
PZ-44		S	S	S	S	--
PZ-46		S	S	S	S	--
PZ-48		S	S	S	S	--
PZ-49		S	S	S	S	--
PZ-53D		S	S	S	S	--
PZ-54		S	S	S	S	--
IW-C-1		S	S	S	S	--
IW-B-1		S	S	S	S	S
IW-D-1		S	S	S	S	--
IW-E-1		S	S	S	S	--
IW-B-2		S	S	S	S	S
IW-C-2		S	S	S	S	--
IW-D-2		S	S	S	S	--

**WELL INSPECTION FORM**  
**PLANT Branch**

WELL-ID	MONITORING WELL POSITION	LOCATION / IDENTIFICATION	PROTECTIVE CASING	SURFACE PAD	INTERNAL CASING	SAMPLING (Groundwater Wells Only)
		a. Visible and accessible b. Properly identified with correct ID c. Not in a high traffic area that requires traffic protection d. No standing water nearby, adequate surrounding drainage  <b>(S) for Satisfactory</b> <b>Discrepancies identified below</b>	a. Free from damage, degradation, or deterioration b. Functioning weep hole c. Annular space free of debris and water, and has enough pea gravel d. Functioning cap and lock and in good condition  <b>(S) for Satisfactory</b> <b>Discrepancies identified below</b>	a. In good condition b. Sloped away from the well c. In contact with protective casing d. Stable and in contact with ground surface e. Free of debris f. Survey pin clearly identified  <b>(S) for Satisfactory</b> <b>Discrepancies identified below</b>	a. Cap prevents entry of foreign material b. Free of kinks or bends or any obstruction from foreign objects c. Weep hole present and cap not too tight to allow equilibrium for air pressure d. Survey point clearly marked on the inner casing e. Stable/immobile  <b>(S) for Satisfactory</b> <b>Discrepancies identified below</b>	a. Well recharges adequately when purged b. If dedicated sampling equipment installed, it is in good condition and specified in the approved groundwater plan for the facility c. Does not require redevelopment d. Other (please specify)  <b>(S) for Satisfactory</b> <b>Discrepancies identified below</b>
	↑ or ↓					
PB-1S		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-2D		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-4S		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-4D		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-7S		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-8D		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-8S		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-10D		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-10S		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-13D		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--
PB-13S		Labeled with Permanent Marker Only	No Protective Casing	No Pad	S	--

NOTES:

1. Provide pictures of any deficiencies.
2. Notify SCS /GPC of any noted deficiencies.
3. Provide additional comments as necessary to address any deficiencies.

Issue resolved

Requires immediate attention

**APPENDIX A**

# DATA VALIDATION SUMMARIES

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## Appendix A Quality Control Review of Analytical Data submitted by Pace Analytical Plant Branch CCR Ash Pond BCD

This narrative presents results of the quality control (QC) data review performed on analytical data submitted by Pace Analytical Services, LLC for groundwater samples collected at the Plant Branch CCR Ash Pond AP-BCD between August 18, 2020 and October 27, 2020. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1. In accordance with groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detection monitoring constituents listed in 40 CFR, Part 257, Appendix III and IV. Test methods included Inductively Coupled Plasma - Mass Spectrometry (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Inductively Coupled Plasma (6010D), Determination of Inorganic Anions By Ion Chromatography (USEPA Method 300.0), Total Dissolved Solids (Standard Methods 2540C), Radium-226 (USEPA Method 9315) and Radium-228 (USEPA Method 9320), and Alkalinity (Standard Methods SM2320B).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program (CLP) Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0), US EPA Region IV Data Validation Standard Operating Procedures for CLP Mercury Data by Cold Vapor Atomic Absorption (September 2011, Rev. 2.0), the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017), and US Department of Energy, Evaluation of Radiochemical Data Usability (April 1997). The review included an assessment of the results for completeness, precision (laboratory duplicates, matrix spike/matrix spike duplicates), accuracy (laboratory control samples and matrix spike samples), and blank contamination (including field and laboratory blanks). Additionally, sample procedures, holding times and chains-of-custody were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytic methodology, method-specific criteria or professional judgment was used.

### DATA QUALITY OBJECTIVES

<b>Laboratory Precision:</b>	Laboratory goals for precision were met
<b>Field Precision:</b>	Field goals for precision were met.
<b>Accuracy:</b>	Laboratory goals for accuracy were met with the exception of chloride and fluoride in SDG 92495653 and SDG 92491393 as described in the qualifications sections below.
<b>Detection Limits:</b>	Project goals for detection limits were met. Certain samples were diluted due to the concentration of the target analytes. Dilutions do not require qualifications based on USEPA guidelines. Detection and reporting limits of non-detect compounds are elevated proportional to the dilution when undiluted sample results are not provided by the laboratory. The data usability of diluted results was evaluated by the data user in the context of site-wide characterization.
<b>Completeness:</b>	There were no rejected analytical results for this event, resulting in a completion of 100%.



**Holding Times:** All holding time requirements were met with the exception of Total Dissolved Solids (TDS) in SDG 92495653.

## QUALIFICATIONS

In general, chemical results for the samples collected at the Site were qualified on the basis of low precision or accuracy, or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory during the data validation process.

- J** The analyte was positively identified above the method detection limit; however, the associated numerical value is the approximate concentration of the analyte in the sample.
- U** The analyte was not detected above the method detection limit.

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines except as specified below. Although these qualifications were applied to some data from samples collected at the site and reported in SDGs 92491389, 92491393, 92491917, 92491914, 92495649, 92495653, 92495656, 92495654, 92496260, 92496249, and 92502483 qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- The fluoride result in BRGWC-25I and chloride and fluoride results in sample BRGWC-29I were qualified as estimated biased high (J+) as the associated matrix spike and/or matrix spike duplicate (MS/MSD) recovery was above the QC criteria.
- Certain antimony and boron results in SDGs 92495653 and 92502483 were qualified as non-detect (U) as the analyte was detected at a similar level in an associated blank sample. As shown in Table 2, when the original sample result was below the reporting limit (RL), the results were qualified as non-detect (U) and the results were raised to the RL.
- The TDS result in sample BRGWC-50 was qualified as estimated (J), when the sample was analyzed outside of hold time.

Golder reviewed the data from samples collected at the Plant Branch CCR Ash Ponds between August 18, 2020 and October 27, 2020 in accordance with the analytical methods, the laboratory specific QC criteria, and the guidelines. As described above, 100% of the results were acceptable for project use. The data are considered usable for meeting project objectives and the results are considered valid.

## REFERENCE

Paar J.G. and Porterfield D.R., April 1997, US Department of Energy, *Evaluation of Radiochemical Data Usability*.

USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, *Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data By Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy*, Revision 2.0.

USEPA, January 2017, National, Office of Superfund Remediation and Technology Innovation, *National Functional Guidelines for Inorganic Superfund Methods Data Review*, Revision 0.0.

**TABLE 1**  
**Sample Summary Table - Pond BCD**  
**SCS Plant Branch**

SDGs	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analysis							
						Total Metals (EPA 6020B)	Mercury (EPA 7470)	Calcium (EPA 6010D)	Anions (EPA 300.0)	TDS (SM 2540C)	Radium-226 & 228 (EPA 9315 & 9320)	Metals (EPA 6010D)	Alkalinity (SM 2320B)
92491389	BRGWA-5I	8/18/2020	92491389001	GW	-	X	X	-	X	-	X	-	-
92491389	BRGWA-5S	8/18/2020	92491389002	GW	-	X	X	-	X	-	X	-	-
92491389	BRGWA-2I	8/18/2020	92491389003	GW	-	X	X	-	X	-	X	-	-
92491389	BRGWA-2S	8/18/2020	92491389004	GW	-	X	X	-	X	-	X	-	-
92491389	BRGWA-6S	8/18/2020	92491389005	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWA-12I	8/18/2020	92491393001	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWA-12S	8/18/2020	92491393002	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWA-23S	8/18/2020	92491393003	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-25I	8/19/2020	92491393004	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-29I	8/19/2020	92491393005	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-27I	8/19/2020	92491393006	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-32S	8/19/2020	92491393007	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-30I	8/19/2020	92491393008	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-45	8/20/2020	92491393009	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-47	8/20/2020	92491393010	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-50	8/20/2020	92491393011	GW	-	X	X	-	X	-	X	-	-
92491393	BRGWC-52I	8/20/2020	92491393012	GW	-	X	X	-	X	-	X	-	-
92491393	DUP-2	8/20/2020	92491393013	GW	FD (BRGWC-50)	X	X	-	X	-	X	-	-
92491393	FB-2	8/20/2020	92491393014	WQ	FB (BRGWC-50)	X	X	-	X	-	X	-	-
92491393	EB-1	8/20/2020	92491393015	WQ	EB (BRGWC-45)	X	X	-	X	-	X	-	-
92491917	PZ-51S	8/20/2020	92491917001	GW	-	X	X	-	X	-	X	-	-
92491917	PZ-51I	8/20/2020	92491917002	GW	-	X	X	-	X	-	X	-	-
92491914	PZ-51S	8/20/2020	92491914001	GW	-	X	X	-	X	-	X	-	-
92491914	PZ-51I	8/20/2020	92491914002	GW	-	X	X	-	X	-	X	-	-
92495649	BRGWA-12S	9/15/2020	92495649001	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWA-12I	9/15/2020	92495649002	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWA-23S	9/15/2020	92495649003	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-25I	9/15/2020	92495649004	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-29I	9/15/2020	92495649005	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-32S	9/16/2020	92495649006	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-30I	9/16/2020	92495649007	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-47	9/16/2020	92495649008	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-45	9/16/2020	92495649009	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-27I	9/16/2020	92495649010	GW	-	-	-	-	-	-	X	-	-
92495649	DUP-1	9/16/2020	92495649011	GW	FD (BRGWC-30I)	-	-	-	-	-	X	-	-
92495649	EB-1	9/16/2020	92495649012	WQ	EB (BRGWC-36S)	-	-	-	-	-	X	-	-
92495649	BRGWC-50	9/17/2020	92495649013	GW	-	-	-	-	-	-	X	-	-
92495649	BRGWC-52I	9/17/2020	92495649014	GW	-	-	-	-	-	-	X	-	-
92495649	FB-2	9/17/2020	92495649015	WQ	FB (BRGWC-50)	-	-	-	-	-	X	-	-
92495653	BRGWA-12S	9/15/2020	92495653001	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWA-12I	9/15/2020	92495653002	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWA-23S	9/15/2020	92495653003	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-25I	9/15/2020	92495653004	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-29I	9/15/2020	92495653005	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-32S	9/16/2020	92495653006	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-30I	9/16/2020	92495653007	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-47	9/16/2020	92495653008	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-45	9/16/2020	92495653009	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-27I	9/16/2020	92495653010	GW	-	X	X	X	X	X	-	-	-
92495653	DUP-1	9/16/2020	92495653011	GW	FD (BRGWC-30I)	X	X	X	X	X	-	-	-
92495653	EB-1	9/16/2020	92495653012	WQ	EB (BRGWC-36S)	X	X	X	X	X	-	-	-
92495653	BRGWC-50	9/17/2020	92495653013	GW	-	X	X	X	X	X	-	-	-
92495653	BRGWC-52I	9/17/2020	92495653014	GW	-	X	X	X	X	X	-	-	-
92495653	FB-2	9/17/2020	92495653015	WQ	FB (BRGWC-50)	X	X	X	X	X	-	-	-
92495656	BRGWA-6S	9/15/2020	92495656001	GW	-	X	X	X	X	X	-	-	-
92495656	BRGWA-5S	9/15/2020	92495656002	GW	-	X	X	X	X	X	-	-	-
92495656	BRGWA-5I	9/15/2020	92495656003	GW	-	X	X	X	X	X	-	-	-
92495656	BRGWA-2S	9/15/2020	92495656004	GW	-	X	X	X	X	X	-	-	-
92495656	BRGWA-2I	9/15/2020	92495656005	GW	-	X	X	X	X	X	-	-	-
92495654	BRGWA-6S	9/15/2020	92495654001	GW	-	-	-	-	-	-	X	-	-
92495654	BRGWA-5S	9/15/2020	92495654002	GW	-	-	-	-	-	-	X	-	-
92495654	BRGWA-5I	9/15/2020	92495654003	GW	-	-	-	-	-	-	X	-	-
92495654	BRGWA-2S	9/15/2020	92495654004	GW	-	-	-	-	-	-	X	-	-
92495654	BRGWA-2I	9/15/2020	92495654005	GW	-	-	-	-	-	-	X	-	-
92496260	PZ-51S	9/17/2020	92496260001	GW	-	X	X	X	X	X	-	-	-
92496260	PZ-51I	9/17/2020	92496260002	GW	-	X	X	X	X	X	-	-	-
92496249	PZ-51S	9/17/2020	92496249001	GW	-	-	-	-	-	-	X	-	-
92496249	PZ-51I	9/17/2020	92496249002	GW	-	-	-	-	-	-	X	-	-
92502483	PZ-50D	10/27/2020	92502483001	GW	-	X	-	-	X	X	-	X	X
92502483	PZ-51D	10/27/2020	92502483002	GW	-	X	-	-	X	X	-	X	X
92502483	PZ-51I	10/27/2020	92502483003	GW	-	X	-	-	X	X	-	X	X
92502483	FB	10/27/2020	92502483004	WQ	FB	X	-	-	X	X	-	X	X
92502483	EB	10/27/2020	92502483005	WQ	EB	X	-	-	X	X	-	X	X
92502483	FD	10/27/2020	92502483006	GW	FD (PZ-51I)	X	-	-	X	X	-	X	X

**Abbreviations:**

- FB - Field blank
- EB - Equipment Blank
- FD - Field duplicate
- GW - Groundwater
- WQ - Water Quality
- TDS - Total Dissolved Solids
- SDG - Sample Delivery Group
- QC - Quality Control

**TABLE 2**  
**Qualifier Summary Table**  
**Plant Branch AP-BCD**

<b>SDG</b>	<b>Sample Name</b>	<b>Constituent</b>	<b>New Result</b>	<b>New RL or MDC</b>	<b>Qualifier</b>	<b>Reason</b>
92495653	BRGWC-50	Total Dissolved Solids	-	-	J	Analysis outside of hold time
92495653	BRGWC-47	Antimony	0.003	-	U	Method blank detection
92495653	BRGWC-45	Antimony	0.003	-	U	Method blank detection
92495653	BRGWC-29I	Chloride	-	-	J+	MSD above acceptance limit
92495653	BRGWC-29I	Fluoride	-	-	J+	MSD above acceptance limit
92491393	BRGWC-25I	Fluoride	-	-	J+	MS/MSD above acceptance limits
92502483	PZ-51D	Boron	0.1	-	U	Method blank detection

**Abbreviations:**

RL : Reporting limit

SDG : Sample delivery group

MS/MSD: Matrix spike/Matrix spike duplicate

MDC : Minimum Detectable Concentration

**Qualifiers:**

U : Non-detect result

J : Estimated value

J-+ : Estimated value, bias high

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## Appendix A Quality Control Review of Analytical Data submitted by Pace Analytical Plant Branch CCR Ash Pond BCD

This narrative presents results of the quality control (QC) data review performed on analytical data submitted by Pace Analytical Services, LLC for groundwater samples collected at the Plant Branch CCR Ash Pond AP-BCD between March 1, 2021 and March 5, 2021. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1. In accordance with groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detection monitoring constituents listed in 40 CFR, Part 257, Appendix III and IV. Test methods included Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Inductively Coupled Plasma (ICP) (6010D), Determination of Inorganic Anions By Ion Chromatography (USEPA Method 300.0), Total Dissolved Solids (TDS) (Standard Methods 2540C), Radium-226 (USEPA Method 9315) and Radium-228 (USEPA Method 9320), and Alkalinity (Standard Methods SM2320B).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program (CLP) Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0), US EPA Region IV Data Validation Standard Operating Procedures for CLP Mercury Data by Cold Vapor Atomic Absorption (September 2011, Rev. 2.0), the National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017), and US Department of Energy, Evaluation of Radiochemical Data Usability (April 1997). The review included an assessment of the results for completeness, precision (laboratory and field duplicates, matrix spike/matrix spike duplicates), accuracy (laboratory control samples and matrix spike samples), and blank contamination (including field and laboratory blanks). Additionally, sample procedures, holding times and chains-of-custody were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytic methodology, method-specific criteria or professional judgment was used.

### DATA QUALITY OBJECTIVES

- Laboratory Precision:** Laboratory goals for precision were met except for certain antimony results in SDGs 92525664 and 92526031 as described in the qualifications sections below.
- Field Precision:** Field goals for precision were met except for certain antimony results in SDG 92525375 as described in the qualifications sections below.
- Accuracy:** Laboratory goals for accuracy were met except for chloride, fluoride, and sulfate results in SDG 92525375 as described in the qualifications sections below.
- Sensitivity:** Project goals for detection limits were met. Certain samples were diluted due to the concentration of the target analytes. Dilutions do not require qualifications based on USEPA guidelines. Detection and reporting limits of non-detect compounds are elevated proportional to the dilution when undiluted sample results are not provided by the laboratory. The data

usability of diluted results was evaluated by the data user in the context of site-wide characterization. Detections were found in certain blank results, as described in the qualification sections below.

**Completeness:** There were no rejected analytical results for this event, resulting in a completion of 100%.

**Holding Times:** All holding time requirements were met in accordance with specific analytical methods.

## QUALIFICATIONS

In general, chemical results for the samples collected at the Site were qualified on the basis of low precision or accuracy, or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory during the data validation process.

- J** The analyte was positively identified above the method detection limit; however, the associated numerical value is the approximate concentration of the analyte in the sample.
- U** The analyte was not detected above the method detection limit.

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines except as specified below. Although these qualifications were applied to some data from samples collected at the site and reported in SDGs 92524840, 92525375, 92525664, 92526031, 92524837, 92525363, 92525653, and 92526026 qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- The chloride and sulfate result in BRGWA-12S were qualified as estimated biased low (J-) since the associated matrix spike and/or matrix spike duplicate (MS/MSD) recovery was below the QC criteria.
- Certain antimony results were qualified as non-detect (U) as the analyte was detected at a similar level in an associated blank sample. As shown in Table 2, when the original sample result was below the reporting limit (RL), the results were qualified as non-detect (U) and the results were raised to the RL.

Golder reviewed the data from samples collected at the Plant Branch CCR Ash Ponds between March 1, 2021 and March 5, 2021 in accordance with the analytical methods, the laboratory specific QC criteria, and the guidelines. As described above, 100% of the results were acceptable for project use. The data are considered usable for meeting project objectives and the results are considered valid.

## REFERENCE

Paar J.G. and Porterfield D.R., April 1997, US Department of Energy, *Evaluation of Radiochemical Data Usability*.

USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, *Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data By Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy*, Revision 2.0.

USEPA, January 2017, National, Office of Superfund Remediation and Technology Innovation, *National Functional Guidelines for Inorganic Superfund Methods Data Review*, Revision 0.0.

**TABLE 1**  
**Sample Summary Table - Pond BCD**  
**SCS Plant Branch**

SDGs	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analysis						
						Field pH	Total Metals (EPA 6020B)	Calcium (EPA 6010D)	Mercury (SW7470A)	Anions (EPA 300.0)	TDS (SM2540C-2011)	Radium-226/228 (EPA 9315/9320)
92524840	BRGWA-6S	3/1/2021	92524840001	GW	-	X	X	X	X	X	X	-
92524840	BRGWA-2I	3/1/2021	92524840002	GW	-	X	X	X	X	X	X	-
92524840	BRGWA-5S	3/2/2021	92524840003	GW	-	X	X	X	X	X	X	-
92524840	BRGWA-5I	3/2/2021	92524840004	GW	-	X	X	X	X	X	X	-
92524840	BRGWA-2S	3/2/2021	92524840005	GW	-	X	X	X	X	X	X	-
92525375	BRGWA-12S	3/2/2021	92525375001	GW	-	X	X	X	X	X	X	-
92525375	BRGWA-12I	3/2/2021	92525375002	GW	-	X	X	X	X	X	X	-
92525375	BRGWA-23S	3/2/2021	92525375003	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-45	3/2/2021	92525375004	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-47	3/2/2021	92525375005	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-25I	3/2/2021	92525375006	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-27I	3/3/2021	92525375007	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-29I	3/3/2021	92525375008	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-30I	3/3/2021	92525375009	GW	-	X	X	X	X	X	X	-
92525375	DUP-1	3/3/2021	92525375010	GW	FD (BRGWC-27I)	X	X	X	X	X	X	-
92525375	BRGWC-32S	3/4/2021	92525375011	GW	-	X	X	X	X	X	X	-
92525375	BRGWC-52I	3/4/2021	92525375012	GW	-	X	X	X	X	X	X	-
92525375	EB-2	3/4/2021	92525375013	WQ	EB	X	X	X	X	X	X	-
92525375	BRGWC-50	3/4/2021	92525375014	GW	-	X	X	X	X	X	X	-
92525375	EB-1	3/5/2021	92525375015	WQ	EB	X	X	X	X	X	X	-
92525664	PZ-51S	3/3/2021	92525664001	GW	-	X	X	X	X	X	X	-
92525664	PZ-51D	3/3/2021	92525664002	GW	-	X	X	X	X	X	X	-
92526031	PZ-50D	3/5/2021	92526031001	GW	-	X	X	X	X	X	X	-
92526031	PZ-51I	3/4/2021	92526031002	GW	-	X	X	X	X	X	X	-
92524837	BRGWA-6S	3/1/2021	92524837001	GW	-	-	-	-	-	-	-	X
92524837	BRGWA-2I	3/1/2021	92524837002	GW	-	-	-	-	-	-	-	X
92524837	BRGWA-5S	3/2/2021	92524837003	GW	-	-	-	-	-	-	-	X
92524837	BRGWA-5I	3/2/2021	92524837004	GW	-	-	-	-	-	-	-	X
92524837	BRGWA-2S	3/2/2021	92524837005	GW	-	-	-	-	-	-	-	X
92525363	BRGWA-12S	3/2/2021	92525363001	GW	-	-	-	-	-	-	-	X
92525363	BRGWA-12I	3/2/2021	92525363002	GW	-	-	-	-	-	-	-	X
92525363	BRGWA-23S	3/2/2021	92525363003	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-45	3/2/2021	92525363004	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-47	3/2/2021	92525363005	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-25I	3/2/2021	92525363006	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-27I	3/3/2021	92525363007	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-29I	3/3/2021	92525363008	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-30I	3/3/2021	92525363009	GW	-	-	-	-	-	-	-	X
92525363	DUP-1	3/3/2021	92525363010	GW	FD(BRGWC-27I)	-	-	-	-	-	-	X
92525363	BRGWC-32S	3/4/2021	92525363011	GW	-	-	-	-	-	-	-	X
92525363	BRGWC-52I	3/4/2021	92525363012	GW	-	-	-	-	-	-	-	X
92525363	FB-2	3/4/2021	92525363013	WQ	FB	-	-	-	-	-	-	X
92525363	BRGWC-50	3/4/2021	92525363014	GW	-	-	-	-	-	-	-	X
92525363	EB-1	3/5/2021	92525363015	WQ	EB	-	-	-	-	-	-	X
92525653	PZ-51S	3/3/2021	92525653001	GW	-	-	-	-	-	-	-	X
92525653	PZ-51D	3/3/2021	92525653002	GW	-	-	-	-	-	-	-	X
92526026	PZ-50D	3/5/2021	92526026001	GW	-	-	-	-	-	-	-	X
92526026	PZ-51I	3/4/2021	92526026002	GW	-	-	-	-	-	-	-	X

**Abbreviations:**

- SDG - Sample Delivery Group
- QC - Quality Control
- GW - Groundwater
- WQ - Water Quality
- SW - Solid Waste
- SM - Standard Method
- EPA - Environmental Protection Agency
- TDS - Total Dissolved Solids
- FB - Field blank
- EB - Equipment Blank
- FD - Field duplicate



**TABLE 2**  
**Qualifier Summary Table**  
**Plant Branch AP-BCD**

<b>SDG</b>	<b>Sample Name</b>	<b>Constituent</b>	<b>New Result</b>	<b>New RL or MDC</b>	<b>Qualifier</b>	<b>Reason</b>
92525375	BRGWC-52I	Antimony	0.0030	-	U	Equipment blank contamination
92525375	BRGWC-50	Antimony	0.0030	-	U	Equipment blank contamination
92525375	BRGWA-12S	Chloride	-	-	J-	MS/MSD outside acceptance limits
92525375	BRGWA-12S	Sulfate	-	-	J-	MS/MSD outside acceptance limits
92525664	PZ-51S	Antimony	0.003	-	U	Method blank contamination
92525664	PZ-52S	Antimony	0.003	-	U	Method blank contamination
92526031	PZ-50D	Antimony	0.003	-	U	Method blank contamination
92526031	PZ-51I	Antimony	0.003	-	U	Method blank contamination

**Abbreviations:**

SDG : Sample delivery group

RL : Reporting limit

MDC : Minimum Detectable Concentration

MS/MSD: Matrix spike/Matrix spike duplicate

**Qualifiers:**

U : Non-detect result

J-: Estimated value, bias low

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**APPENDIX B**

# WELL INSTALLATION REPORTS



November 20, 2020

Project No. 166625418

**Mr. Joju Abraham, PG**

Southern Company Services, Inc.  
241 Ralph McGill Blvd NE  
Atlanta GA 30308

JAbraham@southerco.com

**PIEZOMETER INSTALLATION REPORT FOR SURFACE IMPOUNDMENT ASH POND BCD (AP-BCD)  
GEORGIA POWER PLANT BRANCH, MILLEDGEVILLE, GEORGIA**

Dear Mr. Abraham:

Golder Associates Inc. (Golder) is submitting this *Piezometer Installation Report* to Southern Company Services, Inc. (SCS) and Georgia Power Company (GPC), which documents the construction of piezometers at surface impoundment Ash Pond BCD (AP-BCD) at Plant Branch in Milledgeville, Georgia (Site). Piezometer construction activities were performed in general accordance with the standards described in the *RCRA Technical Enforcement Guidance Document* (1986) and the *Georgia Water Wells Standards Act of 1985*. The installation of the piezometers was conducted under the oversight and direction of Brian Steele, a Georgia-registered Professional Geologist (PG).

The field activities for this investigation were performed in October and November 2020. The field work consisted of the installation and development of two (2) piezometers in October 2020. Metro Engineering & Surveying Co., Inc. (Metro) conducted a survey of the installed piezometers in November 2020. A summary of the activities is presented below. Figure 1, Site Plan and Piezometer Location Map, presents the location of each of the newly installed piezometers.

**Piezometer Drilling and Construction Activities**

Piezometers PZ-50D and PZ-51D were drilled and installed by Cascade Drilling, LP, who was contracted through SCS, at the facility in October 2020. Cascade had a current and valid bond with the Water Wells Standards Advisory Council for the state of Georgia at the time of drilling (Appendix A). The driller's name is provided on the boring/construction diagrams presented in Appendix B.

An experienced Golder geologist was present on site to oversee and record the drilling and piezometer construction under the supervision of a professional geologist registered to practice in Georgia (Brian Steele). Drilling methods employed for borehole advancement were rotosonic drilling techniques with continuous core collected. The drilling equipment consisted of a full-sized TSI 150T Truck-Mounted Sonic drilling rig, equipped

with 4-inch sonic rods with an outer-casing sleeve. During the drilling, continuous core samples were logged in the field for lithologic and geotechnical properties.

Prior to use, and between boreholes, downhole equipment was steam cleaned. The boring (lithologic) logs and piezometer construction records for the newly installed piezometers are included in Appendix B. The construction data are summarized in Table 1, and the locations of the piezometers are provided on Figure 1.

Piezometers were constructed within the borehole using factory-cleaned and sealed Schedule 40 polyvinyl chloride (PVC) products with flush-threaded fittings. Specifically, piezometers were constructed with a 10-foot section of 4-inch outer diameter (OD) and 2-inch inner diameter (ID), flush-threaded, 0.010-inch factory-slotted PVC U-Pack screen. The drillers filled the annulus of each U-Pack screen section with No. 1 filter sand. Prior to setting the wells, packer testing was performed in each borehole where water producing zones were identified in the bedrock core during drilling, beginning at 96 feet below ground surface (bgs). This depth was chosen based on the screened interval of each adjacent, shallow well. Two zones were packer tested in each borehole: 96 to 106 feet bgs and 112 to 122 feet bgs in PZ-50D, and 96 to 106 feet bgs and 106 to 114 feet bgs in PZ-51D). The purpose of the packer testing was to identify the greatest potentially water-producing zones within each 10-foot bedrock interval. The most promising water-producing zones were identified at approximately 96-106 feet bgs in each borehole. The boreholes were backfilled to 106 feet bgs, and the screen was placed at the bottom of the backfilled borehole, with the remainder of the piezometer constructed from 10-foot sections of 2-inch ID, flush-threaded, PVC casing riser. A flush-threaded PVC end cap was placed on the bottom of each piezometer to provide a 0.4-foot sump/sediment trap, and the top of the piezometers to extend to approximately 2.6 feet above grade. Construction details for the piezometers are shown on the boring/construction logs in Appendix B. The PVC products used were American Society for Testing and Materials (ASTM) and National Sanitation Foundation (NSF) rated.

Following placement of the screen and casing, the annular space in each borehole adjacent to the screen was filled with U.S. Standard Sieve size No. 1 filter pack sand as appropriate for the formation. The filter pack sand was placed into the borehole and extends approximately 2 feet above the depth of the top of the screen. Immediately following placement of the filter pack, each piezometer was pumped using a portable submersible pump until visibly clear water was discharged. If settling occurred during pumping, additional sand was placed so that the filter sand thickness was approximately 2 feet above the screen. A filter pack seal, composed of approximately 4 feet of hydrated 3/8" coated bentonite pellets, was then placed on top of the filter pack by slowly pouring the material down the borehole and tamping it into place. The bentonite was hydrated using potable water and allowed to cure for two hours prior to grouting the piezometer.

Following hydration of the bentonite, the remaining annular space was grouted with an AquaGuard® bentonite grout mixture to approximately 2 feet below ground surface using a tremie method. Based on information provided by the product manufacturer, AquaGuard® is a bentonite grout consisting of bentonite and additives that allow for a mixture of 30% solids by weight to facilitate grouting via tremie pipe, with additives that slow the bentonite curing so that proper placement can be achieved. Each piezometer surface completion consists of a locked, anodized aluminum protective casing and a 4-foot by 4-foot by 4-inch concrete pad. The annular space of the aluminum protective casing was filled with pea gravel to approximately 2 inches from top of PVC.

## Piezometer Development Activities

The newly installed piezometers were developed in October 2020 in accordance with the Monitoring Well Development Procedures prepared by SCS (March 2016). The piezometers were surged using a Reclaimer pump system. During development, water quality measurements of pH, temperature, specific conductance, oxidation reduction potential (ORP), dissolved oxygen (DO), and turbidity were periodically collected using field-calibrated water quality equipment after the piezometer responded to improving conditions. Due to poor recovery, PZ-50D was surged by adding 25 gallons of deionized (DI) water during development. The volume of DI water added was removed in addition to recharged groundwater in the piezometer, as recorded on the development logs. Development activities were conducted utilizing a SmarTroll® multimeter and a Lamotte 2020 turbidimeter, and for monitoring water quality measurements. Equipment calibration forms and development forms are included in Appendix B with development details summarized in Table 2.

As presented on Table 2, between approximately 61 gallons (PZ-50D) and approximately 75 gallons (PZ-51D) of water were removed from each piezometer during development. During development, a turbidity value below 10 nephelometric turbidity units (NTUs) was achieved. Water level measurements were collected using a decontaminated electronic water level indicator, referenced to a notch (or permanent marking) at the top of the casing and recorded to within 0.01 foot.

## Piezometer Survey

The newly installed piezometers were surveyed on November 3, 2020 by Metro Survey and Engineering. The survey was completed using Leica DNA10 digital level with a network of closed level loops with a positional tolerance of 0.5/0.01' H:V. The surveyed point on the top of the casing was used as reference, and the measurements were recorded to within 0.01 foot. Surveyed locations and elevations are presented on the boring/construction diagrams and a site map showing the locations of the newly installed piezometers is presented in Figure 1. The certified surveyor's report is attached as Appendix C.

## Closing

We appreciate the opportunity to assist SCS and GPC with this project. Should you have any questions or require additional information, please contact the undersigned at (770) 496-1893.

Sincerely,

**Golder Associates Inc.**



Brian Steele, PG  
Senior Project Geologist

Rachel P. Kirkman, PG  
Principal and Senior Consultant

Attachments: Figure 1 Piezometer Location Map  
Table 1 Piezometer Installation Summary  
Table 2 Summary of Piezometer Development Data

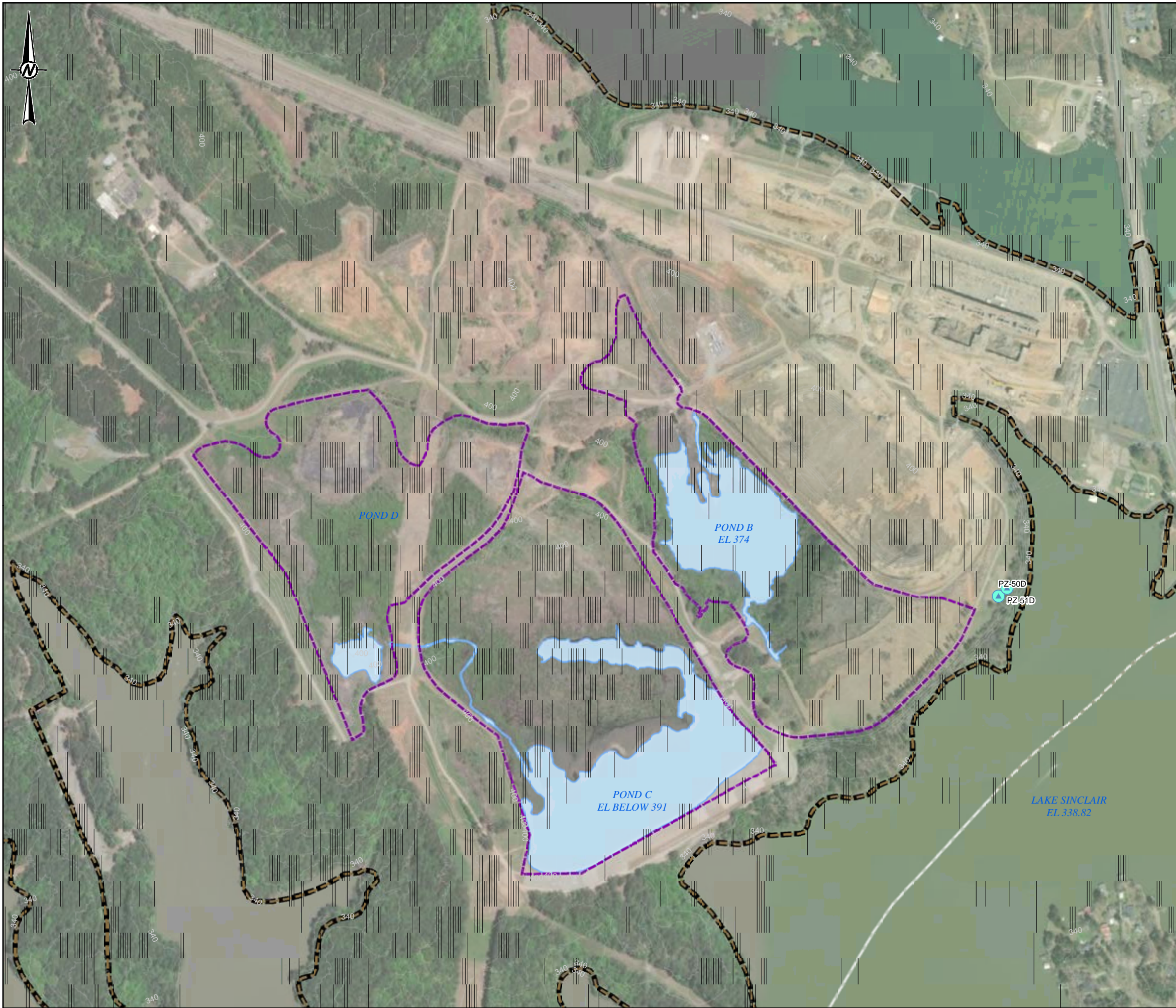
Appendix A Cascade Drilling Bond  
Appendix B Boring Logs/Construction Diagrams, Development Forms, and  
Calibration Logs  
Appendix C Surveyor's Report

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**FIGURE 1**





**SITE PLAN AND PIEZOMETER  
LOCATION MAP**



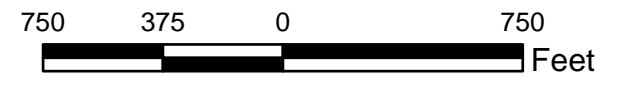


Path: C:\GIS\Southern Company\PlantBranch\Environmental - CCR\Figures\PZ-50D through PZ-58 Installation Report\Figures 1 - Piezometer Location Map.mxd



- LEGEND**
-  PIEZOMETER
  -  PROPERTY BOUNDARY
  -  APPROXIMATE ASH POND BOUNDARY
  -  APPROXIMATE SURFACE WATER LIMITS

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.
  4. PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING.
  5. SURFACE IMPOUNDMENT EXTENT PROVIDED BY SOUTHERN COMPANY SERVICES.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH



PROJECT  
**GROUNDWATER MONITORING PROGRAM**

TITLE  
**PIEZOMETER LOCATION MAP**

CONSULTANT	YYYY-MM-DD	2020-11-12
	PREPARED	DJC
	DESIGN	BS
	REVIEW	RK
	APPROVED	

1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB



**TABLE 1**

**SUMMARY OF PIEZOMETER  
CONSTRUCTION DETAILS**

**Table 1**  
**Summary of Piezometer Construction Details**  
**Georgia Power Company - Plant Branch**  
**Milledgeville, Georgia**

Borehole ID	Latitude	Longitude	NAD 83 Northing	NAD 83 Easting	Elevation On Top Of PVC (feet NAVD88)	Elevation Ground Surface (feet NAVD88)	Rock Type	Total Depth (feet bgs)	Depth to Bedrock (feet bgs)	Screened Interval (feet bgs)	Core Available	Water Level (feet bTOC)	Date Installed
PZ-50D	33.190410	83.297817	1161588.9	2562381.2	380.86	378.3	Gneiss	136	66.0	96-106	Sonic Core	21.72	10/8/2020
PZ-51D	33.190548	83.297643	1161639.8	2562434.0	380.75	378.1	Gneiss	126	74.1	96-106	Sonic Core	38.36	10/9/2020

## Notes:

NAD - North American Datum

NAVD88 - North American Vertical Datum 1988

bgs - Below ground surface

bTOC - Below Top of Casing

Survey Data from Metro Engineering &amp; Surveying Co., Inc.

TABLE 2

## SUMMARY OF PIEZOMETER DEVELOPMENT DATA

**Table 2**  
**Summary of Piezometer Development**  
**Georgia Power Company - Plant Branch**  
**Milledgeville, Georgia**

Piezometer ID	Date Started	Time Started (hr:min)	Development Method	Measured Total Depth of Well (ft bTOC)	Initial Water level (ft bTOC)	Final Water Level (ft bTOC)	Volume of Casing (gal)	Total Volume Removed (gal)	pH (SU)	Specific Conductance (mS/cm)	Temp (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)
PZ-50D	10/13/2020	13:38	Reclaimer Pump	109.00	37.20	103.30	11.7	61 <sup>[1]</sup>	6.69	1.198	22.84	6.96	81.4	5.81
PZ-51D	10/14/2020	11:30	Reclaimer Pump	110.15	40.86	79.25	11.3	74.5	6.77	1.036	20.86	5.74	69.2	3.17

**Notes:**

hr:min - hours:minutes

ft bTOC - feet below Top of Casing

gal - gallons

SU - Standard Units

mS/cm - millisiemens per centimeter

°C - degrees Celcius

NTU - nephelometric turbidity units

mV - millivolts

mg/L - milligrams per liter

ORP - oxygen reduction potential

DO - dissolved oxygen

[1]: 55 gallons of water were removed from PZ-50D, which includes approximately 25 gallons of deionized water that was added to facilitate development

APPENDIX A

# CADCADE DRILLING BOND

**COPY**

CONTINUATION  
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. **800031223**

dated effective **June 30, 2017**  
(MONTH-DAY-YEAR)

on behalf of **Michael C. Rice and Cascade Drilling, L.P., any and all employees, officers and partners**  
(PRINCIPAL)

and in favor of **State of Georgia**  
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on **June 30, 2019**  
(MONTH-DAY-YEAR)

and ending on **June 30, 2021**  
(MONTH-DAY-YEAR)

Amount of bond **Thirty Thousand and Zero/100 (\$30,000.00)**

Description of bond **Water Well Contractor Performance Bond**

Premium: **\$1,200.00**

**PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.**

Signed and dated on May 9, 2019  
(MONTH-DAY-YEAR)  
Atlantic Specialty Insurance Company

By \_\_\_\_\_  
Attorney-in-Fact **Elizabeth R. Hahn**

Parker, Smith & Feek, Inc.  
Agent

2233 112th Ave NE Bellevue, WA 98004  
Address of Agent

(425) 709-3600  
Telephone Number of Agent

## Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindee L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **sixty million dollars (\$60,000,000)** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

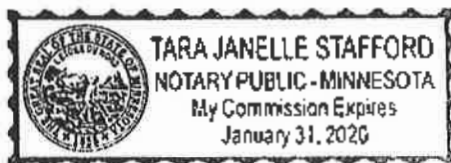
IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-sixth day of October, 2017.



By   
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA  
HENNEPIN COUNTY

On this twenty-sixth day of October, 2017, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



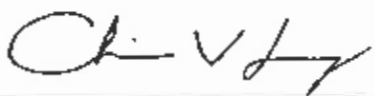
  
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 9 day of May 2019

This Power of Attorney expires  
October 1, 2019



  
Christopher V. Jerry, Secretary

**APPENDIX B**

**BORING LOGS/CONSTRUCTION  
DIAGRAMS, DEVELOPMENT  
FORMS AND CALIBRATION LOGS**



# RECORD OF BOREHOLE PZ-50D

SHEET 1 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 136.00 ft  
 LOCATION: Adjacent to BRGWC-50

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/5/20  
 DATE COMPLETED: 10/8/20

NORTHING: 1,161,588.9  
 EASTING: 2,562,381.2  
 GS ELEVATION: 378.3  
 TOC ELEVATION: 380.86 ft

DEPTH W.L.: 21.72  
 ELEVATION W.L.: 356.58  
 DATE W.L.: 10/8/2020  
 TIME W.L.: 12:45

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			SAMPLES			MONITORING WELL DIAGRAM and NOTES <b>PZ-50D</b>	WELL CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE		
0		0.00 - 6.00 HYDROVAC HOLE BACKFILL, SM; SILTY SAND, red, micaceous, highly weathered, non-cohesive, loose, wet	SM		372.3 6.00	1	ROTO SONIC	2.00 6.00	<p><b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"</p> <p><b>FILTER PACK</b> Interval: 93.9'-108.1' Type: #1 Sand Quantity: 4 - 50lb bags</p> <p><b>FILTER PACK SEAL</b> Interval: 89.7'-93.9' Type: 3/8" Pel-Plud Quantity: 1 5 gallon bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-89.7' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic</p>
375		6.00 - 10.50 SC; CLAYEY SAND WITH SILT, red, micaceous, highly weathered, RESIDUUM, non-cohesive, loose to compact, wet	SC		367.8 10.50	2	ROTO SONIC	8.00 10.00	
5		10.50 - 14.00 SM; SILTY SAND WITH SOME CLAY, gray with red/orange clay, micaceous, highly weathered RESIDUUM, non-cohesive, loose, moist to wet	SM		364.3 14.00	3	ROTO SONIC	5.00 10.00	
10		14.00 - 23.00 SC-CL; SANDY CLAY/CLAYEY SAND, red/orange, micaceous, moderately to highly weathered RESIDUUM, cohesive, very soft to firm, w>PL	CL		355.3 23.00	4	ROTO SONIC	9.40 10.00	
15		23.00 - 26.00 SM; SILTY SAND WITH SOME CLAY, grey with red/orange, micaceous, moderately to highly weathered RESIDUUM, non-cohesive, very loose to loose, dry	SM		352.3 26.00	5	ROTO SONIC	10.00 10.00	
20		26.00 - 56.00 SC-CL; SANDY CLAY/CLAYEY SAND, grey with red/orange, micaceous, moderately weathered RESIDUUM, cohesive, very soft to stiff, w~PL	CL						
35									
40									

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

Log continued on next page

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20



# RECORD OF BOREHOLE PZ-50D


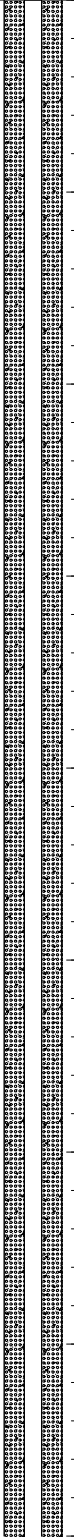
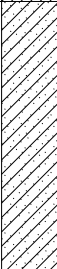


SHEET 2 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 136.00 ft  
 LOCATION: Adjacent to BRGWC-50

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/5/20  
 DATE COMPLETED: 10/8/20

NORTHING: 1,161,588.9  
 EASTING: 2,562,381.2  
 GS ELEVATION: 378.3  
 TOC ELEVATION: 380.86 ft

DEPTH W.L.: 21.72  
 ELEVATION W.L.: 356.58  
 DATE W.L.: 10/8/2020  
 TIME W.L.: 12:45

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			SAMPLES			MONITORING WELL DIAGRAM and NOTES <b>PZ-50D</b>	WELL CONSTRUCTION DETAILS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE			REC
40		26.00 - 56.00 SC-CL; SANDY CLAY/CLAYEY SAND, grey with red/orange, micaceous, moderately weathered RESIDUUM, cohesive, very soft to stiff, w~PL (Continued)	CL		322.3	5	ROTO SONIC	10.00 10.00		<b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"  <b>FILTER PACK</b> Interval: 93.9'-108.1' Type: #1 Sand Quantity: 4 - 50lb bags  <b>FILTER PACK SEAL</b> Interval: 89.7'-93.9' Type: 3/8" Pel-Plud Quantity: 1 5 gallon bucket  <b>ANNULUS SEAL</b> Interval: 0'-89.7' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic
335	45				56.00 - 63.00 SC-CL; CLAYEY SAND/SANDY CLAY, with silt and trace gravels of gneiss, brown/grey, micaceous, moderately to highly weathered SAPROLITE, non-cohesive, loose to compact, moist	SC		315.3		
350	60	63.00 - 66.00 BIOTITE GNEISS, BEDROCK, trace silt and clay, TWR transitioning to highly weathered Gneiss bedrock, grey with black/white banding, qtz, feldspar, mica and amphibole, non-cohesive, loose to compact; moist	TWR		312.3	8	ROTO SONIC	10.00 10.00		
365	65				66.00 - 106.00 BIOTITE GNEISS, BEDROCK, black/white banded, finely and coarsely crystalline, containing quartz, mica, feldspar, amphibole, trace hornblende, moderately to highly weathered ; strength index: R3-R4	Gneiss		300	9	ROTO SONIC
380	75	Log continued on next page								

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20



# RECORD OF BOREHOLE PZ-50D

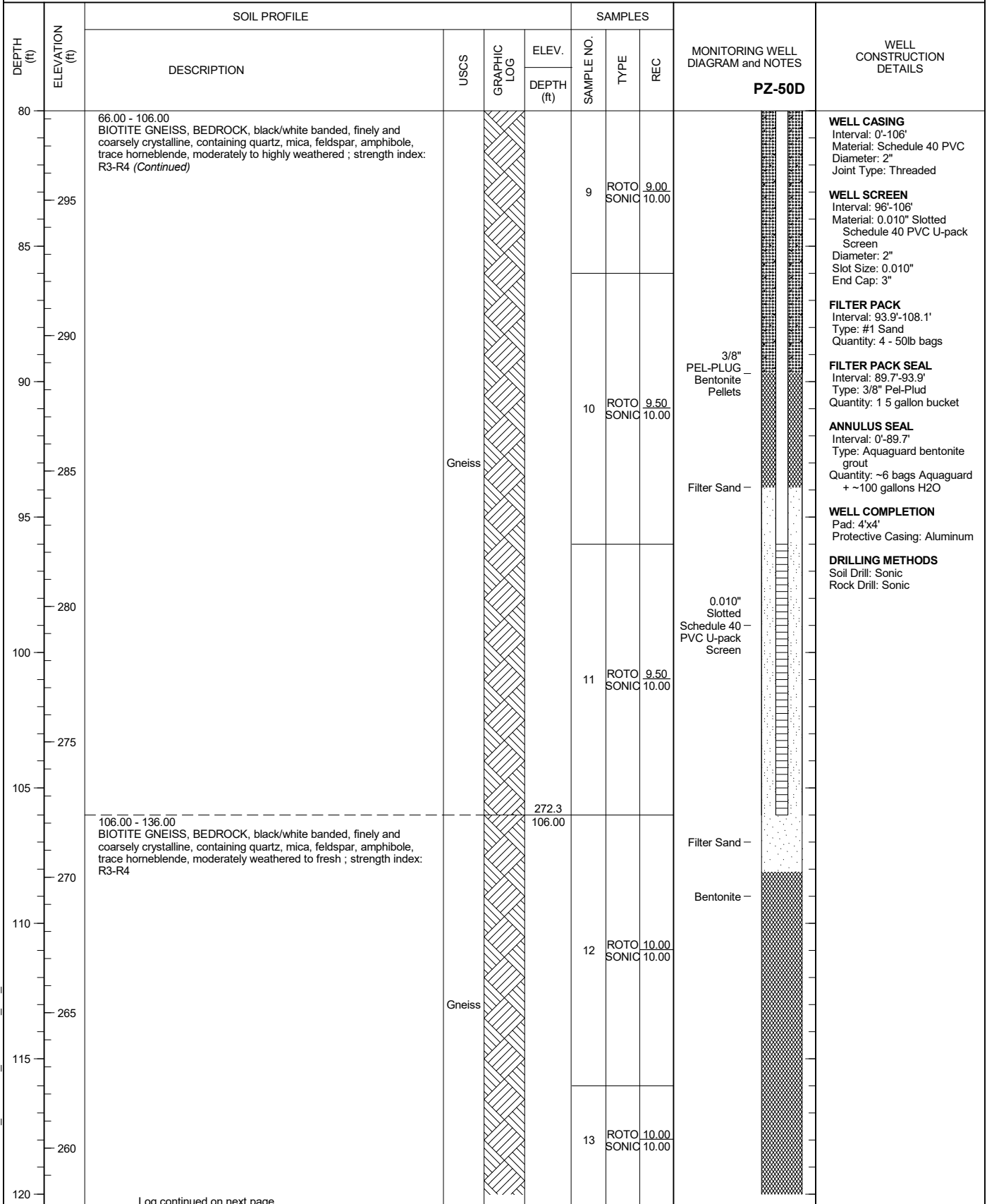
SHEET 3 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 136.00 ft  
 LOCATION: Adjacent to BRGWC-50

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/5/20  
 DATE COMPLETED: 10/8/20

NORTHING: 1,161,588.9  
 EASTING: 2,562,381.2  
 GS ELEVATION: 378.3  
 TOC ELEVATION: 380.86 ft

DEPTH W.L.: 21.72  
 ELEVATION W.L.: 356.58  
 DATE W.L.: 10/8/2020  
 TIME W.L.: 12:45



Log continued on next page

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20



# RECORD OF BOREHOLE PZ-50D

SHEET 4 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 136.00 ft  
 LOCATION: Adjacent to BRGWC-50

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/5/20  
 DATE COMPLETED: 10/8/20

NORTHING: 1,161,588.9  
 EASTING: 2,562,381.2  
 GS ELEVATION: 378.3  
 TOC ELEVATION: 380.86 ft

DEPTH W.L.: 21.72  
 ELEVATION W.L.: 356.58  
 DATE W.L.: 10/8/2020  
 TIME W.L.: 12:45

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			MONITORING WELL DIAGRAM and NOTES <b>PZ-50D</b>	WELL CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE	REC		
120		106.00 - 136.00 BIOTITE GNEISS, BEDROCK, black/white banded, finely and coarsely crystalline, containing quartz, mica, feldspar, amphibole, trace hornblende, moderately weathered to fresh ; strength index: R3-R4 (Continued)	Gneiss							<b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"  <b>FILTER PACK</b> Interval: 93.9'-108.1' Type: #1 Sand Quantity: 4 - 50lb bags  <b>FILTER PACK SEAL</b> Interval: 89.7'-93.9' Type: 3/8" Pel-Plud Quantity: 1 5 gallon bucket  <b>ANNULUS SEAL</b> Interval: 0'-89.7' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic
255					13	ROTO SONIC	10.00	10.00		
125										
250										
130										
245										
135										
240		Boring completed at 136.00 ft								
140										
235										
145										
230										
150										
225										
155										
220										
160										

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20



# RECORD OF BOREHOLE PZ-51D

SHEET 1 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 126.00 ft  
 LOCATION: Adjacent to PZ-511

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/8/20  
 DATE COMPLETED: 10/9/20

NORTHING: 1,161,639.8  
 EASTING: 2,562,434.0  
 GS ELEVATION: 378.1  
 TOC ELEVATION: 380.75 ft

DEPTH W.L.: 38.36'  
 ELEVATION W.L.: 339.74  
 DATE W.L.: 10/14/2020  
 TIME W.L.: 11:00

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			MONITORING WELL DIAGRAM and NOTES	WELL CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE	REC		
0		0.00 - 6.00 HYDROVAC HOLE BACKFILL, SM; SILTY SAND, red, micaceous, highly weathered, non-cohesive, loose, wet	SM		372.1 6.00	1	ROTO SONIC	2.70 6.00	<p style="text-align: center;">PZ-51D</p> <p style="text-align: center;">Aquaguard Bentonite</p> <p style="text-align: center;">Riser</p>	<p><b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"</p> <p><b>FILTER PACK</b> Interval: 93.6'-108.2 Type: #1 Sand Quantity: 5 - 50lb bags</p> <p><b>FILTER PACK SEAL</b> Interval: 89.5'-93.6' Type: 3/8" Pel-Plug Quantity: 1 x 5 gallon bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-89.5' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic</p>
375										
5		6.00 - 12.00 CL; SANDY CLAY, red/orange; highly weathered RESIDUUM, cohesive, firm, w-PL	CL		366.1 12.00	2	ROTO SONIC	5.00 10.00		
10										
15		12.00 - 36.00 SM; SILTY SAND, trace clay and gravel, gray with red/orange clay, micaceous, highly weathered RESIDUUM, non-cohesive, loose, dry to moist	SM							
365										
20										
360										
25										
355										
30										
350										
345										
35										
340		36.00 - 46.00 No Recovery	SM		342.1 36.00	5	ROTO SONIC	0.00 10.00		
40										

Log continued on next page

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20



# RECORD OF BOREHOLE PZ-51D

SHEET 2 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 126.00 ft  
 LOCATION: Adjacent to PZ-511

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/8/20  
 DATE COMPLETED: 10/9/20

NORTHING: 1,161,639.8  
 EASTING: 2,562,434.0  
 GS ELEVATION: 378.1  
 TOC ELEVATION: 380.75 ft

DEPTH W.L.: 38.36'  
 ELEVATION W.L.: 339.74  
 DATE W.L.: 10/14/2020  
 TIME W.L.: 11:00

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			MONITORING WELL DIAGRAM and NOTES	WELL CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE	REC		
40		36.00 - 46.00 No Recovery (Continued)	SM	[Dotted Pattern]	332.1 46.00	5	ROTO SONIC	0.00 10.00		<p><b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"</p> <p><b>FILTER PACK</b> Interval: 93.6'-108.2' Type: #1 Sand Quantity: 5 - 50lb bags</p> <p><b>FILTER PACK SEAL</b> Interval: 89.5'-93.6' Type: 3/8" Pel-Plug Quantity: 1 x 5 gallon bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-89.5' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic</p>
45		46.00 - 57.70 CH; SANDY-SILTY CLAY, dark brown/grey, micaceous, moderately weathered RESIDUUM, cohesive, stiff to very stiff, w<PL to w~PL	CH	[Diagonal Hatching]	320.4 57.70	6	ROTO SONIC	10.00 10.00		
50		57.70 - 65.00 SM; SILTY SAND WITH GRAVEL, trace clay, brown and light tan, micaceous, slightly weathered SAPROLITE, non-cohesive, loose to compact, dry	SM	[Dotted Pattern]	313.1 65.00	7	ROTO SONIC	10.00 10.00		
55		65.00 - 74.10 GM; SILTY-SANDY GRAVEL, gravels of gneiss with black/white banding; highly weathered TWR, non-cohesive, dense, wet (possibly from drilling water), no recovery from 66-74.1.	TWR	[Gravel Pattern]	304 74.10	8	ROTO SONIC	1.90 10.00		
60		74.10 - 96.00 BIOTITE GNEISS, BEDROCK, black/white banded, finely and coarsely crystalline, containing quartz, mica, feldspar, amphibole, trace hornblende, moderately weathered; strength index: R3-R4	Gneiss	[Gneiss Pattern]		9	ROTO SONIC	9.50 10.00		
65		Log continued on next page								

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20





# RECORD OF BOREHOLE PZ-51D

SHEET 3 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 126.00 ft  
 LOCATION: Adjacent to PZ-511

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/8/20  
 DATE COMPLETED: 10/9/20

NORTHING: 1,161,639.8  
 EASTING: 2,562,434.0  
 GS ELEVATION: 378.1  
 TOC ELEVATION: 380.75 ft

DEPTH W.L.: 38.36'  
 ELEVATION W.L.: 339.74  
 DATE W.L.: 10/14/2020  
 TIME W.L.: 11:00

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			MONITORING WELL DIAGRAM and NOTES	WELL CONSTRUCTION DETAILS			
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE	REC					
80		74.10 - 96.00 BIOTITE GNEISS, BEDROCK, black/white banded, finely and coarsely crystalline, containing quartz, mica, feldspar, amphibole, trace hornblende, moderately weathered; strength index: R3-R4 <i>(Continued)</i>	Gneiss		282.1	9	ROTO SONIC	9.50 10.00	PZ-51D 	<b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"  <b>FILTER PACK</b> Interval: 93.6'-108.2 Type: #1 Sand Quantity: 5 - 50lb bags  <b>FILTER PACK SEAL</b> Interval: 89.5'-93.6' Type: 3/8" Pel-Plug Quantity: 1 x 5 gallon bucket  <b>ANNULUS SEAL</b> Interval: 0'-89.5' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic			
295	85				290	90	285	95			10	ROTO SONIC	10.00 10.00
280	100				275	105	270	110			11	ROTO SONIC	9.50 10.00
		96.00 - 106.00 BIOTITE GNEISS, BEDROCK, black/white banded, finely and coarsely crystalline, containing quartz, mica, feldspar, amphibole, trace hornblende, highly weathered; strength index: R2-R3	Gneiss		272.1	12	ROTO SONIC	10.00 10.00	3/8" PEL-PLUG Bentonite Pellets  Filter Sand  0.010" Slotted Schedule 40 PVC U-pack Screen  Filter Sand  Bentonite				
270	115				265	110	260	115			13	ROTO SONIC	9.50 10.00
260	120				255	125	250	130					

Log continued on next page

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ\_PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20



# RECORD OF BOREHOLE PZ-51D



SHEET 4 of 4

PROJECT: Plant Branch  
 PROJECT NUMBER: 1666254-01  
 DRILLED DEPTH: 126.00 ft  
 LOCATION: Adjacent to PZ-511

DRILL RIG: TSI 150T Truck Mounted  
 DATE STARTED: 10/8/20  
 DATE COMPLETED: 10/9/20

NORTHING: 1,161,639.8  
 EASTING: 2,562,434.0  
 GS ELEVATION: 378.1  
 TOC ELEVATION: 380.75 ft

DEPTH W.L.: 38.36'  
 ELEVATION W.L.: 339.74  
 DATE W.L.: 10/14/2020  
 TIME W.L.: 11:00

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			MONITORING WELL DIAGRAM and NOTES	WELL CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	TYPE	REC		
120		106.00 - 126.00 BIOTITE GNEISS, BEDROCK, black/white banded, finely and coarsely crystalline, containing quartz, mica, feldspar, amphibole, trace hornblende, moderately weathered to fresh; strength index: R3-R4 (Continued)	Gneiss						<b>WELL CASING</b> Interval: 0'-106' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 96'-106' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"  <b>FILTER PACK</b> Interval: 93.6'-108.2 Type: #1 Sand Quantity: 5 - 50lb bags  <b>FILTER PACK SEAL</b> Interval: 89.5'-93.6' Type: 3/8" Pel-Plug Quantity: 1 x 5 gallon bucket  <b>ANNULUS SEAL</b> Interval: 0'-89.5' Type: Aquaguard bentonite grout Quantity: ~6 bags Aquaguard + ~100 gallons H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: Sonic Rock Drill: Sonic	
255						13	ROTO SONIC			9.50
125		Boring completed at 126.00 ft								
250										
130										
245										
135										
240										
140										
235										
145										
230										
150										
225										
155										
220										
160										

BOREHOLE RECORD PLANT\_BRANCH\_20200603\_CT\_SURVEY\_UPDATED.GPJ PIEDMONT.GDT 11/18/20

LOG SCALE: 1 in = 5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Logan Hall

GA INSPECTOR: Chris Tidwell  
 CHECKED BY: Brian Steele, PG  
 DATE: 11/12/20





## WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Plant Branch / 166625418  
 WELL DIA (in) 2  
 DEVELOPED BY D. Thomas  
 STARTED DEVEL. 10/13/2020 1338  
DATE TIME  
 W.L. BEFORE DEVEL. 37.20 10.13.2020 1306  
WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 108.95  
 STANDING WATER COLUMN (FT.) 71.75  
 SCREEN LENGTH 10'

WELL ID: PZ-50D  
 DATE OF INSTALL. 10/8/2020  
 COMPLETED DEVEL. 10/15/2020 1130  
DATE TIME  
 WL AFTER DEVEL. 103.30 10/15/2020 1145  
WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. 109.00  
 STANDING WELL VOLUME 11.7 gal.  
 DRILLING WATER LOSS 0 gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft)	FIELD PARAMETERS							REMARKS
				pH (s.u.)	Sp. Cond. (uS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
10.13.2020 / 1340	0	0.5	41.60	9.30	468.5	26.29	>1000	gray	3.18	134.8	surging
10.13.2020 / 1345	2.5		59.50	9.21	320.4	22.98	>1000	gray	3.03	98.4	
10.13.2020 / 1355	5		93.56	9.33	303.000	23.44	>1000	gray	3.71	85.7	
--- Well went dry at 1400 and recovered 1 foot in 15 minutes. Added 5 gallons of DI water ---											
10.13.2020 / 1415	-5										DI water added
10.13.2020 / 1420	2.5	0.5	80.50	9.40	54.4	24.24	>1000	gray-brown	8.61	50.70	surging
10.13.2020 / 1435	7.5	0.5	102.20	8.61	275.0	23.27	>1000	gray-brown	9.26	83.60	
10.13.2020 / 1440											--- Started development again ---
10.13.2020 / 1450	5	0.5	102.80	8.66	288.9	26.92	>1000	gray-brown	8.37	66.2	
--- Well went dry at 1450, added 10 gallons of DI water at 1455 ---											
10.13.2020 / 1455	-10										DI water added
10.13.2020 / 1500											2
10.13.2020 / 1515	7.5	0.5	102.50	9.24	27.8	28.17	>1000	gray	7.92	102.4	surging
10.13.2020 / 1530	7.5	0.5	102.70	8.45	170.0	25.41	>1000	gray	8.24	701.5	
--- Well went dry, added 5 gallons of DI water ---											
10.13.2020 / 1550	-5										DI water added
10.13.2020 / 1555											--- Started development again ---
10.13.2020 / 1600	1.25	0.25	97.50	8.41	43.4	25.85	>1000	brown	8.55	106.2	
10.13.2020 / 1610	2.50	0.25	103.10	8.14	192.4	25.24	>1000	gray	8.40	103.8	Well went dry at 1618 & recharged 0.4' in 30 minutes
10.13.2020 / 1700											--- Will return tomorrow to continue development ---
10.14.2020 / 0842	--	--	84.9	--	--	--	--	--	--	--	Began development at 0852
10.14.2020 / 0900	1.75	0.25	BTOP	7.70	859.4	19.25	46.8	clear	9.80	146.8	
--- Air compressor stopped working and paused development. Began development at 0910 ---											
10.14.2020 / 0918	2.00	0.25	BTOP	7.63	103.4	18.43	38.8	clear	9.80	146.8	
--- Well went dry, added 5 gallons of DI water ---											
10.14.2020 / 0923	-5										DI water added
10.14.2020 / 0927	0										--- Started development again ---
10.14.2020 / 0943	5	0.31	BTOP	8.01	291.9	18.79	39.1	clear	9.80	105.9	
10.14.2020 / 0948	--	--	102.00								--- Well went dry. Waiting for recharge and delivery of more DI water. Will return tomorrow to continue developing ---
10.15.2020 / 1050	--	--	85.30	--	--	--	--	--	--	--	
10.15.2020 / 1055	2.25	0.25	93.70	6.93	1332.4	23.61	26.3	clear	8.91	96.8	
10.15.2020 / 1100	1.25	0.25	95.30	6.85	1261.6	22.63	8.98	clear	6.03	89	
10.15.2020 / 1105	1.25	0.25	97.00	6.67	1242.6	22.41	7.17	clear	5.72	83	
10.15.2020 / 1115	2.5	0.25	BTOP	6.65	1212.7	22.71	5.07	clear	5.71	82	
10.15.2020 / 1120	1.25	0.25	BTOP	6.65	1211.0	22.63	5.26	clear	5.57	81.3	
10.15.2020 / 1130	2.5	0.25	BTOP	6.69	1198.3	22.89	6.96	clear	5.81	81.4	
	36	= TOTAL VOLUME REMOVED (gal.)									

DEVELOPMENT METHOD: Reclaimer and surging

NOTES: 61 gallons of water were removed, including ~25 gallons of deionized water that was added to facilitate development

BTOP = Below top of pump



## WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Plant Branch / 166625418  
 WELL DIA (in) 2  
 DEVELOPED BY D. Thomas  
 STARTED DEVEL. 10.14.2020 1130  
                             DATE                            TIME  
 W.L. BEFORE DEVEL. 40.86 10.14.2020 1100  
                             WL                            DATE                            TIME  
 WELL DEPTH: BEFORE DEVEL. 110  
 STANDING WATER COLUMN (FT.) 69.14  
 SCREEN LENGTH 10'

WELL ID: PZ-51D  
 DATE OF INSTALL. 10.9.2020  
 COMPLETED DEVEL. 10.15.2020 0920  
                             DATE                            TIME  
 WL AFTER DEVEL. 79.25 10.15.2020 0934  
                             WL                            DATE                            TIME  
 WELL DEPTH: AFTER DEVEL. 110.15  
 STANDING WELL VOLUME 11.3 gal.  
 DRILLING WATER LOSS                              gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft)	FIELD PARAMETERS							REMARKS
				pH (s.u.)	Sp. Cond. (uS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
10.14.2020 / 1130	0	0.5	51.80	8.00	232.5	22.31	>1000	brown	4.08	47.2	6 feet from bottom
10.14.2020 / 1150	10	0.5	84.60	8.40	219.6	23.29	>1000	brown	4.94	86.0	
10.14.2020 / 1200	5	0.5	100.62	8.25	282.3	22.09	75.4	cloudy	9.30	89.2	
10.14.2020 / 1215	7.5	0.5	BTOP	8.13	265.4	22.60	73.0	cloudy	8.65	87.2	
--- Well went dry, waiting for recharge ---											
10.14.2020 / 1303	--	--	83.15	--	--	--	--	--	--	--	
10.14.2020 / 1310	0	0.5	86.4	7.84	325.8	25.79	>1000	brown	8.59	93.0	surged
10.14.2020 / 1325	7.5	0.5	95.2	7.43	650.2	23.91	105	cloudy	2.23	91.7	
--- Well went dry, waiting for recharge ---											
10.14.2020 / 1435	--	--	81.95	--	--	--	--	--	--	--	
10.14.2020 / 1445	5	0.5	94.8	7.41	771.7	27.16	116	cloudy	8.70	90.6	
10.14.2020 / 1455	5	0.5	102.7	7.72	630.7	26.61	129	cloudy	8.65	108.6	
10.14.2020 / 1525	15	0.5	102.7	7.76	811.2	25.65	54	cloudy	8.66	107.2	
--- Allowing well to recharge ---											
10.14.2020 / 1625	--	0.5	94.10	--	--	--	--	--	--	--	
10.14.2020 / 1630	2.5	0.5	98.60	7.56	914.0	28.17	30.8	clear	8.82	91.6	
10.14.2020 / 1645	7.5	0.5	100.73	7.64	952.0	27.89	13.8	clear	8.33	90.0	
10.14.2020 / 1700	1.5	0.1	101.50	7.76	925.0	27.86	12.8	clear	8.65	95.0	
10.14.2020 / 1715	1.5	0.1	101.50	7.60	918.7	27.70	15.7	clear	8.32	99.7	
10.14.2020 / 1730	1.5	0.1	BTOP	7.63	932.0	27.76	18.8	clear	8.67	102.9	
--- Will continue developing tomorrow, NTU did not go below 10 ---											
10.15.2020 / 0900	0	0.25	53.20	7.37	1210.9	21.78	17.30	clear	2.94	142.2	
10.15.2020 / 0910	2.5	0.25	68.10	6.90	1024.6	21.11	6.20	clear	3.25	98.5	
10.15.2020 / 0920	2.5	0.25	76.70	6.77	1036.4	20.86	5.74	clear	3.17	69.2	
--- Development Complete ---											
74.5	= TOTAL VOLUME REMOVED (gal.)										

DEVELOPMENT METHOD: Reclaimer and surging  
 NOTES: BTOP = Below top of pump

Project Plant Branch  
 Field Staff D.Thomas

**Instrument Calibration**

Date: 10-13-20 Time: 1200

Parameter	Units	Standard	SmarTROLL SN 643819 iPad # 79	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	92.7			
Conductivity	us/cm	4490	4485			
pH	S.U.	4.00	4.00 4.13			
pH	S.U.	7.00	7.02			
pH	S.U.	10.00	9.89			
ORP	mV	228.00	228.00			

	Units	Standard	LaMotte SN 2953-0413	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
Turbidity	NTU	0.0	0.0			
	NTU	1.0	1.0			
	NTU	10.0	10.0			

Date: 10-14-20 Time: 0810

Parameter	Units	Standard	SmarTROLL SN 643819 iPad # 79	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	91.3			
Conductivity	us/cm	4490	4255			
pH	S.U.	4.00	4.20			
pH	S.U.	7.00	7.04			
pH	S.U.	10.00	9.86			
ORP	mV	228.00	232.2			

	Units	Standard	LaMotte SN 2953-0413	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
Turbidity	NTU	0.0	0.0			
	NTU	1.0	1.0			
	NTU	10.0	10.0			

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

2.30



Project Plant Branch  
 Field Staff D.Thomas

**Instrument Calibration**

Date: <sup>D1</sup> ~~0830-1015-20~~ Time: <sup>DT</sup> ~~1015-20~~ 0830

Parameter	Units	Standard	SmarTROLL SN <u>643819</u> iPad # <u>79</u>	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100	<u>92.30</u>			
Conductivity	us/cm	4490	<u>4288</u>			
pH	S.U.	4.00	<u>4.16</u>			
pH	S.U.	7.00	<u>7.02</u>			
pH	S.U.	10.00	<u>9.90</u>			
ORP	mV	228.00	<u>224.4</u>			

Turbidity	Units	Standard	LaMotte SN <u>2953-043</u>	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0	<u>0.0</u>			
	NTU	1.0	<u>1.0</u>			
	NTU	10.0	<u>10.0</u>			

Date:

Time:

Parameter	Units	Standard	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____	SmarTROLL SN _____ iPad # _____
DO	% saturation	100				
Conductivity	us/cm	4490				
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00				

Turbidity	Units	Standard	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____	LaMotte SN _____
	NTU	0.0				
	NTU	1.0				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

APPENDIX C

# CERTIFIED WELL SURVEY



1469 Highway 20 West • McDonough, GA 30253  
phone 770-707-0777 fax 770-707-0755  
WWW.METRO-ENGINEERING.COM

## SURVEYOR'S REPORT

### SCOPE OF WORK:

Field survey of existing monitoring wells at Georgia Power Company, Plant Branch in Milledgeville, GA.

Horizontal and vertical datum were derived from RTK GPS observations with corrections from the eGPS network and conventional surveying equipment. Horizontal datum is Georgia State Plane, West Zone, NAD83(2011) and vertical datum is NAVD88.

### EQUIPMENT USED TO ESTABLISH THE MONITORING WELL LOCATIONS:

Trimble R8 Dual Frequency GPS Receiver  
Leica TS16 Total Station  
Leica DNA10 Digital Level

### CERTIFICATION:

I hereby certify that the center of well casing (PVC) has a horizontal accuracy of 0.5+/- feet or better using a Trimble R8 Dual Frequency RTK (survey-grade) global positioning system receiver referencing the Georgia State Plane, west zone, NAD83(2011) coordinate system in US survey feet. The top of well casing (PVC) elevation data was determined in feet above mean sea level based on the NAVD88 vertical datum. Vertical data was confirmed to be accurate within 0.01 foot through establishment of a closed level check loop with a Leica DNA10 digital level having a published accuracy of 0.9mm per dual-traverse kilometer.

  
James R. Green R.L.S. No. 2543

Date: 11/4/20



Plant Branch  
Monitoring Well Locations  
November 3, 2020

Well ID	LATITUDE	LONGITUDE	NAIL NORTH-ING	NAIL EASTING	NAIL ELEVATION	PVC NORTH-ING	PVC EASTING	PVC ELEVATION	ELEV AT BASE CONC/GRC
IWA-E-1	N33.196117	W83.327753	1164319.1	2553139.5	436.39	1164318.5	2553200.4	436.48	436.4
IWA-D-2	N33.192791	W83.311136	1162422.3	2556238.6	407.12	1162422.3	2553297.5	409.93	407.1
IWA-D-1	N33.191073	W83.310119	1161301.4	2556814.9	403.61	1161201.5	2558614.9	406.44	403.6
IWA-C-2	N33.190235	W83.305639	1161524.2	2559917.4	395.11	1161523.0	2559917.3	397.64	395.1
IWA-C-1	N33.190367	W83.306256	1161547.4	2559187.0	395.35	1161548.3	2559186.6	395.66	395.4
IWA-B-2	N33.193317	W83.304804	1162629.5	2560234.0	378.60	1162630.0	2560233.2	381.32	378.6
PZ-50D	N33.190410	W83.297817	1161589.4	2562380.3	378.32	1161588.9	2562381.2	380.58	378.3
PZ-51D	N33.190548	W83.297543	1161640.3	2562433.0	378.12	1161638.8	2562434.0	380.78	378.1
IWA-B-1	N33.199055	W83.300739	1161099.7	2561472.0	378.29	1161100.8	2561471.6	378.91	378.3



June 3, 2021

Project No. 166625421

**Mr. Joju Abraham, PG**

Southern Company Services, Inc.  
241 Ralph McGill Blvd NE  
Atlanta GA 30308

JAbraham@southerco.com

**PIEZOMETER INSTALLATION REPORT FOR SURFACE IMPOUNDMENT ASH POND BCD (AP-BCD)  
GEORGIA POWER PLANT BRANCH, MILLEDGEVILLE, GEORGIA**

Dear Mr. Abraham:

Golder Associates Inc. (Golder) is submitting this *Piezometer Installation Report* to Southern Company Services, Inc. (SCS) and Georgia Power Company (Georgia Power), which documents the construction of piezometers at surface impoundment Ash Pond BCD (AP-BCD) at Plant Branch in Milledgeville, Georgia (Site). Piezometer construction activities were performed in general accordance with the standards described in the *RCRA Technical Enforcement Guidance Document* (1986) and the *Georgia Water Wells Standards Act of 1985*. The installation of the piezometers was conducted under the oversight and direction of Brian Steele, a Georgia-registered Professional Geologist (PG).

The field activities for this investigation were performed in March and April 2021. The field work consisted of the installation and development of five (5) piezometers in March 2021. Metro Engineering & Surveying Co., Inc. (Metro) conducted a survey of the installed piezometers in April 2021. A summary of the activities is presented below. Figure 1, Site Plan and Piezometer Location Map, presents the location of each of the newly installed piezometers.

### **Piezometer Drilling and Construction Activities**

Piezometers PZ-571 through PZ-611 were drilled and installed by Cascade Drilling, LP, who was contracted through SCS, at the facility in March 2021. Cascade had a current and valid bond with the Water Wells Standards Advisory Council for the state of Georgia at the time of drilling (Appendix A). The driller's name is provided on the boring/construction diagrams presented in Appendix B.

An experienced Golder geologist was present on site to oversee and record the drilling and piezometer construction under the supervision of a professional geologist registered to practice in Georgia (Brian Steele). Drilling methods employed for borehole advancement were rotasonic drilling techniques with continuous core collected. The drilling equipment consisted of a full-sized TSI 150T Truck-Mounted Sonic drilling rig, equipped



with 4-inch sonic rods with an outer-casing sleeve. During the drilling, continuous core samples were logged in the field for lithologic and geotechnical properties.

Piezometers PZ-57I and PZ-60I were drilled using standard vertical drilling method using the rotasonic drill. Piezometers PZ-58I, PZ-59I, and PZ-61I were installed using angled drilling techniques, due to obstructions by overhead power lines at PZ-58I and PZ-59I and steep topography near Lake Sinclair at PZ-61I, which prohibited the use of traditional vertical drilling. Piezometers PZ-58I and PZ-59I were horizontally offset 15 feet on the ground surface from the desired screened interval location below overhead powerlines, and a 13-degree angle from vertical was used to reach the depth interval where each of the piezometers are screened. Piezometer PZ-61I was horizontally offset 36.5 feet on the ground surface from the desired screened interval location adjacent to Lake Sinclair, and a 32-degree angle from vertical was used to reach the depth interval where the piezometer is screened due to steep topography. Concrete pads were built with survey nails as spatial reference for where the screened intervals are located below ground surface. These pads were surveyed by Metro, with locations shown on Figure 1.

Prior to use, and between boreholes, downhole equipment was steam cleaned. The boring (lithologic) logs and piezometer construction records for the newly installed piezometers are included in Appendix B. The construction data are summarized in Table 1, and the locations of the piezometers are provided on Figure 1.

Piezometers were constructed within the borehole using factory-cleaned and sealed Schedule 40 polyvinyl chloride (PVC) products with flush-threaded fittings. Specifically, piezometers were constructed with a 10-foot section of 4-inch outer diameter (OD) and 2-inch inner diameter (ID), flush-threaded, 0.010-inch factory-slotted PVC U-Pack screen. The drillers filled the annulus of each U-Pack screen section with No. 1 filter sand. In each case, the screen was placed near the bottom of the borehole, with the remainder of the piezometer constructed from 10-foot sections of 2-inch ID, flush-threaded, PVC casing riser. A flush-threaded PVC end cap was placed on the bottom of each piezometer to provide a 0.4-foot sump/sediment trap, and the top of the piezometers to extend to approximately 2.6 feet above grade. Construction details for the piezometers are shown on the boring/construction logs in Appendix B. The PVC products used were American Society for Testing and Materials (ASTM) and National Sanitation Foundation (NSF) rated.

Following placement of the screen and casing, the annular space in each borehole adjacent to the screen was filled with US Standard Sieve size No. 1 filter pack sand as appropriate for the formation. The filter pack sand was placed into the borehole and extends approximately 2 feet above the depth of the top of the screen. Immediately following placement of the filter pack, each piezometer was pumped using a portable submersible pump until visibly clear water was discharged. A filter pack seal, composed of approximately 4 feet of hydrated 3/8" coated bentonite pellets, was then placed on top of the filter pack by slowly pouring the material down the borehole and tamping it into place. The bentonite was hydrated using potable water and allowed to cure for two hours prior to grouting the piezometer.

Following hydration of the bentonite, the remaining annular space was grouted with an AquaGuard® bentonite grout mixture to approximately 2 feet below ground surface using a tremie method. Based on information provided by the product manufacturer, AquaGuard® is a bentonite grout consisting of bentonite and additives that allow for a mixture of 30% solids by weight to facilitate grouting via tremie pipe, with additives that slow the bentonite curing so that proper placement can be achieved. Each piezometer surface completion consists of a locked, anodized aluminum protective casing and a 4-foot by 4-foot by 4-inch concrete pad. The annular space of the aluminum protective casing was filled with pea gravel to approximately 2 inches from top of PVC.

## Piezometer Development Activities

The newly installed piezometers were developed in April 2021 in general accordance with the *Monitoring Well Development Procedures* prepared by SCS (March 2016), and the US EPA Science and Ecosystem Support Division *Design and Installation of Monitoring Wells* (February 2008). The piezometers were surged using a Reclaimer pump system. During development, water quality measurements of pH, temperature, specific conductance, oxidation reduction potential (ORP), dissolved oxygen (DO), and turbidity were periodically collected using field-calibrated water quality equipment after the piezometer responded to improving conditions. Development activities were conducted utilizing a AquaTroll® multimeter and a Hach turbidimeter, and for monitoring water quality measurements. Equipment calibration forms and development forms are included in Appendix B with development details summarized in Table 2.

As presented on Table 2, between approximately 154 gallons and approximately 284 gallons of water were removed from each piezometer during development. During development, a turbidity value below 10 nephelometric turbidity units (NTUs) was achieved. Water level measurements were collected using a decontaminated electronic water level indicator, referenced to a permanent marking at the top of the casing and recorded to within 0.01 foot.

## Piezometer Survey

The newly installed piezometers were surveyed on April 12, 2021 by Metro Survey and Engineering. The survey was completed using Leica DNA10 digital level with a network of closed level loops with a positional tolerance of 0.5/0.01' H:V. The surveyed point on the top of the casing was used as reference, and the measurements were recorded to within 0.01 foot. The spatial reference concrete pads for the angled piezometers were surveyed, and the measurements were recorded within 0.01 foot. Surveyed locations and elevations are presented on the boring/construction diagrams and a site map showing the locations of the newly installed piezometers is presented in Figure 1. The certified surveyor's report is attached as Appendix C.

## Closing

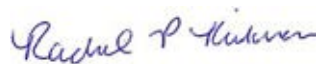
We appreciate the opportunity to assist SCS and Georgia Power with this project. Should you have any questions or require additional information, please contact the undersigned at (770) 496-1893.

Sincerely,

**Golder Associates Inc.**



  
Brian Steele, PG  
Senior Project Geologist



Rachel P. Kirkman, PG  
Principal and Senior Consultant

Attachments: Figure 1 Piezometer Location Map  
Table 1 Summary of Piezometer Construction Details  
Table 2 Summary of Piezometer Development

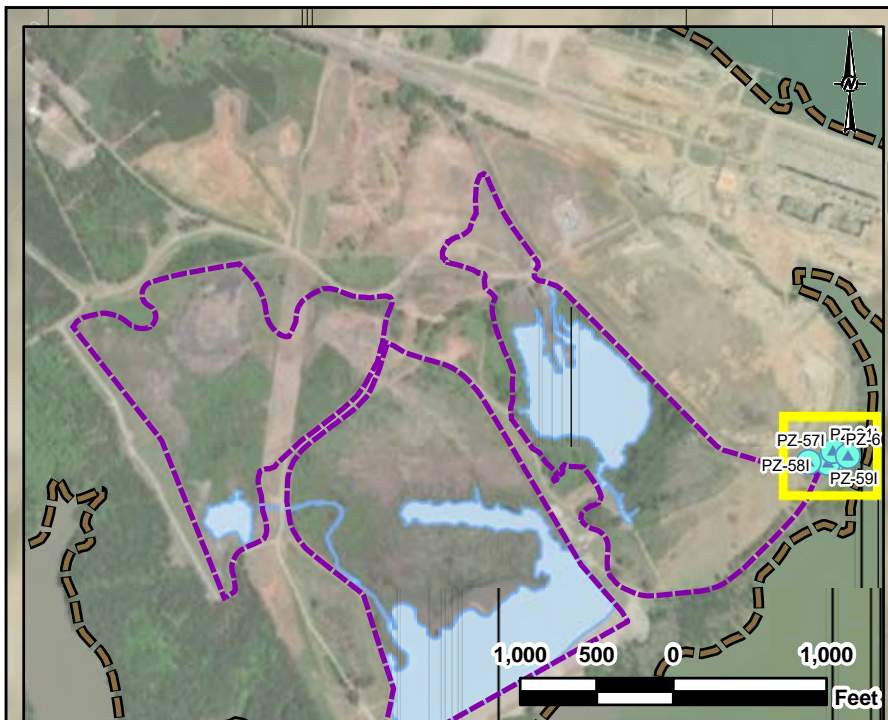
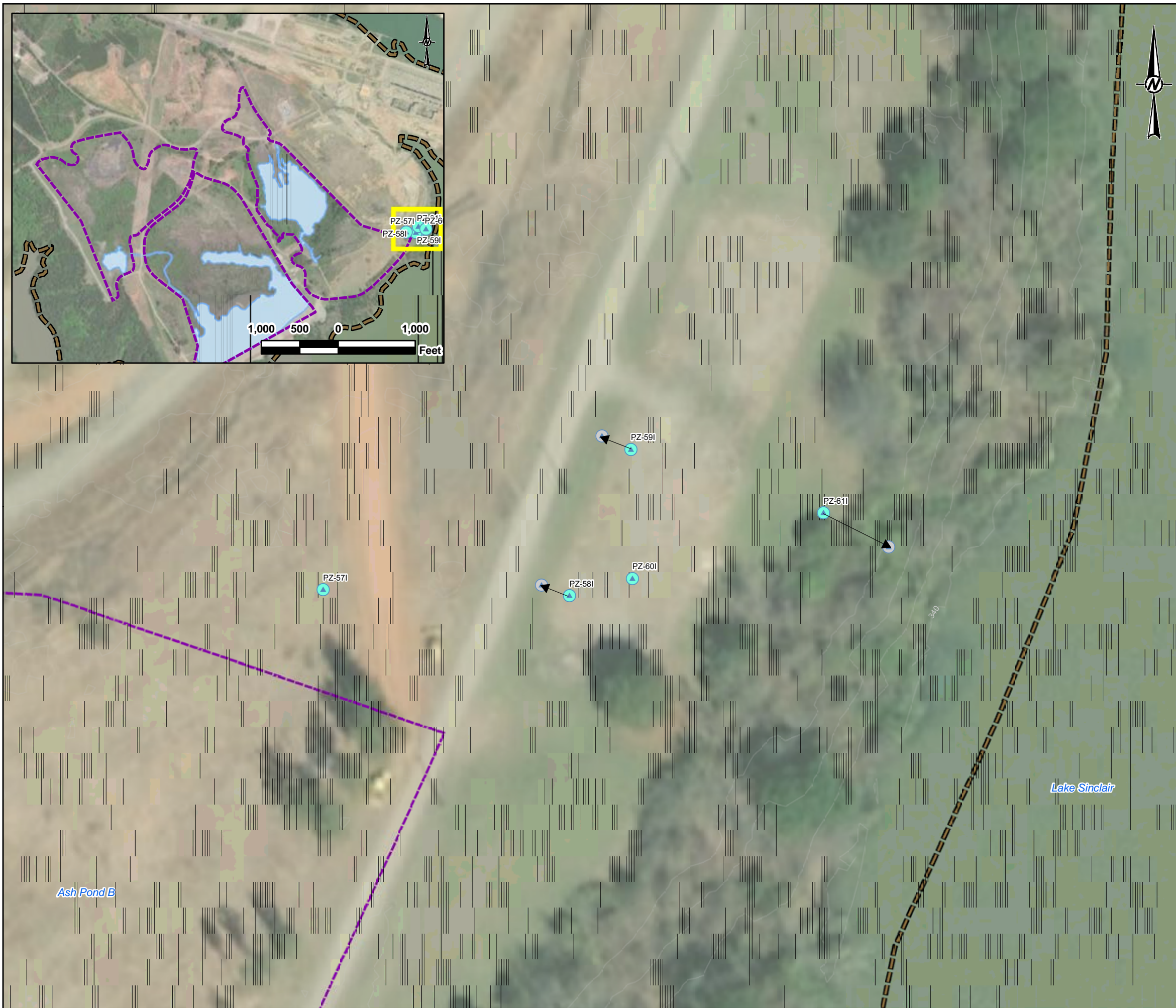
Appendix A Cascade Drilling Bond  
Appendix B Boring Logs/Construction Diagrams, Development Forms, and  
Calibration Logs  
Appendix C Certified Well Survey

[https://golderassociates.sharepoint.com/sites/11952g/shared documents/200 reports/well installation/march 2021 pz-57i through pz-61i installation report/bcd piezometer 57i-61i installation report\\_final.docx](https://golderassociates.sharepoint.com/sites/11952g/shared%20documents/200%20reports/well%20installation/march%202021%20pz-57i%20through%20pz-61i%20installation%20report/bcd%20piezometer%2057i-61i%20installation%20report_final.docx)

**FIGURE 1**

# SITE PLAN AND PIEZOMETER LOCATION MAP





- LEGEND**
- PIEZOMETER
  - SCREENED INTERVAL LOCATION FOR ANGLED PIEZOMETERS
  - PROPERTY BOUNDARY
  - APPROXIMATE ASH POND BOUNDARY
  - APPROXIMATE SURFACE WATER LIMITS

- NOTES**
1. PIEZOMETERS PZ-581, PZ-591, AND PZ-611 ARE ANGLED PIEZOMETERS. THE HORIZONTAL LOCATIONS FOR WHERE THE RESPECTIVE WELL SCREENS WERE MARKED WITH CONCRETE PADS, WITH LOCATIONS PROVIDED BY METRO ENGINEERING.
  2. ANGLED WELL DIRECTION SHOWN WITH BLACK ARROW.

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.
  4. PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING.
  5. SURFACE IMPOUNDMENT EXTENT PROVIDED BY SOUTHERN COMPANY SERVICES.



CLIENT  
**GEORGIA POWER COMPANY**

PROJECT  
 PLANT BRANCH

TITLE  
**PIEZOMETER LOCATION MAP**

CONSULTANT	YYYY-MM-DD	2021-04-21
	PREPARED	DJC
	DESIGN	BS
	REVIEW	RK
	APPROVED	

Piezometer Installation Report for Surface Impoundment Ash Pond BCD (AP-BCD)

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB

**TABLE 1**

# SUMMARY OF PIEZOMETER CONSTRUCTION DETAILS

**TABLE 1**  
**SUMMARY OF PIEZOMETER CONSTRUCTION DETAILS**  
 Georgia Power Company - Plant Branch

Borehole ID	Latitude	Longitude	NAD 83 Northing	NAD 83 Easting	Elevation On Top Of PVC (feet NAVD88)	Elevation Ground Surface (feet NAVD88)	Total Depth (feet bgs)	Depth to Bedrock (feet bgs)	Screened Interval (feet bgs)	Core Available	Water Level (feet bTOC)	Date Installed
PZ-57I	33.190395	-83.298504	1161582.2	2562170.2	382.50	379.4	77.4	Not encountered	65.6 - 75.6	Sonic Core	36.48	3/24/2021
PZ-58I	33.190383	-83.298087	1161579.1	2562297.9	382.27	379.3	66.8	63.0	53.6 - 63.6	Sonic Core	37.15	3/27/2021
PZ-58I/CCPAD	33.190399	-83.298134	1161584.7	2562283.4	NA	379.8	NA	NA	NA	NA	NA	3/27/2021
PZ-59I	33.190591	-83.297981	1161654.9	2562329.8	383.49	379.9	66.0	Not encountered	55.6 - 65.6	Sonic Core	38.55	3/31/2021
PZ-59I/CCPAD	33.190610	-83.298029	1161661.9	2562314.8	NA	379.6	NA	NA	NA	NA	NA	3/31/2021
PZ-60I	33.190407	-83.297979	1161588.0	2562330.6	382.61	379.5	65.5	58.0	50.5 - 60.5	Sonic Core	37.52	3/29/2021
PZ-61I	33.190498	-83.297655	1161621.9	2562429.7	380.64	377.7	76.0	Not encountered	65.7 - 75.7	Sonic Core	48.78	3/30/2021
PZ-61I/CCPAD	33.190449	-83.297545	1161604.4	2562463.4	NA	366.5	NA	NA	NA	NA	NA	3/30/2021

Notes:

NAD - North American Datum

NAVD88 - North American Vertical Datum 1988

bgs - Below ground surface

bTOC - Below Top of Casing

Survey Data from Metro Engineering & Surveying Co., Inc.

NA - Not available

CCPAD - Horizontal locations for where the respective well screens are spatially located, marked with concrete pads and surveyed by Metro Engineering & Surveying Co., Inc.

**TABLE 2**

## **SUMMARY OF PIEZOMETER DEVELOPMENT DATA**



**TABLE 2**  
**SUMMARY OF PIEZOMETER DEVELOPMENT**  
 Georgia Power Company - Plant Branch

Piezometer ID	Date Started	Time Started (hr:min)	Development Method	Measured Total Depth of Well (ft bTOC)	Initial Water level (ft bTOC)	Final Water Level (ft bTOC)	Volume of Casing (gal)	Total Volume Removed (gal)	pH (SU)	Specific Conductance (mS/cm)	Temp (°C)	Turbidity (NTU)	ORP (mV)	DO (mg/L)
PZ-57I	4/5/2021	15:00	Reclaimer Pump	80.20	34.76	36.48	7.4	227	5.53	0.75	21.97	9.60	-319.7	0.09
PZ-58I	4/5/2021	15:20	Reclaimer Pump	67.80	37.15	40.25	4.99	258	4.39	1.39	21.13	9.69	96.3	0.42
PZ-59I	4/7/2021	8:00	Reclaimer Pump	68.00	38.55	43.52	4.8	284	3.88	3.63	21.24	8.62	118.5	0.75
PZ-60I	4/6/2021	16:25	Reclaimer Pump	64.05	37.20	37.52	4.4	154	5.11	2.49	22.66	2.74	-14.2	0.24
PZ-61I	4/7/2021	15:30	Reclaimer Pump	77.95	47.66	48.78	4.94	154	5.10	2.65	23.98	4.55	-81.7	0.86

**Notes:**

hr:min - hours:minutes  
 ft bTOC - feet below Top of Casing  
 gal - gallons  
 SU - Standard Units  
 mS/cm - millisiemens per centimeter  
 °C - degrees Celcius  
 NTU - nephelometric turbidity units  
 mV - millivolts  
 mg/L - milligrams per liter  
 ORP - oxygen reduction potential  
 DO - dissolved oxygen

**APPENDIX A**

# CADCADE DRILLING BOND

**COPY**

CONTINUATION  
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. **800031223**

dated effective **June 30, 2017**  
(MONTH-DAY-YEAR)

on behalf of **Michael C. Rice and Cascade Drilling, L.P., any and all employees, officers and partners**  
(PRINCIPAL)

and in favor of **State of Georgia**  
(OBLIGEE)

does hereby continue said bond in force for the further period

beginning on **June 30, 2019**  
(MONTH-DAY-YEAR)

and ending on **June 30, 2021**  
(MONTH-DAY-YEAR)

Amount of bond **Thirty Thousand and Zero/100 (\$30,000.00)**

Description of bond **Water Well Contractor Performance Bond**

Premium: **\$1,200.00**

**PROVIDED: That this continuation certificate does not create a new obligation and is executed upon the express condition and provision that the Surety's liability under said bond and this and all Continuation Certificates issued in connection therewith shall not be cumulative and that the said Surety's aggregate liability under said bond and this and all such Continuation Certificates on account of all defaults committed during the period (regardless of the number of years) said bond had been and shall be in force, shall not in any event exceed the amount of said bond as hereinbefore set forth.**

Signed and dated on May 9, 2019  
(MONTH-DAY-YEAR)  
Atlantic Specialty Insurance Company

By \_\_\_\_\_  
Attorney-in-Fact **Elizabeth R. Hahn**

Parker, Smith & Feek, Inc.  
Agent

2233 112th Ave NE Bellevue, WA 98004  
Address of Agent

(425) 709-3600  
Telephone Number of Agent

## Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Deanna M. French, Susan B. Larson, Elizabeth R. Hahn, Jana M. Roy, Scott McGilvray, Mindie L. Rankin, Ronald J. Lange, John R. Claeys, Roger Kaltenbach, Guy Armfield, Scott Fisher, Andrew P. Larsen, Nicholas Fredrickson**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **sixty million dollars (\$60,000,000)** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-sixth day of October, 2017.

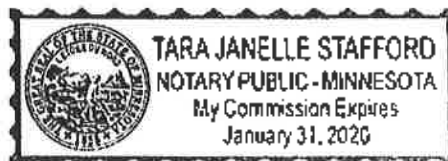
STATE OF MINNESOTA  
HENNEPIN COUNTY



By

  
Paul J. Brehm, Senior Vice President

On this twenty-sixth day of October, 2017, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.



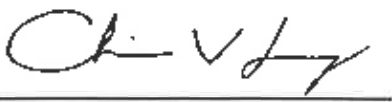
  
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 9 day of May 2019

This Power of Attorney expires  
October 1, 2019



  
Christopher V. Jerry, Secretary

**APPENDIX B**

**BORING LOGS/CONSTRUCTION  
DIAGRAMS, DEVELOPMENT  
FORMS AND CALIBRATION LOGS**

# RECORD OF BOREHOLE PZ-571

SHEET 1 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 77.40 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/23/21  
 DATE COMPLETED: 3/24/21

NORTHING: 1,161,582.20  
 EASTING: 2,562,170.20  
 GS ELEVATION: 379.4  
 TOC ELEVATION: 382.50 ft

DEPTH W.L.: 36.48  
 ELEVATION W.L.: 346.02  
 DATE W.L.: 4/6/21  
 TIME W.L.: 15:25

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
0		0.00 - 6.00 HYDROVAC HOLE, [BACKFILL], SM, silty sand, brown, micaceous, highly weathered, non-cohesive, loose	SM			1		2.00 6.50		<p><b>WELL CASING</b> Interval: 0'-65.6' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 65.6'-75.6' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 4"</p> <p><b>FILTER PACK</b> Interval: 63.3'-77.4' Type: #1 sand Quantity: 4.25 x 14L bags</p> <p><b>FILTER PACK SEAL</b> Interval: 60.2'-63.3' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gallon bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-60.2' Type: Aquaguard bentonite grout Quantity: 4 bags + 70 gal H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotosonic</p>
5	375	6.00 - 11.00 No Recovery, washout			373.4 6.00					
10	370	11.00 - 13.00 (RESIDUUM) SM, silty sand/sandy silt, brown, black, tan, micaceous, highly weathered, non-cohesive, loose. Weathered biotite gneiss piece at 11.25'	SM		368.4 11.00	2		5.00 10.00		
15	365	13.00 - 14.00 SM-SC, sandy silt/sandy clay, reddish brown; moderately to highly weathered, medium plasticity clay, non-cohesive, loose	SM-SC		366.4 13.00 365.4					
15	365	14.00 - 16.50 SM, silty sand/sandy silt, brown, micaceous with biotite and quartz, moderately to highly weathered, non-cohesive, loose	SM		362.9 14.00					
15	365	16.50 - 20.50 No Recovery. 2" lens of saprolite at 20.5'			362.9 16.50					
20	360	20.50 - 22.50 SM, silty sand/sandy silt with trace clay, brown, micaceous with biotite and quartz, moderately to highly weathered, non-cohesive, loose	SM		358.9 20.50	3		6.00 10.00		
25	355	22.50 - 23.50 SM-SC, sandy silt/sandy clay, reddish brown, highly weathered, non-cohesive, loose	SM-SC		355.9 22.50 355.9					
25	355	23.50 - 26.50 SM, silty sand/sandy silt, brown, micaceous with biotite and quartz, moderately to highly weathered, non-cohesive, loose	SM		352.9 23.50					
30	350	26.50 - 35.00 SC, sandy clay/clayey sand, high plasticity clay, brown and grey	SC		26.50	4		10.00 10.00		
35	345	35.00 - 36.50 SM, silty sand/sandy silt, brown, micaceous, moderately to highly weathered, loose, saprolite	SM-SC		344.4 35.00 342.9					
35	345	36.50 - 40.50 No Recovery, washout			36.50					
40	340	40.50 - 41.50 SM-SC, silty sand/sandy silt and sandy clay, medium plasticity clay, greyish brown, moderately to highly weathered, cohesive, firm	SM-SC		338.9 40.50 337.9	5		6.00 10.00		
45	335	41.50 - 54.00 SC-CL, sandy clay, brownish red, moderately to highly weathered, cohesive, stiff	SC-CL		41.50	6		8.00 10.00		

Log continued on next page

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



# RECORD OF BOREHOLE PZ-571

SHEET 2 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 77.40 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/23/21  
 DATE COMPLETED: 3/24/21

NORTHING: 1,161,582.20  
 EASTING: 2,562,170.20  
 GS ELEVATION: 379.4  
 TOC ELEVATION: 382.50 ft

DEPTH W.L.: 36.48  
 ELEVATION W.L.: 346.02  
 DATE W.L.: 4/6/21  
 TIME W.L.: 15:25

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
50		41.50 - 54.00 SC-CL, sandy clay, brownish red, moderately to highly weathered, cohesive, stiff <i>(Continued)</i>	SC-CL	[Hatched Pattern]	325.4	6	[Photo]	8.00 10.00	[Piezo Diagram]	<b>WELL CASING</b> Interval: 0'-65.6' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 65.6'-75.6' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 4"  <b>FILTER PACK</b> Interval: 65.6'-77.4' Type: #1 sand Quantity: 4.25 x 14L bags  <b>FILTER PACK SEAL</b> Interval: 60.2'-63.3' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gallon bucket  <b>ANNULUS SEAL</b> Interval: 0'-60.2' Type: Aquaguard bentonite grout Quantity: 4 bags + 70 gal H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotosonic
55	325	54.00 - 56.50 SM, silty sand/sandy silt, brown, micaceous, moderately to highly weathered, non-cohesive, loose	SM	[Stippled Pattern]	54.00					
		56.50 - 58.50 No Recovery, washout			322.9					
60	320	58.50 - 63.00 SC-CL, sandy clay, brownish red, moderately to highly weathered, cohesive, stiff	SC-CL	[Hatched Pattern]	58.50	7	[Photo]	8.00 10.00		
		63.00 - 66.50 SM, silty sand/sandy silt with trace clay, greyish brown with some tan, micaceous with biotite and quartz, some saprolite, non-cohesive, loose	SM	[Stippled Pattern]	316.4					
65	315	66.50 - 77.40 Transitionally weathered rock (TWR) GM, silty sandy gravel, gravel sized fragments of gneiss with black and white banding, non-cohesive	TWR	[Circular Pattern]	312.9	8		10.00 10.00		
					66.50					
70	310	Boring completed at 77.40 ft								
75	305									
80	300									
85	295									
90	290									
95	285									
100	280									

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



**RECORD OF BOREHOLE PZ-581**

PROJECT: SCS Plant Branch  
PROJECT NUMBER: 166625421  
DRILLED DEPTH: 66.80 ft  
LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
DATE STARTED: 3/25/21  
DATE COMPLETED: 3/27/21

NORTHING: 1,161,579.10  
EASTING: 2,562,297.90  
GS ELEVATION: 379.3  
TOC ELEVATION: 382.27 ft

SHEET 1 of 2

DEPTH W.L.: 37.15  
ELEVATION W.L.: 345.12  
DATE W.L.: 4/5/21  
TIME W.L.: 14:10

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO		
0		0.00 - 5.50 SM, silty sand, brown, micaceous, highly weathered, non-cohesive, loose	SM		373.8	1		5.50 5.50	<p><b>WELL CASING</b> Interval: 0'-53.6' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 53.6'-63.6' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 4"</p> <p><b>FILTER PACK</b> Interval: 50'-66.8' Type: #1 sand Quantity: 4.5 x 14L bags</p> <p><b>FILTER PACK SEAL</b> Interval: 46.4'-50' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gal bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-46.4' Type: Aquaguard bentonite grout Quantity: 3.5 bags + 60 gal H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotosonic</p> <p><b>NOTES</b> Angled piezometer, drilled at 13 degrees from vertical</p>
375		5.50 - 7.50 No recovery, washout			371.8				
370		7.50 - 15.50 SM, silty sand with trace clay and gravel, brown, micaceous, highly weathered, non-cohesive, loose; 4" thick lens of clay with some sand at 9.5', w>PL; below clay 4" biotite gneiss riprap; trace angular gravels of biotite gneiss with biotite, quartz and plagioclase throughout run	SM		7.50	2		8.00 10.00	
365		15.50 - 19.50 No recovery, washout			363.8				
360		19.50 - 25.50 SM, silty sand with trace clay and gravel, brown, micaceous, highly weathered, non-cohesive, loose; 1.5" lens of biotite gneiss riprap; cobble-size gravels of biotite gneiss with biotite, quartz and plagioclase	SM		359.8	3		6.00 10.00	
355		25.50 - 29.50 No recovery, washout			353.8				
350		29.50 - 31.00 SM, silty sand, brown, micaceous, highly weathered, non-cohesive, loose	SM		349.8	4		6.00 10.00	
345		31.00 - 35.00 CL; sandy clay, brown, cohesive, stiff to very stiff, w>PL	CL		348.3				
340		35.00 - 35.50 OL, organic soils, black, roots and plant materials visible with sandy silt mixed, non-cohesive, loose	OL		344.3				
335		35.50 - 39.00 CH, clay with some organics and some silt, reddish brown, micaceous, cohesive, stiff to very stiff, w>PL	CH		35.50				
330		39.00 - 43.00 SM, silty sand, reddish brown, micaceous, cohesive	SM		340.3	5		10.00 10.00	
325		43.00 - 45.50 GM, silty sandy gravel, light tan to grey, biotite gneiss gravels and cobbles, biotite, quartz, plagioclase; non-cohesive, loose	GM		336.3				
320		45.50 - 47.50 SM, silty sand, reddish brown, micaceous, cohesive	SM		43.00				
315		47.50 - 49.00 Transitionally weathered rock (TWR) GM, silty sandy gravel, light tan to grey, biotite gneiss gravels and cobbles, biotite, quartz, plagioclase; non-cohesive, loose	TWR		333.8	6		3.50 3.50	
310		Bedrock			45.50				
305					331.8			3/8" Pel-Plug Benotite Pellets	
300					330.3	7		6.00	

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
DRILLING COMPANY: Cascade Environmental  
DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
CHECKED BY: Rachel P. Kirkman, PG  
DATE: 5/14/21





# RECORD OF BOREHOLE PZ-581

SHEET 2 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 66.80 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/25/21  
 DATE COMPLETED: 3/27/21

NORTHING: 1,161,579.10  
 EASTING: 2,562,297.90  
 GS ELEVATION: 379.3  
 TOC ELEVATION: 382.27 ft

DEPTH W.L.: 37.15  
 ELEVATION W.L.: 345.12  
 DATE W.L.: 4/5/21  
 TIME W.L.: 14:10

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
50		49.00 - 51.50 (BEDROCK) Biotite Gneiss, black and white banded with biotite, quartz, plagioclase, and hornblende <i>(Continued)</i>	Bedrock		327.8			6.00	#1 Filter Sand  0.010" Slotted Schedule 40 PVC U-pack Screen  Sump	<b>WELL CASING</b> Interval: 0'-53.6' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 53.6'-63.6' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 4"  <b>FILTER PACK</b> Interval: 50'-66.8' Type: #1 sand Quantity: 4.5 x 14L bags  <b>FILTER PACK SEAL</b> Interval: 46.4'-50' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gal bucket  <b>ANNULUS SEAL</b> Interval: 0'-46.4' Type: Aquaguard bentonite grout Quantity: 3.5 bags + 60 gal H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotosonic  <b>NOTES</b> Angled piezometer, drilled at 13 degrees from vertical
		51.50 - 63.00 Transitionally weathered rock (TWR) SW-GW, coarse sand and gravel, brown to light brown, micaceous, non-cohesive, loose	TWR		51.50	7		6.00 6.00		
		63.00 - 66.80 (BEDROCK) Biotite Gneiss, black and white banded with biotite, quartz, plagioclase, and hornblende	Bedrock		316.3			7.50 7.50		
					63.00	9		4.30 4.30		
		Boring completed at 66.80 ft			312.5					

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



# RECORD OF BOREHOLE PZ-59I












SHEET 1 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 66.00 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/30/21  
 DATE COMPLETED: 3/31/21

NORTHING: 1,161,654.90  
 EASTING: 2,562,329.80  
 GS ELEVATION: 379.9  
 TOC ELEVATION: 383.49 ft

DEPTH W.L.: 38.55  
 ELEVATION W.L.: 344.91  
 DATE W.L.: 4/7/21  
 TIME W.L.: 07:50

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
0		0.00 - 6.00 SM, silty sand, brown to reddish brown, micaceous, highly weathered, non-cohesive, loose, moist	SM			1		6.00 6.00	Bentonite Grout	<p><b>WELL CASING</b> Interval: 0'-55.6' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 55.6'-65.6' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 4"</p> <p><b>FILTER PACK</b> Interval: 53'-66' Type: #1 sand Quantity: 4.5x 14L bags</p> <p><b>FILTER PACK SEAL</b> Interval: 49.3'-53' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gal bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-49.3' Type: Aquaguard bentonite grout Quantity: 4 bags + 70 gal H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotasonic</p> <p><b>NOTES</b> Angled piezometer, drilled at 13 degrees from vertical</p>
5	375	6.00 - 8.00 No Recovery, washout			373.9 6.00					
10	370	8.00 - 16.00 SM, silty sand, brown, grey, reddish brown, micaceous, highly weathered, non-cohesive, loose, moist	SM		371.9 8.00	2		8.00 10.00		
15	365	16.00 - 26.00 SM, silty sand, brown, grey, and greyish brown, micaceous, non-cohesive, loose, moist. Thin 0.3' lens of sandy clay at bottom of run. Some broken biotite gneiss fragments (crumbly, loose) at 24'-25'			363.9 16.00					
20	360		SM			3		9.00 10.00		
25	355	26.00 - 31.00 SM, silty sand, brown, grey, and greyish brown, micaceous, non-cohesive, loose, wet.	SM		353.9 26.00					
30	350	31.00 - 36.00 SC-SM, sandy clay/clayey sand with interbedded sandy silt, reddish brown, cohesive, firm to stiff, w-PL to w<PL	SC-SM		348.9 31.00	4		9.00 10.00		
35	345	36.00 - 37.00 OL, organic soils, black, roots and plant material visible with sandy silt	OL		343.9 36.00					
40	340	37.00 - 38.00 SP-GP, poorly sorted sand and gravel, black and white, fragments of biotite gneiss, biotite, quartz, and plagioclase, non-cohesive	SP-GP		341.9 37.00					
45	335	38.00 - 46.00 CH-SM, clay with silty sand, reddish brown, some organics, micaceous, cohesive, stiff to very stiff, w>PL	CH-SM			5		10.00 10.00		
50	330	46.00 - 52.00 SC-SM, sandy clay/clayey sand and silty sand, saprolite, micaceous, biotite, plagioclase, and quartz, highly weathered, cohesive, soft to firm, w-PL to w>PL	SC-SM		333.9 46.00	6		10.00 10.00		

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

Log continued on next page

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



# RECORD OF BOREHOLE PZ-591

SHEET 2 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 66.00 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/30/21  
 DATE COMPLETED: 3/31/21

NORTHING: 1,161,654.90  
 EASTING: 2,562,329.80  
 GS ELEVATION: 379.9  
 TOC ELEVATION: 383.49 ft

DEPTH W.L.: 38.55  
 ELEVATION W.L.: 344.91  
 DATE W.L.: 4/7/21  
 TIME W.L.: 07:50

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
50			SC-SM	[Hatched Pattern]	327.9					<p><b>WELL CASING</b>                      Interval: 0'-55.6'                      Material: Schedule 40 PVC                      Diameter: 2"                      Joint Type: Threaded</p> <p><b>WELL SCREEN</b>                      Interval: 55.6'-65.6'                      Material: 0.010" Slotted Schedule 40 PVC U-pack Screen                      Diameter: 2"                      Slot Size: 0.010"                      End Cap: 4"</p> <p><b>FILTER PACK</b>                      Interval: 53'-66'                      Type: #1 sand                      Quantity: 4.5x 14L bags</p> <p><b>FILTER PACK SEAL</b>                      Interval: 49.3'-53'                      Type: 3/8" Pel-Plug Benotite Pellets                      Quantity: 1 x 5 gal bucket</p> <p><b>ANNULUS SEAL</b>                      Interval: 0'-49.3'                      Type: Aquaguard bentonite grout                      Quantity: 4 bags + 70 gal H2O</p> <p><b>WELL COMPLETION</b>                      Pad: 4'x4'                      Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b>                      Soil Drill: 4-inch Sonic                      Rock Drill: NA                      Sample Type: Rotosonic</p> <p><b>NOTES</b>                      Angled piezometer, drilled at 13 degrees from vertical</p>
		52.00 - 66.00 Transitionally weathered rock (TWR) SP-GW, sandy gravel with some silty sand, coarse sand, white plagioclase lens at 51', non-cohesive, loose, moist		[Graphic Log: Sandy gravel with silty sand and white plagioclase lens]	52.00	6	[Photo: Sample 6]	10.00 10.00		
55	325									
60	320		TWR	[Graphic Log: Transitionally weathered rock]						
					313.9	7	[Photo: Sample 7]	10.00 10.00		
		Boring completed at 66.00 ft								
65	315									
70	310									
75	305									
80	300									
85	295									
90	290									
95	285									
100	280									

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



# RECORD OF BOREHOLE PZ-601

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 65.50 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/28/21  
 DATE COMPLETED: 3/29/21

NORTHING: 1,161,588.00  
 EASTING: 2,562,330.60  
 GS ELEVATION: 379.5  
 TOC ELEVATION: 382.61 ft

SHEET 1 of 2

DEPTH W.L.: 37.52  
 ELEVATION W.L.: 345.09  
 DATE W.L.: 4/7/21  
 TIME W.L.: 14:32

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
0		0.00 - 6.50 HYDROVAC HOLE, [BACKFILL], SM, silty sand, brown, micaceous, highly weathered, non-cohesive, loose	SM		373	1		6.50 6.50	Bentonite Grout	<b>WELL CASING</b> Interval: 0'-50.5' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded  <b>WELL SCREEN</b> Interval: 50.5'-60.5' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"  <b>FILTER PACK</b> Interval: 47.5'-65.5' Type: #1 sand Quantity: 5 x 14L bags  <b>FILTER PACK SEAL</b> Interval: 43'-47.5' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gal bucket  <b>ANNULUS SEAL</b> Interval: 0'-43' Type: Aquaguard bentonite grout Quantity: 5 bags + 83 gal H2O  <b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum  <b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotosonic
5	375	6.50 - 9.80 No recovery, washout			6.50					
10	370	9.80 - 16.50 SM, silty sand with some coarse gravel, brown, micaceous, gravels of biotite gneiss, highly weathered, non-cohesive, loose	SM		369.7	2		6.70 10.00		
15	365	16.50 - 22.00 No recovery, washout			363					
20	360	22.00 - 22.80 SM, silty sand, brown, micaceous, cohesive, soft, w<PL	SM		357.5	3		4.50 10.00		
25	355	22.80 - 23.50 SC, clayey sand/sandy clay lens, reddish brown, micaceous, cohesive, firm, w<PL	SC		356.7					
25	355	23.50 - 25.40 SM, silty sand, brown, micaceous, non-cohesive, loose	SM		356					
25	355	25.00 - 30.00 SM, silty sand, brown, micaceous, non-cohesive, loose	SM-GW		354.1					
25	355	25.40 - 25.00 SM-GW, silty sand with gravel, brown, micaceous, cobble-sized biotite gneiss riprap layer, non-cohesive, loose	SM		350.0					
30	350	30.00 - 34.50 SM, silty sand with some clay, brown to reddish brown, cohesive, firm to stiff, w<PL	SM		349.5	4		10.00 10.00		
35	345	34.50 - 36.50 SM, silty sand, grey, micaceous, non-cohesive, loose	SM		345					
35	345	36.50 - 40.00 No recovery, washout			34.50					
40	340	40.00 - 40.50 SM, silty sand, grey, micaceous, non-cohesive, loose; distinct layer of organic soil with visible roots and plant material at 40.5, 1/4" thick	SM		343					
40	340	40.50 - 44.50 CH, clay with some organics and some silt, reddish brown, micaceous, cohesive, firm, w>PL	CH		339.5	5		6.50 10.00		
45	335	44.50 - 46.50 Transitionally weathered rock (TWR) SW-GW, coarse sand and coarse gravel, brown to tan, non-cohesive, loose, biotite gneis	TWR		345					
45	335	46.50 - 47.80 No recovery, washout			44.50					
45	335	47.80 - 50.00 CH, clay with some organics and some silt, reddish brown, micaceous, cohesive, firm, w>PL	CH		333	6		6.70 10.00		
50	330	Log continued on next page			331.7					
					329.5					

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



# RECORD OF BOREHOLE PZ-60I



SHEET 2 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 65.50 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/28/21  
 DATE COMPLETED: 3/29/21

NORTHING: 1,161,588.00  
 EASTING: 2,562,330.60  
 GS ELEVATION: 379.5  
 TOC ELEVATION: 382.61 ft

DEPTH W.L.: 37.52  
 ELEVATION W.L.: 345.09  
 DATE W.L.: 4/7/21  
 TIME W.L.: 14:32

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO			REC
50		50.00 - 50.50 No recovery, washout 50.50 - 54.50 CH, clay with some organics and some silt, reddish brown, micaceous, cohesive, firm, w>PL	CH		50.50	6		6.70 10.00	<p>0.010" Slotted Schedule 40 PVC U-pack Screen</p> <p>Sump</p> <p>3/8" Pel-Plug Benotite Pellets</p>	<p><b>WELL CASING</b> Interval: 0'-50.5' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 50.5'-60.5' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"</p> <p><b>FILTER PACK</b> Interval: 47.5'-65.5' Type: #1 sand Quantity: 5 x 14L bags</p> <p><b>FILTER PACK SEAL</b> Interval: 43'-47.5' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gal bucket</p> <p><b>ANNULUS SEAL</b> Interval: 0'-43' Type: Aquaguard bentonite grout Quantity: 5 bags + 83 gal H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotasonic</p>
55	325	54.50 - 55.00 Transitionally weathered rock (TWR) coarse sand and cobbles of biotite gneiss, tan to grey, non-cohesive, loose	TWR		325					
60	320	55.00 - 58.00 No recovery, washout			321.5					
65	315	58.00 - 65.50 (BEDROCK) Biotite Gneiss, black and white banded with biotite, quartz and hornblende	BEDROCK		58.00	7		7.00 10.00		
		Boring completed at 65.50 ft								
70	310									
75	305									
80	300									
85	295									
90	290									
95	285									
100	280									

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



# RECORD OF BOREHOLE PZ-611


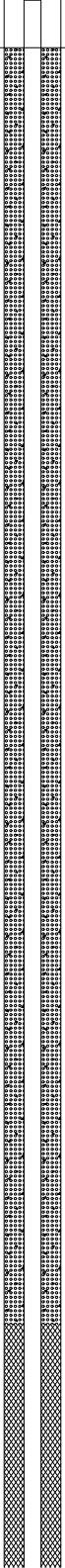





SHEET 1 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 75.00 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/29/21  
 DATE COMPLETED: 3/30/21

NORTHING: 1,161,621.90  
 EASTING: 2,562,429.70  
 GS ELEVATION: 377.7  
 TOC ELEVATION: 380.64 ft

DEPTH W.L.: 48.78  
 ELEVATION W.L.: 331.86  
 DATE W.L.: 4/8/21  
 TIME W.L.: 13:45

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES			PIEZOMETER DIAGRAM and NOTES	PIEZOMETER CONSTRUCTION DETAILS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	SAMPLE NO.	PHOTO	REC		
0		0.00 - 2.60 SM-SC, silty sand and sandy clay with trace gravel and trace organic matter, reddish brown, quartz, plagioclase, biotite in gravels. cohesive, firm to stiff, w~PL	SM-SC		375.1	1		5.00 5.00		<p><b>WELL CASING</b> Interval: 0'-65.7' Material: Schedule 40 PVC Diameter: 2" Joint Type: Threaded</p> <p><b>WELL SCREEN</b> Interval: 65.7'-75.7' Material: 0.010" Slotted Schedule 40 PVC U-pack Screen Diameter: 2" Slot Size: 0.010" End Cap: 3"</p> <p><b>FILTER PACK</b> Interval: 61'-76' Type: #1 sand Quantity: 6 x 14L bags</p> <p><b>FILTER PACK SEAL</b> Interval: 42'-61' Type: 3/8" Pel-Plug Benotite Pellets Quantity: 1 x 5 gal bucket + 2 bags</p> <p><b>ANNULUS SEAL</b> Interval: 0'-42' Type: Aquaguard bentonite grout Quantity: 4 bags + 70 gal H2O</p> <p><b>WELL COMPLETION</b> Pad: 4'x4' Protective Casing: Aluminum</p> <p><b>DRILLING METHODS</b> Soil Drill: 4-inch Sonic Rock Drill: NA Sample Type: Rotasonic</p> <p><b>NOTES</b> Angled piezometer, drilled at 32 degrees from vertical</p>
375		2.60 - 5.00 SM, silty sand, reddish brown to dark brown, micaceous, non-cohesive, loose, dry	SM		372.7					
5		5.00 - 6.00 No recovery			5.00 371.7					
370		6.00 - 15.00 SM-SC, sandy clay with ~1ft interbedded layers of silty sand, brown, greyish brown, and reddish brown, micaceous, cohesive, soft to firm (stiff from 11'-12'), w~PL to w<PL	SM-SC		6.00	2		9.00 10.00		
10										
365					362.7					
15		15.00 - 25.00 SM, sandy silt. brown, greyish brown, and tan, micaceous, non-cohesive, loose, dry	SM		15.00	3		5.00 10.00		
20										
355					352.7					
25		25.00 - 35.00 SM, sandy silt/silty sand with some gravel, brown, grey and reddish brown, grey lens of crushed rock ~27'-30'- biotite gneiss; non-cohesive, loose, dry	SM		25.00	4		4.00 10.00		
30										
345					342.7					
35		35.00 - 45.00 SM, sandy silt/silty sand, brown, grey, and reddish brown, non-cohesive, loose, dry	SM		35.00	5		3.00 10.00		
40										
335					332.7					
45		45.00 - 54.00 SM-SC, sandy silt/silty clay, brown, reddish brown, and grey, non-cohesive, loose, moist	SM-SC		45.00	6		10.00 10.00		
330										
50		Log continued on next page								

BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21





# RECORD OF BOREHOLE PZ-611

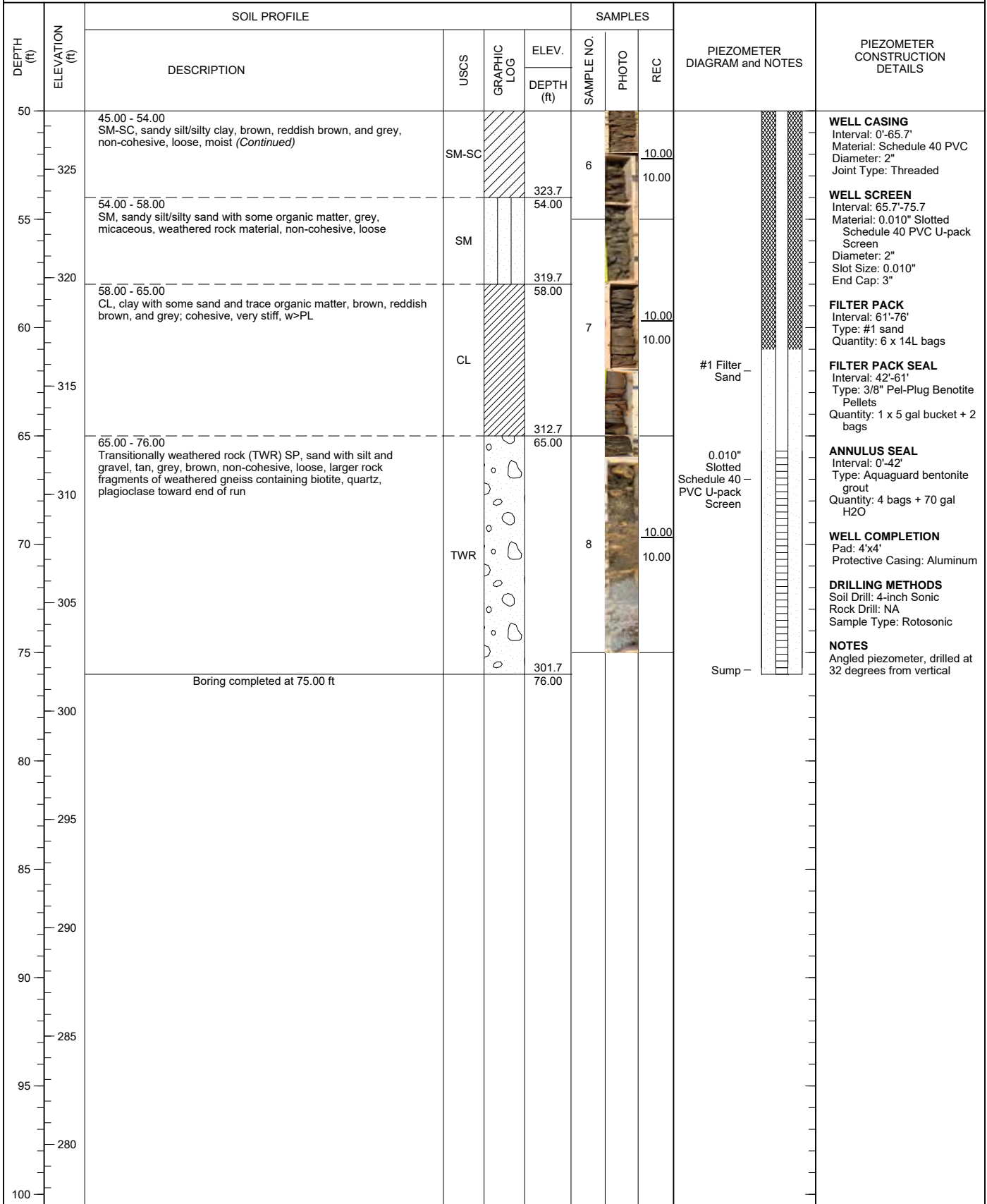
SHEET 2 of 2

PROJECT: SCS Plant Branch  
 PROJECT NUMBER: 166625421  
 DRILLED DEPTH: 75.00 ft  
 LOCATION: Milledgeville, GA

DRILL RIG: TSI 150T Truck-Mounted  
 DATE STARTED: 3/29/21  
 DATE COMPLETED: 3/30/21

NORTHING: 1,161,621.90  
 EASTING: 2,562,429.70  
 GS ELEVATION: 377.7  
 TOC ELEVATION: 380.64 ft

DEPTH W.L.: 48.78  
 ELEVATION W.L.: 331.86  
 DATE W.L.: 4/8/21  
 TIME W.L.: 13:45



BOREHOLE RECORD PLANT BRANCH PIEZO MARCH 2021.GPJ PIEDMONT.GDT 5/21/21

LOG SCALE: 1 in = 6.5 ft  
 DRILLING COMPANY: Cascade Environmental  
 DRILLER: Donald Myles

INSPECTOR: Brian Steele, PG  
 CHECKED BY: Rachel P. Kirkman, PG  
 DATE: 5/14/21



**WELL DEVELOPMENT FIELD RECORD**

PROJECT NAME / NUMBER Branch / 166625421  
 WELL DIA (in) 2  
 DEVELOPED BY J. WAGERSPAEK  
 STARTED DEVEL. 7/5/21 15:00  
DATE TIME  
 W.L. BEFORE DEVEL. 34.76 4/5 14:12  
WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 80.20  
 STANDING WATER COLUMN (FT.) 45.44  
 SCREEN LENGTH 10'

WELL ID: PZ-57E  
 DATE OF INSTALL. \_\_\_\_\_  
 COMPLETED DEVEL. 4/6/21 15:25  
DATE TIME  
 WL AFTER DEVEL. 36.48 4/6 15:25  
WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. 80.20  
 STANDING WELL VOLUME 7.40 gal.  
 DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS							PUMP FROM BOTTOM REMARKS	
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)		
4.5.21/15:00	0	0.5	34.76	—	BEGIN	DEVELOPMENT	—	—	—	—	—	6" SURGE W/ HOLE SCREEN
15:10	5	"	41.70	5.72	0.67	20.19	370	TAN	1.20	-119.0	" SURGING	
15:20	10	"	41.85	5.72	0.52	24.23	71000	BROWN	0.63	-108.6	6"	
15:30	15	"	42.0	5.67	0.54	23.17	154	cloudy	1.40	-88.5	" SURGING	
15:40	20	"	42.1	5.60	0.67	20.24	21000	BROWN	0.97	-107.9	SURGING	
15:50	25	"	42.3	5.60	0.67	20.41	71000	BROWN	1.01	-169.2		
16:00	30	"	42.6	5.65	0.69	20.36	880	TAN	1.07	-193.5	SURGING	
16:10	35	"	42.45	5.69	0.70	20.34	783	TAN	1.00	-208.3	"	
16:20	40	"	42.50	5.76	0.70	20.38	513	TAN	1.06	-226.0		
16:30	45	"	42.90	5.80	0.71	20.33	156	cloudy	1.06	-238.8	SURGING	
16:40	50	"	42.7	5.79	0.69	20.36	71000	BROWN	1.05	-246.6		
16:50	55	"	42.9	5.81	0.72	20.30	360	TAN	1.15	-250.3		
	—	—	PAUSE	DEV.	RESUME	4/6	—	—	—	—	—	
4.6.21/09:05	55	0.5	34.90	—	RESUME	DEV	—	—	—	—	—	6" SURGE W/ HOLE SCREEN
09:15	60	"	41.40	5.74	0.67	19.86	71000	BROWN	1.00	-225.3		
09:25	65	"	41.6	5.72	0.69	19.93	102	cloudy	1.11	-158.9	SURGING	
09:35	70	"	42.2	5.68	0.69	19.97	446	cloudy	1.11	-156.6		
09:45	75	"	41.8	5.71	0.72	19.93	60.3	cloudy	1.14	-159.8	SURGING	
09:55	80	"	42.1	5.67	0.72	19.91	151	cloudy	1.08	-184.6	SURGING	
10:05	85	"	42.4	5.67	0.73	20.01	198	cloudy	1.10	-188.5		
10:15	90	"	42.3	5.62	0.73	19.97	70.3	cloudy	1.10	-192.2	6" → 3', SURGING	
10:25	95	"	42.18	5.63	0.73	18.95	609	TAN	1.15	-192.2	3', SURGING	
10:35	100	"	42.5	5.62	0.73	20.09	113	cloudy	1.07	-207.9	SURGING	
10:45	105	"	42.4	5.63	0.74	20.14	259	cloudy	1.09	-207.1		
= TOTAL VOLUME REMOVED (gal.)												

DEVELOPMENT METHOD: RECLAIMER + SURGING

NOTES: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Branch/166625421  
 WELL DIA (in) 2  
 DEVELOPED BY J. WAGURSPACK  
 STARTED DEVEL. 4/5/21 15:00  
DATE TIME  
 W.L. BEFORE DEVEL. 34.76 4/5 14:12  
WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 80.20  
 STANDING WATER COLUMN (FT.) 45.44  
 SCREEN LENGTH 10'

WELL ID: PZ-57I  
 DATE OF INSTALL. 4/6/21 15:25  
DATE TIME  
 COMPLETED DEVEL. 4/6/21 15:25  
DATE TIME  
 WL AFTER DEVEL. 36.48 4/6 15:25  
WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. 80.20  
 STANDING WELL VOLUME 7.40 gal.  
 DRILLING WATER LOSS                      gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS							PUMP FROM BOTTOM REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
4:6:21/10:55	110	0.5	42.35	5.64	0.74	20.15	29.5	CLEAR	1.12	-211.1	3', surging
11:05	115	"	42.2	5.62	0.74	20.18	97.0	CLEAR	1.10	-214.5	
11:15	120	"	42.05	5.60	0.74	20.20	19.2	CLEAR	1.13	-212.6	3 → 5', surging
11:25	125	"	42.40	5.59	0.73	20.24	237	cloudy	1.09	-207.7	5', surging
11:35	130	"	42.10	5.56	0.73	20.24	143	cloudy	1.14	-205.4	surging
11:45	135	"	41.99	5.58	0.73	19.10	165	cloudy	1.23	-197.5	
11:55	140	"	41.9	5.58	0.76	20.26	22.1	clear	1.25	-197.8	surging
12:05	145	"	41.8	5.58	0.73	20.35	136	cloudy	1.13	-201.7	5" → 6", surge
13:05	175	"	41.9	5.53	0.72	19.57	17.6	clear	0.38	-238.7	6", surging
13:15	180	"	40.9	5.57	0.78	19.18	104	cloudy	0.97	-220.4	
13:25	185	"	40.9	5.55	0.77	19.11	12.7	clear	1.02	-209.0	6" → 8', surging
13:35	190	"	41.6	5.57	0.79	19.95	62.6	cloudy	0.90	-234.5	surging
13:45	195	"	41.15	5.55	0.77	19.63	22.7	clear	1.07	-197.5	8" → 5', surging
14:05	205	"	41.2	5.54	0.76	19.45	14.1	clear	1.15	-184.7	5" → 6", surging
14:25	215	"	40.4	5.54	0.77	19.25	20.3	clear	1.01	-190.2	6", surging
14:45	225	"	40.49	5.53	0.78	18.40	13.7	clear	0.92	-196.8	
			BEGIN LOW-FLOW SETUP - RECHARGE								6" → 5'
14:55	—	300 $\frac{gal}{min}$	35.0	— BEGIN LOW FLOW DEV. —							
15:25	92	300 $\frac{gal}{min}$	36.48	5.53	0.75	21.97	9.6	clear	0.09	-319.7	
			END LOW FLOW; DEV. COMPLETE								
	225 + 2.4 (92)										
	227.4	= TOTAL VOLUME REMOVED (gal)									

DEVELOPMENT METHOD: ACCLAIMER + SURGING

NOTES: RECHARGE ~ 1 ft/min

LOW FLOW TURBIDITY: 0:00 = 7.5, 5:00 = 7.9, 10:00 = 33.2, 15:00 = 55.7, 20:00 = 28.9  
 25:00 = 12.1, 30:00 = 9.6

NOTE: AQUATAUR TURBIDITY NOT CALIBRATED; USE HAND DATA ABOVE

# Low-Flow Test Report:

Test Date / Time: 4/6/2021 2:55:40 PM

Project: Plant Branch 166625421

Operator Name: Jude Waguespack

<b>Location Name: PZ-57I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 70.2 ft</b> <b>Total Depth: 80.2 ft</b> <b>Initial Depth to Water: 35 ft</b>	<b>Pump Type: Reclaimer</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 75 ft</b> <b>Estimated Total Volume Pumped: 9285 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 300 ml/min</b> <b>Final Draw Down: 1.48 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750176</b>
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## Test Notes:

Low flow development

## Weather Conditions:

Sunny, 81F

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/6/2021 2:55 PM	00:00	5.53 pH	24.30 °C	0.76 mS/cm	0.83 mg/L	7.5 NTU	-202.4 mV	35.00 ft	300.00 ml/min
4/6/2021 3:00 PM	05:00	5.51 pH	22.23 °C	0.74 mS/cm	1.07 mg/L	7.9 NTU	-182.9 mV	36.41 ft	300.00 ml/min
4/6/2021 3:01 PM	05:57	5.51 pH	22.16 °C	0.74 mS/cm	1.02 mg/L	33.2 NTU	-183.6 mV	36.41 ft	300.00 ml/min
4/6/2021 3:06 PM	10:57	5.56 pH	22.04 °C	0.82 mS/cm	0.28 mg/L	55.7 NTU	-265.1 mV	36.44 ft	300.00 ml/min
4/6/2021 3:11 PM	15:57	5.55 pH	22.13 °C	0.74 mS/cm	0.07 mg/L	28.9 NTU	-311.7 mV	36.30 ft	300.00 ml/min
4/6/2021 3:16 PM	20:57	5.53 pH	22.08 °C	0.75 mS/cm	0.05 mg/L	12.1 NTU	-326.4 mV	36.40 ft	300.00 ml/min
4/6/2021 3:21 PM	25:57	5.53 pH	21.82 °C	0.74 mS/cm	0.04 mg/L	9.6 NTU	-330.8 mV	36.42 ft	300.00 ml/min
4/6/2021 3:26 PM	30:57	5.53 pH	21.97 °C	0.75 mS/cm	0.09 mg/L	9.6 NTU	-319.7 mV	36.48 ft	300.00 ml/min

## Samples

Sample ID:	Description:
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WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER 166625421  
 WELL DIA (in) 2  
 DEVELOPED BY CT  
 STARTED DEVEL. 4-5-21 15:20  
 W.L. BEFORE DEVEL. 37.15, 4-5-21 14:10 (TOC)  
 WELL DEPTH: BEFORE DEVEL. 67.8  
 STANDING WATER COLUMN (FT.) 30.65  
 SCREEN LENGTH 10

WELL ID: P2-587  
 DATE OF INSTALL. \_\_\_\_\_  
 COMPLETED DEVEL. \_\_\_\_\_  
 W.L. AFTER DEVEL. \_\_\_\_\_  
 WELL DEPTH: AFTER DEVEL. 67.8  
 STANDING WELL VOLUME 4.99 gal.  
 DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS							REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
15:30	2.5	0.5	37.92	5.47	1.24	21.03	1100	Brown	2.28	-52.6	micaceous
15:45	4.0	0.5	38.10	5.48	1.24	20.95	1100	Brown	1.05	-236.4	throughout
16:00	8.0	20.5	38.82	5.36	1.33	20.81	1100	Grey	2.59	-177.1	↓
16:15	14.0	20.5	38.71	5.21	1.32	20.40	250	Grey	2.42	-102.6	small dip to report Houston
16:25											
16:30											
16:30	20.0	0.5	37.64	5.66	1.32	20.81	1100	grey	3.01	-147.6	(Air lift before)
16:45	27.0	0.5	38.11	5.13	1.35	20.66	771	grey	2.12	-111.9	
08:15	2.0	0.5	37.22	4.83	1.31	19.60	1100	grey	0.84	-146.5	
08:30	9.5	0.5	37.88	4.89	1.33	19.59	750	grey	0.95	-125.5	
08:45	17.0	0.5	37.91	4.80	1.32	19.71	1100	grey	1.26	-111.9	
09:00	24.0	0.5	38.11	4.83	1.34	19.80	453	grey	1.32	-140.7	
09:15	30.0	0.5	38.25	4.79	1.34	19.80	142	clayey	1.02	-73.3	
09:35	40.0	0.5	38.97	4.74	1.34	19.90	509	clayey	1.40	-17.4	after large surge
10:00	52.0	0.5	38.56	4.73	1.36	19.80	391	clayey	0.54	-97.9	
10:20	62.0	0.5	38.67	4.72	1.35	20.08	1100	brown	0.30	-125.9	large surge
10:40	72.0	0.5	38.90	4.68	1.36	20.14	407	clayey	0.65	-32.9	
10:00	80.0	0.4	38.99	4.71	1.36	20.9	1240	clayey	0.55	-37.3	Turb=1260 CF
11:15	88.0	0.5	39.10	4.65	1.36	20.55	318	clayey	0.37	-48.2	
11:30	98.0	0.5	39.21	4.65	1.37	20.61	170	clayey	0.51	-3.0	
11:45	102.0	0.5	39.25	4.65	1.36	20.82	589	clayey	0.28	-25.0	
12:00	109.0	0.5	39.30	4.60	1.37	20.76	716	clayey	0.48	0.5	
12:15	116.0	0.5	39.36	4.60	1.36	21.03	151	clayey	0.53	24.1	
	116										

DEVELOPMENT METHOD: Reckmer pump  
 NOTES: Start pump at bottom of well.  
see next page

WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER 1166625421

WELL ID: PZ-58F

WELL DIA (in) 2

DATE OF INSTALL \_\_\_\_\_

DEVELOPED BY C. T. Smith

COMPLETED LEVEL \_\_\_\_\_

STARTED LEVEL 4.5.21 15:20

DATE \_\_\_\_\_ TIME \_\_\_\_\_

W.L. BEFORE DEVEL. 37.13 4.5.21 14:10 (TOC)

WL AFTER DEVEL. \_\_\_\_\_

WELL DEPTH: BEFORE DEVEL. 67.5

WELL DEPTH: AFTER DEVEL. 67.9

STANDING WATER COLUMN (FT.) 30.65

STANDING WELL VOLUME 4.99 gal.

SCREEN LENGTH 10

DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS							REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
<u>4-6-21</u>				<u>Continued</u>							
<u>12:50</u>	<u>140.7</u>	<u>0.5</u>	<u>39.41</u>	<u>4.63</u>	<u>1.36</u>	<u>20.98</u>	<u>435</u>	<u>grey</u>	<u>0.37</u>	<u>-7.7</u>	<u>microaceous</u>
<u>12:50</u>	<u>137.0</u>	<u>0.5</u>	<u>39.52</u>	<u>4.56</u>	<u>1.36</u>	<u>20.91</u>	<u>340</u>	<u>grey</u>	<u>0.38</u>	<u>40.2</u>	
<u>13:10</u>	<u>147.0</u>	<u>0.5</u>	<u>39.59</u>	<u>4.60</u>	<u>1.37</u>	<u>21.17</u>	<u>783</u>	<u>grey</u>	<u>0.26</u>	<u>29.3</u>	
<u>13:30</u>	<u>157.0</u>	<u>0.5</u>	<u>39.67</u>	<u>4.63</u>	<u>1.36</u>	<u>21.12</u>	<u>302</u>	<u>cloudy</u>	<u>0.40</u>	<u>-12.8</u>	
<u>13:50</u>	<u>167.0</u>	<u>0.5</u>	<u>39.72</u>	<u>4.58</u>	<u>1.36</u>	<u>21.33</u>	<u>579</u>	<u>cloudy</u>	<u>0.33</u>	<u>28.5</u>	
<u>14:10</u>	<u>177.0</u>	<u>0.5</u>	<u>39.80</u>	<u>4.55</u>	<u>1.37</u>	<u>20.98</u>	<u>124</u>	<u>cloudy</u>	<u>0.72</u>	<u>69.0</u>	
<u>14:35</u>	<u>185.0</u>	<u>0.5</u>	<u>39.51</u>	<u>4.52</u>	<u>1.36</u>	<u>21.56</u>	<u>259</u>	<u>cloudy</u>	<u>0.75</u>	<u>94.7</u>	<u>indon gas to groundwater</u>
<u>14:55</u>	<u>195.0</u>	<u>0.5</u>	<u>39.60</u>	<u>4.41</u>	<u>1.37</u>	<u>21.02</u>	<u>35.6</u>	<u>clear</u>	<u>0.70</u>	<u>88.2</u>	<u>clear w/ micro</u>
<u>15:15</u>	<u>205.0</u>	<u>0.5</u>	<u>39.71</u>	<u>4.47</u>	<u>1.38</u>	<u>21.25</u>	<u>29.9</u>	<u>clear</u>	<u>0.62</u>	<u>88.7</u>	
<u>15:30</u>	<u>212.0</u>	<u>0.5</u>	<u>39.79</u>	<u>4.45</u>	<u>1.39</u>	<u>21.03</u>	<u>805</u>	<u>clear</u>	<u>0.61</u>	<u>91.7</u>	
<u>15:45</u>	<u>220.0</u>	<u>0.5</u>	<u>39.55</u>	<u>4.43</u>	<u>1.39</u>	<u>21.61</u>	<u>375</u>	<u>cloudy</u>	<u>0.67</u>	<u>84.7</u>	<u>pull up to 5' in screen.</u>
<u>16:05</u>	<u>230.0</u>	<u>0.5</u>	<u>39.89</u>	<u>4.44</u>	<u>1.38</u>	<u>21.30</u>	<u>57.8</u>	<u>clear</u>	<u>0.73</u>	<u>99.1</u>	
<u>16:20</u>	<u>237.0</u>	<u>0.5</u>	<u>39.92</u>	<u>4.42</u>	<u>1.39</u>	<u>21.29</u>	<u>29.6</u>	<u>clear</u>	<u>0.58</u>	<u>101.7</u>	
<u>16:35</u>	<u>247.0</u>	<u>0.5</u>	<u>40.03</u>	<u>4.44</u>	<u>1.39</u>	<u>21.37</u>	<u>21.4</u>	<u>clear</u>	<u>0.77</u>	<u>109.9</u>	
<u>16:50</u>	<u>249.0</u>	<u>0.5</u>	<u>40.10</u>	<u>4.41</u>	<u>1.40</u>	<u>21.42</u>	<u>18.2</u>	<u>clear</u>	<u>0.77</u>	<u>93.9</u>	<u>pull to ~9' in screen (top)</u>
<u>17:00</u>	<u>256.0</u>	<u>0.5</u>	<u>40.19</u>	<u>4.43</u>	<u>1.39</u>	<u>21.51</u>	<u>6.61</u>	<u>clear</u>	<u>0.78</u>	<u>111.3</u>	<u>drop back down to bottom</u>
<u>17:05</u>	<u>258.0</u>	<u>0.4</u>	<u>40.25</u>	<u>4.39</u>	<u>1.39</u>	<u>21.14</u>	<u>9.19</u>	<u>clear</u>	<u>0.48</u>	<u>96.2</u>	<u>DO = 0.42 CP</u>
<u>Recorded in summary file (Aguacontrol ex)</u>											
<u>Aguacontrol</u>											
<u>258.0</u> = TOTAL VOLUME REMOVED (gal.)											

DEVELOPMENT METHOD: Retainer

NOTES: clear but some lagging micro

# Low-Flow Test Report:

**Test Date / Time:** 4/6/2021 5:02:55 PM

**Project:** Plant Branch 166625421

**Operator Name:** C. Tidwell

<b>Location Name:</b> PZ-58I <b>Well Diameter:</b> 2 in <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 ft <b>Top of Screen:</b> 57.8 ft <b>Total Depth:</b> 67.8 ft <b>Initial Depth to Water:</b> 40.1 ft	<b>Pump Type:</b> Reclaimer <b>Tubing Type:</b> Poly <b>Pump Intake From TOC:</b> 62.8 ft <b>Estimated Total Volume Pumped:</b> 4500 ml <b>Flow Cell Volume:</b> 130 ml <b>Final Flow Rate:</b> 900 ml/min <b>Final Draw Down:</b> 0.15 ft	<b>Instrument Used:</b> Aqua TROLL 500 <b>Serial Number:</b> 750148
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**Test Notes:**  
Development

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/6/2021 5:02 PM	00:00	4.39 pH	21.06 °C	1.37 mS/cm	0.34 mg/L	6.61 NTU	91.8 mV	40.1 ft	900.00 ml/min
4/6/2021 5:07 PM	05:00	4.39 pH	21.13 °C	1.39 mS/cm	0.42 mg/L	9.69 NTU	96.3 mV	40.25 ft	900.00 ml/min

## Samples

Sample ID:	Description:
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WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Plant Branch 160025421  
 WELL DIA (in) 2  
 DEVELOPED BY C. Ripwell  
 STARTED LEVEL 4-7-21, 08:00  
 DATE TIME  
 W.L. BEFORE DEVEL. 39.55, 4.7.21, 07:50  
 WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 68.00  
 STANDING WATER COLUMN (FT.) 29.45  
 SCREEN LENGTH 10

WELL ID: P2 - 59 I  
 DATE OF INSTALL. \_\_\_\_\_  
 COMPLETED LEVEL. \_\_\_\_\_  
 DATE TIME  
 WL AFTER DEVEL. \_\_\_\_\_  
 WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. 68.00  
 STANDING WELL VOLUME 4.80 gal.  
 DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS							REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
08:40	10.0	0.25	50.59	4.87	2.70	19.93	+1000	brown	9.11	120.12	press for recovery
09:00	17.0	0.5	46.78	4.49	3.03	20.65	+1000	brown	1.35	-255.3	
09:20	25.0	0.4	46.80	4.84	2.96	20.71	+1000	brown	1.65	-210.7	
09:40	33.0	0.4	46.90	4.36	3.15	20.69	+1000	brown	1.04	-250.5	
10:10	43.0	0.4	47.21	4.12	3.42	20.65	+1000	brown	0.92	-212.4	
10:30	50.0	0.4	47.29	4.17	3.33	20.89	+1000	brown	0.88	-217.8	
10:50	58.0	0.4	47.55	4.09	3.38	21.05	+1000	brown	0.70	-216.1	
11:10	64.0	0.4	40.39	4.29	3.26	21.07	+1000	brown	1.73	-149.5	
11:40	75.0	0.4	40.45	4.07	3.46	21.12	859	brown	6.74	-178.8	
12:00	85.0	0.4	40.51	4.36	3.15	21.21	+1000	brown	0.97	-177.6	
12:20	92.0	0.4	40.55	4.07	3.43	21.57	+1000	brown	0.89	-142.2	
12:40	99.0	0.4	40.61	4.03	3.45	21.27	+1000	brown	0.87	-120.1	
13:00	107.00	0.4	40.70	3.96	3.50	21.28	+1000	brown	1.50	-49.6	
13:30	115.00	0.4	40.72	3.88	3.53	21.39	+1000	brown	2.44	56.0	franklestock - nr 1.6 m
13:50	123.00	0.4	40.79	3.96	3.52	21.26	145	cloudy	1.20	-49.8	
14:10	131.00	0.4	40.85	3.96	3.52	21.43	350	cloudy	0.89	-67.9	
14:30	138.00	0.4	40.88	3.99	3.52	21.35	66.9	cloudy	0.83	-61.6	
14:45	144.00	0.4	40.92	3.97	3.53	21.48	43.9	clear	0.81	-55.4	micaceous
15:00	150.00	0.4	40.97	4.00	3.52	21.35	29.9	clear	0.84	-47.5	
15:15	156.00	0.4	41.03	4.00	3.51	21.49	12.0	clear	0.73	-50.1	
15:30	161.00	0.4	41.11	3.99	3.50	21.80	875	cloudy	0.70	-19.2	pull up to 5' in screen + large grains
15:45	168.00	0.4	41.20	3.89	3.55	21.68	215	cloudy	0.58	14.4	
16:00	176.00	0.4	41.51	3.91	3.52	21.86	45.6	clear	0.51	-1.6	
16:15	182.00	0.4	41.36	3.88	3.54	21.73	120	cloudy	0.58	26.1	
				= TOTAL VOLUME REMOVED (gal.)							

DEVELOPMENT METHOD: \_\_\_\_\_  
 NOTES: Started pumping @ 08:00/4-7-21 while circulating. Heavy drawdown  
Heavy trouble getting good flow rate without air/lift. Pump rate is not constant

WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Plant Branch 1060625421  
 WELL DIA (in) 2  
 DEVELOPED BY C. Tidwell  
 STARTED LEVEL 4-7-21 08:00  
 DATE TIME  
 W.L. BEFORE DEVEL. 38.55 4-7-21 09:50  
 WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 68.00  
 STANDING WATER COLUMN (FT.) 29.45  
 SCREEN LENGTH 10'

WELL ID: P2-59I  
 DATE OF INSTALL. \_\_\_\_\_  
 COMPLETED LEVEL \_\_\_\_\_  
 GATE TIME  
 WL AFTER DEVEL. 50  
 WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. \_\_\_\_\_  
 STANDING WELL VOLUME \_\_\_\_\_ gal.  
 DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS							REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)	
16:30	190.00	0.4	41.41	3.88	3.55	21.66	36.1	clear	0.72	18.3	
16:45	195.00	0.4	41.49	3.86	3.55	21.91	188	cloudy	0.58	38.0	
09:15	195.00	0.4	38.70	4.15	3.60	20.69	282	cloudy	0.04	-141.7	drop to bottom of well
09:35	202.00	0.4	40.55	4.05	3.61	20.71	95.4	cloudy	0.77	-136.3	
10:00	209.00	0.4	42.67	4.02	3.61	20.89	22.5	clear	0.88	-113.0	
10:20	216.0	0.4	42.91	3.95	3.61	20.94	185	cloudy	0.72	-98.5	rise to 5' from bottom
10:40	220.0	0.4	43.01	3.61	3.61	20.85	47.0	clear	0.79	-85.9	transportation cables
11:00	227.0	0.4	43.08	3.93	3.62	20.96	12.5	clear	0.77	0.30	
11:20	239.0	0.4	43.15	3.87	3.63	20.99	114	cloudy	0.51	38.9	rise to 8' from bottom
11:40	246.0	0.4	43.20	3.88	3.61	21.07	70.2	cloudy	0.57	79.1	
12:00	249.0	0.4	43.27	3.89	3.60	21.41	9.31	clear	0.50	105.5	
12:20	252.0	0.4	43.31	3.79	3.68	21.03	218	cloudy	0.64	142.5	
12:40	260.0	0.4	43.39	3.85	3.66	21.19	78.7	cloudy	0.80	112.8	
13:00	267.0	0.4	43.44	3.87	3.65	21.25	43.6	clear	0.71	110.6	
13:20	273.0	0.4	43.49	3.88	3.64	21.23	28.2	clear	0.81	114.2	
13:40	280.00	0.4	43.52	3.88	3.64	21.21	9.91	clear	0.84	116.6	
13:45	282.00	0.4	43.53	3.87	3.64	21.18	8.70	clear	0.70	117.9	start recording on Agutwell
13:50	288.00	0.4	43.53	3.88	3.63	21.15	8.55	clear	0.72	119.1	
13:55	289.00	0.4	43.53	3.88	3.63	21.24	8.62	clear	0.75	118.5	
= TOTAL VOLUME REMOVED (gal.)											

DEVELOPMENT METHOD: Rockmer  
 NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Low-Flow Test Report:

Test Date / Time: 4/8/2021 1:43:11 PM

Project: Plant Branch 166625421

Operator Name: C. Tidwell

<b>Location Name: PZ-59I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 58 ft</b> <b>Total Depth: 68 ft</b> <b>Initial Depth to Water: 43.52 ft</b>	<b>Pump Type: Reclaimer</b> <b>Tubing Type: Poly</b> <b>Pump Intake From TOC: 63 ft</b> <b>Estimated Total Volume Pumped: 9000 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 900 ml/min</b> <b>Final Draw Down: .01 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750148</b>
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## Test Notes:

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/8/2021 1:43 PM	00:00	3.87 pH	21.18 °C	3.64 mS/cm	0.70 mg/L	8.70 NTU	117.9 mV	43.52 ft	900.00 ml/min
4/8/2021 1:48 PM	05:00	3.88 pH	21.15 °C	3.63 mS/cm	0.72 mg/L	8.55 NTU	119.1 mV	43.52 ft	900.00 ml/min
4/8/2021 1:53 PM	10:00	3.88 pH	21.24 °C	3.63 mS/cm	0.75 mg/L	8.62 NTU	118.5 mV	43.52 ft	900.00 ml/min

## Samples

Sample ID:	Description:
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WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Branch / 166625421  
 WELL DIA (in) 2  
 DEVELOPED BY S. WAGUESPAK  
 STARTED DEVEL. 4/6/21 16:25  
DATE TIME  
 W.L. BEFORE DEVEL. 37.20 4/6 16:03  
WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 64.05  
 STANDING WATER COLUMN (FT.) 26.85  
 SCREEN LENGTH 10'

WELL ID: PZ-60E  
 DATE OF INSTALL. 4/7 14:32  
DATE TIME  
 COMPLETED DEVEL. 4/7 14:32  
DATE TIME  
 WL AFTER DEVEL. 37.52 4/7 14:32  
WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. 64.05  
 STANDING WELL VOLUME 4.38 gal.  
 DRILLING WATER LOSS          gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS								PUMP FROM BOTTOM REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)		
4.6.21/16:25	0	0.45	37.20	BEGIN DEVELOPMENT								6" SURGE WITH SCREEN
16:36	5	0.42	42.90	5.59	3.02	20.74	7000	BROWN	1.75	-207.7	6" SURGE WITH SCREEN	
16:48	10	"	42.8	5.50	3.07	18.98	7000	BROWN	1.66	-282.0	SURGING	
17:00	15	"	42.3	5.43	2.95	19.79	160	TAN	1.48	-261.7	SURGING	
17:12	20	"	41.5	5.42	2.95	19.4	175	TAN	1.90	-217.1	SURGING	
17:24	25	"	41.7	5.39	2.94	19.99	55	cloudy	1.47	-218.2	SURGING	
				PAUSE DEV. RESUME 4/7								
4.7.21/8:30	25	1.0	37.15	RESUME DEVELOPMENT								6" SURGE WITH SCREEN
8:35	30	0.5	41.88	5.68	3.01	18.27	54.6	cloudy	15.89	181.4	6" SURGE SCREEN	
8:45	35	0.45	42.10	5.69	3.06	18.30	102	cloudy	16.91	158.2	AIR IN LINE - CUT FLOW	
8:56	40	0.31	39.0	5.30	2.99	18.59	13.1	CLEAR	1.05	-168.5	6" -> 3' SURGE	
9:12	45	0.42	39.4	5.39	3.13	17.70	115	cloudy	0.99	-143.0	SURGE, FLOW RATE ↑	
9:24	50	0.5	40.9	5.39	3.02	17.85	16.3	CLEAR	0.99	-164.1	SURGING	
9:34	55	"	41.2	5.38	3.06	19.92	122	cloudy	1.02	-166.4	SURGING	
9:54	65	"	40.8	5.33	2.89	17.51	10.6	CLEAR	1.53	-108.9	3' -> 5' SURGING	
10:01	68.5			PAUSE DEV TO FUEL GENERATOR								
10:10	68.5	0.5	39.35	RESUME DEV								SURGING
10:20	73.5	"	39.65	5.25	2.70	20.29	132	cloudy	1.43	-78.3	SURGING	
10:40	83.5	"	39.90	5.29	2.76	20.37	7.71	CLEAR	1.11	-93.8	5' -> 8' SURGING	
11:00	93.5	"	40.21	5.29	2.76	20.44	5.36	CLEAR	0.99	-89.7	8' -> 5' SURGING	
<del>11:20</del>	<del>103.5</del>	<del>0.97</del>	<del>11:07</del>	GENERATOR OUT OF FUEL - PAUSE DEV								
12:12	97	0.5	37.20	RESUME DEV								5' SURGING
12:32	107	"	39.15	5.09	2.73	20.62	6.20	CLEAR	1.04	-40.4	5' -> 6" SURGING	
12:42	112	"	38.60	4.99	2.64	17.66	81.2	cloudy	1.12	6.3		
				= TOTAL VOLUME REMOVED (gal.)								

DEVELOPMENT METHOD: RECLAIMER + SURGING

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Branch/166625421  
 WELL DIA (in) 2  
 DEVELOPED BY J. WAGUESPAK  
 STARTED DEVEL. 4/6/21 16:25  
DATE TIME  
 W.L. BEFORE DEVEL. 37.20 4/6/21 16:03  
WL DATE TIME  
 WELL DEPTH: BEFORE DEVEL. 64.05  
 STANDING WATER COLUMN (FT.) 26.85  
 SCREEN LENGTH 10'

WELL ID: PZ-60I  
 DATE OF INSTALL. \_\_\_\_\_  
 COMPLETED DEVEL. 4/7 14:32  
DATE TIME  
 WL AFTER DEVEL. 37.52 4/7/21 19:32  
WL DATE TIME  
 WELL DEPTH: AFTER DEVEL. 64.05  
 STANDING WELL VOLUME 4.38 gal.  
 DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS								Pump From BOTTOM	REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)			
4.7.21 / 13:02	122	0.5	38.95	5.15	2.73	20.18	25.5	CLEAR	1.05	-31.5	6" surging		
13:22	132	"	38.60	5.21	2.66	20.63	16.2	CLEAR	0.91	-36.9	surging		
13:42	142	"	38.75	5.26	2.71	20.68	14.4	CLEAR	1.21	-24.0	6" → 5", surge		
14:02	152	"	38.90	5.16	2.60	20.83	6.69	CLEAR	0.90	41.1			
								RECHARGE FOR LOW FLOW DEV.					
14:12		300 $\frac{gal}{min}$	37.25					BEGIN LOW FLOW DEV.					
19:32	62	300 $\frac{gal}{min}$	37.52	5.11	2.49	22.66	2.74	CLEAR	0.24	-14.2			
								DEVELOPMENT COMPLETE					
	152 + 1.6 (6") = 153.6												
	153.6										= TOTAL VOLUME REMOVED (gal.)		

DEVELOPMENT METHOD: APPLAMER + SURGING

NOTES: LOW FLOW DEV. TURBIDITY: 0:00 = 2.96, 5:00 = 2.88, 10:00 = 4.35, 15:00 = 3.96  
20:00 = 2.74

# Low-Flow Test Report:

Test Date / Time: 4/7/2021 2:12:26 PM

Project: Plant Branch 166625421

Operator Name: Jude Waguespack

<b>Location Name: PZ-60I</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 54.05 ft</b> <b>Total Depth: 64.05 ft</b> <b>Initial Depth to Water: 37.25 ft</b>	<b>Pump Type: Reclaimer</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 59 ft</b> <b>Estimated Total Volume Pumped: 6000 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 300 ml/min</b> <b>Final Draw Down: 0.27 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750176</b>
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## Test Notes:

Low flow development

## Weather Conditions:

Sunny, 81F

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/7/2021 2:12 PM	00:00	5.24 pH	25.32 °C	2.73 mS/cm	1.14 mg/L	2.96 NTU	-41.0 mV	37.25 ft	300.00 ml/min
4/7/2021 2:17 PM	05:00	5.21 pH	22.77 °C	2.65 mS/cm	0.92 mg/L	2.88 NTU	-14.9 mV	37.48 ft	300.00 ml/min
4/7/2021 2:22 PM	10:00	5.17 pH	22.62 °C	2.54 mS/cm	0.26 mg/L	4.35 NTU	-38.8 mV	37.50 ft	300.00 ml/min
4/7/2021 2:27 PM	15:00	5.13 pH	22.73 °C	2.50 mS/cm	0.28 mg/L	3.96 NTU	-14.7 mV	37.52 ft	300.00 ml/min
4/7/2021 2:32 PM	20:00	5.11 pH	22.66 °C	2.49 mS/cm	0.24 mg/L	2.74 NTU	-14.2 mV	37.52 ft	300.00 ml/min

## Samples

Sample ID:	Description:
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WELL DEVELOPMENT FIELD RECORD

PROJECT NAME / NUMBER Branch 1166625421  
 WELL DIA (in) 2  
 DEVELOPED BY J. WAGVESPACK  
 STARTED LEVEL 4/7/21 15:30  
 W.L. BEFORE DEVEL. 47.66 4/7 15:07  
 WELL DEPTH: BEFORE DEVEL. 77.95  
 STANDING WATER COLUMN (FT.) 30.29  
 SCREEN LENGTH 10'

WELL ID: PZ-61I  
 DATE OF INSTALL. \_\_\_\_\_  
 COMPLETED LEVEL. 4/8/21 13:45  
 WL AFTER DEVEL. 48.78 4/8 13:45  
 WELL DEPTH: AFTER DEVEL. 77.95  
 STANDING WELL VOLUME \_\_\_\_\_ gal.  
 DRILLING WATER LOSS \_\_\_\_\_ gal.

DATE/TIME	VOLUME REMOVED (gal)	PUMPING RATE (gpm)	DTW (ft bgs)	FIELD PARAMETERS								PUMP FROM BOTTOM REMARKS
				pH (s.u.)	Sp. Cond. (mS/cm)	TEMP. (°C)	Turbidity (NTU)	Color	RDO (mg/L)	ORP (mV)		
4.7.21/5:30	0	0.5	47.66	BEGIN DEVELOPMENT								6" SURGE W/ WIRE SCREEN
15:40	5	"	53.90	5.62	2.10	20.81	71000	BROWN	1.58	-146.3	6" SURGE SCREEN	
16:00	15	"	54.80	5.31	2.32	20.08	421	TAN	1.40	-141.2	"	
16:30	30	"	54.80	5.26	2.41	15.97	182	TAN	1.49	-116.9	"	
16:40	35	"	54.90	5.28	2.38	18.70	402.2	TAN	1.50	-111.0	"	
				PAUSE DEV RESUME 4/8								
4.8.21/9:20	35	0.5	47.38	RESUME DEV								6" SURGE SCREEN
9:30	40	0.3	54.10	5.57	2.47	19.78	35.8	cloudy	12.61	138.2	AIR IN LINE, CUT FLOW RATE	
9:40	43	0.5	54.25	5.24	2.63	19.92	803.5	TAN	1.46	-144.4	FLOW RATE ↑, SURGING	
10:00	53	"	55.20	5.24	2.36	19.04	43.2	cloudy	1.49	-156.9	6" → 3', SURGING	
10:20	63	"	55.10	5.20	2.61	20.66	51.6	cloudy	1.16	-151.7	3', SURGING	
10:40	73	"	55.25	5.18	2.62	20.44	30.9	murky	1.17	-139.6	SURGING	
11:00	83	"	55.0	5.16	2.63	20.21	32.2	murky	1.12	-137.6	SURGING	
11:20	93	"	55.1	5.13	2.64	20.01	28.5	CLEAR	1.14	-130.0		
11:40	103	"	55.2	5.14	2.63	20.17	5.80	CLEAR	1.10	-127.3	3 → 5' SURGING	
12:00	113	"	55.2	5.10	2.67	21.47	7.81	CLEAR	0.90	-128.4	5' SURGING	
12:20	123	"	55.5	5.08	2.67	20.44	8.25	CLEAR	0.97	-126.6	5' → 8' SURGING	
12:40	133	"	55.6	5.13	2.57	20.82	1.09	CLEAR	0.50	-157.9	8' → 6' SURGING	
13:00	143	"	54.7	5.04	2.73	20.92	9.47	CLEAR	1.17	-97.2	6" → 5' SURGING	
13:20	153	"	54.95	5.10	2.70	21.93	10.25	CLEAR	0.88	-113.6	RECHARGING	
				PREP FOR Low-Flow DEVELOPMENT								
13:30	153	300 $\frac{cm^3}{min}$	48.0	BEGIN low flow DEV								
13:45	4.5L	300 $\frac{cm^3}{min}$	48.78	5.10	2.65	23.98	4.55	CLEAR	0.86	-81.7		
	153 + (4.5L)			DEVELOPMENT COMPLETE								
	154.2	= TOTAL VOLUME REMOVED (gal.)										

DEVELOPMENT METHOD: RECCLAIMER + SURGING

NOTES: RECLAMER - 2 ft/min

Low Flow DEV TURBIDITY: 0:00 = 6.89, 5:00 = 6.18, 10:00 = 4.34, 15:00 = 4.55

# Low-Flow Test Report:

Test Date / Time: 4/8/2021 1:29:43 PM

Project: Plant Branch 166625421

Operator Name: Jude Waguespack

<b>Location Name: PZ-611</b> <b>Well Diameter: 2 in</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 ft</b> <b>Top of Screen: 67.95 ft</b> <b>Total Depth: 77.95 ft</b> <b>Initial Depth to Water: 48 ft</b>	<b>Pump Type: Reclaimer</b> <b>Tubing Type: Polyethylene</b> <b>Pump Intake From TOC: 72 ft</b> <b>Estimated Total Volume Pumped: 4500 ml</b> <b>Flow Cell Volume: 130 ml</b> <b>Final Flow Rate: 300 ml/min</b> <b>Final Draw Down: 0.78 ft</b>	<b>Instrument Used: Aqua TROLL 500</b> <b>Serial Number: 750176</b>
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## Test Notes:

Low flow development

## Weather Conditions:

Overcast, 75F

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
4/8/2021 1:29 PM	00:00	5.12 pH	23.85 °C	2.62 mS/cm	0.81 mg/L	6.89 NTU	-113.7 mV	48.00 ft	300.00 ml/min
4/8/2021 1:34 PM	05:00	5.07 pH	24.45 °C	2.68 mS/cm	0.83 mg/L	6.18 NTU	-81.7 mV	48.50 ft	300.00 ml/min
4/8/2021 1:39 PM	10:00	5.07 pH	23.86 °C	2.68 mS/cm	0.91 mg/L	4.34 NTU	-75.7 mV	48.78 ft	300.00 ml/min
4/8/2021 1:44 PM	15:00	5.10 pH	23.98 °C	2.65 mS/cm	0.86 mg/L	4.55 NTU	-81.7 mV	48.78 ft	300.00 ml/min

## Samples

Sample ID:	Description:
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Project Plant Branch  
 Field Staff C. Tidwell/J. Waguespack

**Instrument Calibration**

Date: 4/5/21 Time: 12:30

Parameter	Units	Standard	Date: 4/5/21 Time: 12:30			
			SmarTROLL SN 750156	4/6/21 08:18	4/7/21 07:50	4/8/21 08:35
DO	% saturation	100	105.25	93.3	92.12	104.74
Conductivity	us/cm	44907.99	6.87	4.59	4.40	4.30
pH	S.U.	4.00	3.74	4.09	4.08	3.97
pH	S.U.	7.00	6.82	7.12	7.06	7.02
pH	S.U.	10.00	9.87	10.16	10.10	9.97
ORP	mV	228.00	195.3	240.57	225.1	244.0

Turbidity	Units	Standard	Hach SN 20017	Hach SN 20017	Hach SN 20017	Hach SN 20017
	NTU	0.0100	76.7	105	102	99.3
NTU	1.020	19.8	22.8	18.1	19.7	
NTU	10.0	9.98	9.18	9.90	9.74	

Date: 4/12/21 Time: 09:04

Parameter	Units	Standard	SmarTROLL SN 750156	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____
DO	% saturation	100	99.5			
Conductivity	us/cm	44904.99	3.58			
pH	S.U.	4.00	4.04			
pH	S.U.	7.00	7.04			
pH	S.U.	10.00	10.00			
ORP	mV	228.00	239.0			

Turbidity	Units	Standard	Hach SN 20017	Hach SN _____	Hach SN _____	Hach SN _____
	NTU	0.0100	98.5			
NTU	1.020	20.1				
NTU	10.0	10.1				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated



Project Plant Branch  
 Field Staff C. Tidwell/J. Waguespack

Instrument Calibration

Date: 4-5-21 Time: 4:50 <sup>4-5</sup> 750148 4-6 4-7 4-8

Parameter	Units	Standard	SmarTROLL SN <del>750148</del>	SmarTROLL SN 750148	SmarTROLL SN 750148	SmarTROLL SN 750148
DO	% saturation	100	96.93	92.23	108.13	99.53
Conductivity	us/cm	4490	5.01	4.38	4.48	4.41
pH	S.U.	4.00	3.87	4.22	3.97	3.97
pH	S.U.	7.00	6.62	7.23	7.15	6.93
pH	S.U.	10.00	9.85	10.16	10.02	9.98
ORP	mV	228.00	203.2	231.4	238.0	226.7

# = NOMINAL

Turbidity	Units	Standard	Hach SN 16029	Hach SN 16029	Hach SN 16029	Hach SN 16029
	NTU	0.010	Will	15.98	9.55	10.3
	NTU	1.0 20	Not	15.7	18.8	23.2
	NTU	10.0	Concrete	107	104	99.7

Date: 4-12-21 Time: 09:00 <sup>using AT twin. 4-12-21 before factory cal</sup>

Parameter	Units	Standard	SmarTROLL SN 750148	SmarTROLL SN _____	SmarTROLL SN _____	SmarTROLL SN _____
DO	% saturation	100	99.71			
Conductivity	us/cm	4490	4.22			
pH	S.U.	4.00	4.04			
pH	S.U.	7.00	7.02			
pH	S.U.	10.00	10.05			
ORP	mV	228.00	237.7			

Turbidity	Units	Standard	Hach SN 16029	Hach SN _____	Hach SN _____	Hach SN _____
	NTU	0.010	11.3			
	NTU	1.0 20	15.7			
	NTU	10.0 100	99.9			

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

**APPENDIX C**

# CERTIFIED WELL SURVEY





1469 HIGHWAY 20 WEST • McDONOUGH, GA 30253  
phone: 770-707-0777 fax: 770.707-0755  
WWW.METRO-ENGINEERING.COM

## SURVEYOR'S REPORT

### SCOPE OF WORK:

Field survey of existing monitoring wells at Georgia Power Company, Plant Branch in Milledgeville, GA.

Horizontal and vertical datum were derived from RTK GPS observations with corrections from the eGPS network and conventional surveying equipment. Horizontal datum is Georgia State Plane, West Zone, NAD83(2011) and vertical datum is NAVD88.

### EQUIPMENT USED TO ESTABLISH THE MONITORING WELL LOCATIONS:

Trimble R8 Dual Frequency GPS Receiver  
Leica TS16 Total Station  
Leica DNA10 Digital Level

### CERTIFICATION:

I hereby certify that the center of well casing (PVC) has a horizontal accuracy of 0.5+/- feet or better using a Trimble R8 Dual Frequency RTK (survey-grade) global positioning system receiver referencing the Georgia State Plane, west zone, NAD83(2011) coordinate system in US survey feet. The top of well casing (PVC) elevation data was determined in feet above mean sea level based on the NAVD88 vertical datum. Vertical data was confirmed to be accurate within 0.01 foot through establishment of a closed level check loop with a Leica DNA10 digital level having a published accuracy of 0.9mm per dual-traverse kilometer.

  
James R. Green R.L.S. No. 2543



Date: 4/21/2021

Plant Branch  
Monitoring Well Locations  
April 12, 2021

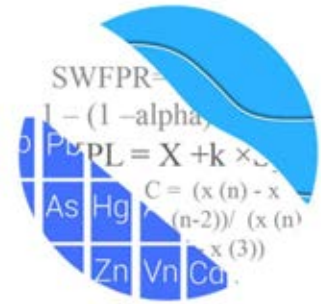
Well ID	LATITUDE	LONGITUDE	NAIL NORTH	NAIL EAST	NAIL ELEV	PVC NORTHING	PVC EASTING	TOP PVC ELEVATION	ELEV AT BASE CONC/GRD
PZ-60I	N33.190407	W83.297979	1161588.37	2562329.15	379.43	1161588.0	2562330.6	382.61	379.5
PZ-58I	N33.190383	W83.298087	1161579.97	2562295.77	379.30	1161579.1	2562297.9	382.27	379.3
PZ-58I/CCPAD	N33.190399	W83.298134	1161584.69	2562283.39	379.76	N.A.	N.A.	N.A.	N.A.
PZ-59I	N33.190591	W83.297981	1161655.77	2562327.66	379.87	1161654.9	2562329.8	383.49	379.9
PZ-59I/CC PAD	N33.190610	W83.298029	1161661.89	2562314.80	379.63	N.A.	N.A.	N.A.	N.A.
PZ-57I	N33.190395	W83.298504	1161581.71	2562171.02	379.38	1161582.2	2562170.2	382.50	379.4
PZ-61I	N33.190498	W83.297655	1161621.67	2562430.28	377.77	1161621.9	2562429.7	380.64	377.7
PZ-61I/CC PAD	N33.190449	W83.297545	1161604.38	2562463.39	366.54	N.A.	N.A.	N.A.	N.A.

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**APPENDIX C**

**STATISTICAL ANALYSES**  
**September 2020**

## GROUNDWATER STATS CONSULTING



February 23, 2021

Southern Company Services  
Attn: Mr. Joju Abraham  
241 Ralph McGill Blvd NE, Bin 10160  
Atlanta, Georgia 30308-3374

Re: Plant Branch Ponds B,C,D – September 2020 Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the September 2020 Semi-Annual Groundwater Monitoring and Corrective Action Statistical summary of groundwater data for Georgia Power Company's Plant Branch Ponds B, C, and D. The analysis complies with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009). The site is in Assessment Monitoring.

Sampling began for Appendix III and IV parameters in 2016 for most wells. However, sampling for wells BRGWC-45, BRGWC-47, BRGWC-50 and BRGWC-52I began in 2018, and at least 8 background samples have been collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of constituents has been performed for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWA-12I, BRGWA-12S, and BRGWA-23S
- **Downgradient wells:** BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
- **Delineation wells:** PZ-51I and PZ-51S

The CCR program consists of the following constituents:

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. A substitution of the most recent reporting limit is used for nondetect data.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Delineation well data are included on the time series graphs only. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

### **Summary of Statistical Methods – Appendix III Parameters:**

Based on the earlier evaluation described above, the following method was selected:

- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, the earlier portion of data are deselected prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

## Summary of Background Screening – Conducted in March 2019

### Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified either visually or by Tukey's test, flagged in the computer database with "o" and deselected prior to construction of statistical limits. A list of flagged values is provided in the outlier summary. Although outliers are screened for all wells, only outliers in upgradient wells will affect the interwell prediction limits. The current list of outliers includes a few that were not included in the previous background screening list for Appendix III parameters.

When suspected outliers were evaluated using the Tukey box plot method during the previous screening, several outliers were identified. In cases where the most recent value was identified as an outlier, values were not flagged in the database as they may represent a future trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

When any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. A substitution of the most recent reporting limit was applied when varying detection limits existed in data. Note that the reporting limit for boron for this event was 0.1 mg/L; however, the historical reporting limit of 0.04 mg/L was substituted for all nondetects which provides more conservative (lower) statistical limits.

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.



While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses, included with the background screening report, showed a handful of statistically significant decreasing trends for the Appendix III parameters. All trends noted were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to the data sets.

#### Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for fluoride, making this constituent eligible for interwell analyses. Variation was noted for boron, calcium, chloride, pH, sulfate, and TDS. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

#### **Evaluation of Appendix III Parameters – September 2020**

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through September 2020 (Figure D). Background



(upgradient) well data were re-assessed for potential outliers during this analysis and no new values were flagged. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When resamples confirm the initial exceedance, a statistically significant increase is identified, and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Prediction limit exceedances were noted for several Appendix III parameters. A summary table of the prediction limits and exceedances follows this letter.

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site which is an indication of natural variability in groundwater unrelated to practices at the site. While several statistically significant decreasing trends were noted in both upgradient and downgradient wells, only one statistically significant increasing trend was identified for calcium in downgradient well BRGWC-30I. A summary of the trend test results follows this letter.

### **Evaluation of Appendix IV Parameters – September 2020**

Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis and no new outliers were flagged. Interwell tolerance limits were used to calculate the site-specific background limits from pooled upgradient well data for Appendix IV constituents (Figure F). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution such as for combined radium 226 + 228. When data contained greater than 50% nondetects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a) (Figure G).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, CCR-rule specified level have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements, GWPS were established for statistical comparison of Appendix IV constituents for the September 2020 sample event (Figure G).

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well (Figure H). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. Those confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Exceedances were noted for cadmium and cobalt in well BRGWC-50. A summary of the confidence intervals follows this letter.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Branch Ponds B, C, D. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

A handwritten signature in cursive script that reads "Kristina Rayner".

Kristina L. Rayner  
Groundwater Statistician

# 100% Non-Detects

Analysis Run 11/1/2020 10:02 AM View: 100% Nondetects B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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Antimony (mg/L)

BRGWA-5I, BRGWA-6S, BRGWC-25I, BRGWC-27I, BRGWC-30I

Beryllium (mg/L)

BRGWA-12I, BRGWA-12S, BRGWA-23S, BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWC-25I, BRGWC-30I, BRGWC-32S, BRGWC-52I

Boron (mg/L)

BRGWA-2S

Cadmium (mg/L)

BRGWA-12I, BRGWA-12S, BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWC-25I, BRGWC-29I, BRGWC-30I, BRGWC-52I

Cobalt (mg/L)

BRGWA-12I, BRGWA-12S

Lead (mg/L)

BRGWA-12I, BRGWA-12S, BRGWC-32S, BRGWC-52I

Lithium (mg/L)

BRGWA-12S, BRGWA-2S, BRGWA-5S, BRGWC-25I

Mercury (mg/L)

BRGWA-12S, BRGWA-23S, BRGWA-5I, BRGWA-6S, BRGWC-45, BRGWC-47, BRGWC-52I, BRGWC-50

Molybdenum (mg/L)

BRGWA-12S, BRGWA-2S, BRGWA-5S, BRGWA-6S, BRGWC-27I, BRGWC-29I, BRGWC-32S, BRGWC-47

Selenium (mg/L)

BRGWA-12I, BRGWA-12S, BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWC-25I, BRGWC-52I

Thallium (mg/L)

BRGWA-12I, BRGWA-12S, BRGWA-23S, BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWC-25I, BRGWC-27I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-52I, BRGWC-50

# Federal Interwell Prediction Limit Summary - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	9/15/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	9/16/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	9/15/2020	1.1	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	9/16/2020	1.7	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	9/16/2020	1.4	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	9/16/2020	0.47	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	9/17/2020	1.9	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	9/17/2020	0.36	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	9/15/2020	40.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	9/16/2020	62.5	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	9/15/2020	55.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	9/16/2020	106	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	9/16/2020	43.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	9/16/2020	39.7	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	9/16/2020	309	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	9/17/2020	35.4	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	9/17/2020	206	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-27I	5.036	n/a	9/16/2020	5.4	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-29I	5.036	n/a	9/15/2020	5.5	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-32S	5.036	n/a	9/16/2020	5.6	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.036	n/a	9/16/2020	54.9	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-52I	5.036	n/a	9/17/2020	6.3	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.036	n/a	9/17/2020	20.1	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	9/17/2020	0.46	Yes	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
pH, Field (S.U)	BRGWC-29I	7.08	5.584	9/15/2020	4.53	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-45	7.08	5.584	9/16/2020	5.27	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.08	5.584	9/17/2020	4.41	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	9/15/2020	126	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	9/16/2020	190	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	9/15/2020	241	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	9/16/2020	334	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	9/16/2020	255	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	9/16/2020	103	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	9/16/2020	1360	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	9/17/2020	165	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	9/17/2020	1330	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	299	n/a	9/16/2020	301	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	9/16/2020	634	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	9/16/2020	428	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	9/16/2020	2090	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	9/17/2020	329	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	9/17/2020	1910	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2

# Federal Interwell Prediction Limit Summary - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	9/15/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	9/16/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	9/15/2020	1.1	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	9/16/2020	1.7	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	9/16/2020	1.4	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	9/16/2020	0.028J	No	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	9/16/2020	0.47	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	9/17/2020	1.9	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	9/17/2020	0.36	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	9/15/2020	40.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	9/16/2020	62.5	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	9/15/2020	55.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	9/16/2020	106	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	9/16/2020	43.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	9/16/2020	39.7	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	9/16/2020	309	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	9/17/2020	35.4	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	9/17/2020	206	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-25I	5.036	n/a	9/15/2020	4.9	No	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-27I	5.036	n/a	9/16/2020	5.4	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-29I	5.036	n/a	9/15/2020	5.5	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-30I	5.036	n/a	9/16/2020	4.4	No	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-32S	5.036	n/a	9/16/2020	5.6	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.036	n/a	9/16/2020	54.9	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-47	5.036	n/a	9/16/2020	4.1	No	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-52I	5.036	n/a	9/17/2020	6.3	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.036	n/a	9/17/2020	20.1	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	9/15/2020	0.15	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	9/16/2020	0.15	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	9/15/2020	0.057J	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	9/16/2020	0.13	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	9/16/2020	0.1ND	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	9/16/2020	0.052J	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	9/16/2020	0.1ND	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	9/17/2020	0.074J	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	9/17/2020	0.46	Yes	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
pH, Field (S.U)	BRGWC-25I	7.08	5.584	9/15/2020	6	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-27I	7.08	5.584	9/16/2020	5.81	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-29I	7.08	5.584	9/15/2020	4.53	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-30I	7.08	5.584	9/16/2020	6.29	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-32S	7.08	5.584	9/16/2020	5.79	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-45	7.08	5.584	9/16/2020	5.27	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-47	7.08	5.584	9/16/2020	5.76	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-52I	7.08	5.584	9/17/2020	6.12	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.08	5.584	9/17/2020	4.41	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	9/15/2020	126	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	9/16/2020	190	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	9/15/2020	241	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	9/16/2020	334	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	9/16/2020	255	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2

# Federal Interwell Prediction Limit Summary - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	9/16/2020	103	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	9/16/2020	1360	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	9/17/2020	165	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	9/17/2020	1330	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-25I	299	n/a	9/15/2020	272	No	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	299	n/a	9/16/2020	301	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	299	n/a	9/15/2020	281	No	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	9/16/2020	634	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	9/16/2020	428	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-45	299	n/a	9/16/2020	275	No	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	9/16/2020	2090	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	9/17/2020	329	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	9/17/2020	1910	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2

# Trend Test Summary - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:37 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BRGWC-27I	-0.2108	-47	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-25I	-6.82	-52	-38	Yes	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-29I	-14.31	-46	-38	Yes	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-30I	13.05	45	38	Yes	12	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-23S (bg)	-0.08225	-56	-48	Yes	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-2I (bg)	-0.1422	-59	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-12I (bg)	-0.2968	-60	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-12S (bg)	-0.2094	-52	-43	Yes	13	15.38	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-25I	-46.07	-39	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-27I	-26.6	-45	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-29I	-70.06	-52	-38	Yes	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	-50.85	-41	-38	Yes	12	0	n/a	n/a	0.01	NP



# Trend Test Summary - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/3/2020, 8:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-12I (bg)	-0.0004579	-13	-38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-12S (bg)	0	-11	-38	No	12	83.33	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-23S (bg)	0.0004028	3	38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2I (bg)	-0.0003913	-9	-38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	0	38	No	12	100	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	5	38	No	12	83.33	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-6	-38	No	12	66.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	-2	-38	No	12	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-25I	-0.1013	-18	-38	No	12	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>BRGWC-27I</b>	<b>-0.2108</b>	<b>-47</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	BRGWC-29I	-0.1128	-25	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-30I	-0.005121	-10	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-32S	0.02475	13	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-47	0.001853	3	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-52I	0.186	17	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-50	0.01538	17	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12I (bg)	0.5525	19	43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12S (bg)	0.4903	32	43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-1.169	-22	-38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	1.137	29	38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	-0.05889	-17	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	-0.08584	-3	-38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.153	-4	-38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1455	32	38	No	12	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-25I</b>	<b>-6.82</b>	<b>-52</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-27I	-4.805	-30	-38	No	12	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-29I</b>	<b>-14.31</b>	<b>-46</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>BRGWC-30I</b>	<b>13.05</b>	<b>45</b>	<b>38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-32S	-3.197	-22	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-1.319	-21	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-47	8.197	11	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-52I	5.226	11	34	No	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-50	-0.6983	-2	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-12I (bg)	-0.2129	-42	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-12S (bg)	0	-8	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-23S (bg)	-0.2572	-26	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2I (bg)	-0.02706	-7	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2S (bg)	0	0	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5I (bg)	-0.1482	-21	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5S (bg)	-0.01532	-6	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-6S (bg)	0.01532	12	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-27I	-0.09698	-10	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-29I	-0.3063	-22	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-32S	-0.2863	-24	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-45	-3.833	-24	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-52I	-0.467	-29	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-50	-1.541	-26	-38	No	12	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12I (bg)	-0.01658	-29	-48	No	14	35.71	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0	19	48	No	14	71.43	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-23S (bg)	0	-15	-48	No	14	64.29	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	-0.01511	-39	-48	No	14	42.86	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	7	48	No	14	57.14	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	17	48	No	14	71.43	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	-0.01067	-29	-48	No	14	35.71	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0	11	48	No	14	57.14	n/a	n/a	0.01	NP

# Trend Test Summary - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/3/2020, 8:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Fluoride (mg/L)	BRGWC-50	-0.2133	-32	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12I (bg)	-0.06443	-41	-58	No	16	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12S (bg)	-0.006874	-14	-53	No	15	0	n/a	n/a	0.01	NP
<b>pH, Field (S.U)</b>	<b>BRGWA-23S (bg)</b>	<b>-0.08225</b>	<b>-56</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (S.U)</b>	<b>BRGWA-2I (bg)</b>	<b>-0.1422</b>	<b>-59</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (S.U)	BRGWA-2S (bg)	-0.04353	-47	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5I (bg)	-0.03452	-29	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5S (bg)	-0.05503	-32	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-6S (bg)	-0.04101	-17	-43	No	13	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-29I	0.02098	14	48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-45	-0.04257	-13	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-50	-0.0137	-7	-53	No	15	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12I (bg)</b>	<b>-0.2968</b>	<b>-60</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12S (bg)</b>	<b>-0.2094</b>	<b>-52</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>15.38</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWA-23S (bg)	-1.903	-8	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2I (bg)	-0.1119	-11	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2S (bg)	0.04767	13	38	No	12	25	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-5I (bg)	-0.1873	-8	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-5S (bg)	-0.07276	-22	-38	No	12	25	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-6S (bg)	-0.01104	-8	-38	No	12	25	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-25I</b>	<b>-46.07</b>	<b>-39</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-27I</b>	<b>-26.6</b>	<b>-45</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-29I</b>	<b>-70.06</b>	<b>-52</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWC-30I	16.01	16	38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-32S	-29.47	-32	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-45	-2.111	-11	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-47	-45.1	-11	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-52I	-7.328	-9	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-50	-74.11	-8	-34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12I (bg)	-4.199	-25	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12S (bg)	-1.357	-8	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-23S (bg)	-11.33	-18	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2I (bg)	-1.984	-2	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2S (bg)	4.612	11	38	No	12	8.333	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5I (bg)	-3.347	-9	-38	No	12	8.333	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5S (bg)	-3.649	-23	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-6S (bg)	0.4269	1	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	-25.62	-37	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	44.87	24	38	No	12	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids [TDS] (mg/L)</b>	<b>BRGWC-32S</b>	<b>-50.85</b>	<b>-41</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	-32.65	-15	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	-1.637	-2	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	-60.86	-28	-38	No	12	0	n/a	n/a	0.01	NP

# Tolerance Limit Summary Table

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/1/2020, 10:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.012	104	n/a	n/a	81.73	n/a	n/a	0.004822	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	104	n/a	n/a	72.12	n/a	n/a	0.004822	NP Inter(normality)
Barium (mg/L)	n/a	0.13	104	n/a	n/a	0	n/a	n/a	0.004822	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	104	n/a	n/a	100	n/a	n/a	0.004822	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	106	n/a	n/a	98.11	n/a	n/a	0.004352	NP Inter(NDs)
Chromium (mg/L)	n/a	0.016	103	n/a	n/a	24.27	n/a	n/a	0.005076	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0135	104	n/a	n/a	57.69	n/a	n/a	0.004822	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	1.672	104	0.8101	0.4489	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.42	112	n/a	n/a	54.46	n/a	n/a	0.003199	NP Inter(normality)
Lead (mg/L)	n/a	0.005	104	n/a	n/a	83.65	n/a	n/a	0.004822	NP Inter(NDs)
Lithium (mg/L)	n/a	0.089	104	n/a	n/a	44.23	n/a	n/a	0.004822	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	88	n/a	n/a	92.05	n/a	n/a	0.01096	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	101	n/a	n/a	79.21	n/a	n/a	0.005625	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	104	n/a	n/a	92.31	n/a	n/a	0.004822	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	104	n/a	n/a	100	n/a	n/a	0.004822	NP Inter(NDs)

<b>PLANT BRANCH PONDS B,C,D GWPS</b>			
<b>Constituent Name</b>	<b>MCL</b>	<b>Background Limit</b>	<b>GWPS</b>
Antimony, Total (mg/L)	0.006	0.012	0.012
Arsenic, Total (mg/L)	0.01	0.005	0.01
Barium, Total (mg/L)	2	0.13	2
Beryllium, Total (mg/L)	0.004	0.003	0.004
Cadmium, Total (mg/L)	0.005	0.0025	0.005
Chromium, Total (mg/L)	0.1	0.016	0.1
Cobalt, Total (mg/L)	n/a	0.014	0.014
Combined Radium, Total (pCi/L)	5	1.67	5
Fluoride, Total (mg/L)	4	0.42	4
Lead, Total (mg/L)	n/a	0.005	0.005
Lithium, Total (mg/L)	n/a	0.089	0.089
Mercury, Total (mg/L)	0.002	0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.01	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

*\*Highlighted cells indicate Background is higher than MCLs*

*\*MCL = Maximum Contaminant Level*

*\*GWPS = Groundwater Protection Standard*

# Confidence Interval Summary - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 10:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BRGWC-50	0.0482	0.01365	0.005	Yes 13	0.03269	0.02633	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.5	1.3	0.014	Yes 13	1.392	0.06405	0	None	No	0.01	NP (normality)

# Confidence Interval Summary - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/1/2020, 10:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BRGWC-29I	0.003	0.0007	0.012	No 13	0.002823	0.0006379	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-32S	0.003	0.0014	0.012	No 13	0.002877	0.0004438	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-45	0.0031	0.0012	0.012	No 14	0.002403	0.0009415	57.14	None	No	0.01	NP (normality)
Antimony (mg/L)	BRGWC-47	0.003	0.00035	0.012	No 14	0.002811	0.0007082	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-52I	0.003	0.00085	0.012	No 13	0.002637	0.0008904	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-50	0.003	0.00052	0.012	No 13	0.00261	0.0009522	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-25I	0.005	0.0006	0.01	No 13	0.003673	0.002073	69.23	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-27I	0.005	0.0009	0.01	No 13	0.003777	0.001915	69.23	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-29I	0.005	0.00051	0.01	No 13	0.003477	0.002047	61.54	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-30I	0.005	0.00056	0.01	No 13	0.004658	0.001231	92.31	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-32S	0.005	0.00053	0.01	No 13	0.004656	0.00124	92.31	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-45	0.005	0.00075	0.01	No 14	0.003578	0.00201	64.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-47	0.001791	0.000854	0.01	No 14	0.002731	0.001842	35.71	Kaplan-Meier x^(1/3)		0.01	Param.
Arsenic (mg/L)	BRGWC-52I	0.003469	0.001603	0.01	No 13	0.003398	0.001528	30.77	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	BRGWC-50	0.005	0.00074	0.01	No 13	0.004046	0.001823	76.92	Kaplan-Meier	No	0.01	NP (NDs)
Barium (mg/L)	BRGWC-25I	0.0379	0.02755	2	No 13	0.03272	0.006963	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-27I	0.01726	0.01514	2	No 13	0.0162	0.00142	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-29I	0.01993	0.01662	2	No 13	0.01833	0.002426	7.692	None	ln(x)	0.01	Param.
Barium (mg/L)	BRGWC-30I	0.02553	0.02141	2	No 13	0.02347	0.002773	7.692	None	No	0.01	Param.
Barium (mg/L)	BRGWC-32S	0.04652	0.02982	2	No 13	0.03817	0.01123	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-45	0.09884	0.08173	2	No 14	0.09029	0.01208	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-47	0.04541	0.03458	2	No 14	0.03999	0.007644	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-52I	0.02741	0.01659	2	No 13	0.022	0.00728	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-50	0.02109	0.0186	2	No 13	0.01985	0.001676	0	None	No	0.01	Param.
Beryllium (mg/L)	BRGWC-27I	0.003	0.00011	0.004	No 14	0.0009578	0.001341	28.57	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-29I	0.0014	0.00072	0.004	No 13	0.001224	0.0008178	15.38	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-45	0.003	0.000079	0.004	No 15	0.002608	0.001034	86.67	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-47	0.003	0.000056	0.004	No 14	0.002368	0.001255	78.57	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-50	0.004442	0.002802	0.004	No 13	0.003723	0.001168	15.38	Kaplan-Meier	sqrt(x)	0.01	Param.
Cadmium (mg/L)	BRGWC-27I	0.0025	0.001	0.005	No 14	0.002219	0.0007365	92.86	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-32S	0.0025	0.001	0.005	No 14	0.002051	0.0009155	85.71	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-45	0.0025	0.00014	0.005	No 15	0.002023	0.0009871	80	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-47	0.0025	0.00015	0.005	No 14	0.001006	0.001156	35.71	None	No	0.01	NP (normality)
<b>Cadmium (mg/L)</b>	<b>BRGWC-50</b>	<b>0.0482</b>	<b>0.01365</b>	<b>0.005</b>	<b>Yes 13</b>	<b>0.03269</b>	<b>0.02633</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.01</b>	<b>Param.</b>
Chromium (mg/L)	BRGWC-25I	0.01	0.0016	0.1	No 13	0.00866	0.003273	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-27I	0.01	0.003	0.1	No 13	0.008769	0.003032	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-29I	0.02	0.01	0.1	No 13	0.01077	0.002774	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-30I	0.014	0.0051	0.1	No 13	0.009931	0.001825	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-32S	0.01	0.0011	0.1	No 13	0.004808	0.004293	38.46	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-45	0.01	0.0014	0.1	No 14	0.008066	0.003846	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-47	0.01	0.00092	0.1	No 14	0.007439	0.00421	71.43	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-52I	0.01	0.0017	0.1	No 13	0.009362	0.002302	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-50	0.01	0.00065	0.1	No 13	0.006134	0.004467	53.85	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-25I	0.007161	0.004311	0.014	No 13	0.006038	0.002166	15.38	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BRGWC-27I	0.0131	0.008	0.014	No 14	0.01199	0.008318	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-29I	0.01039	0.006211	0.014	No 13	0.008392	0.002939	7.692	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-30I	0.005	0.00078	0.014	No 14	0.001899	0.001708	21.43	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-32S	0.01	0.0025	0.014	No 14	0.005179	0.001539	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-45	0.022	0.0071	0.014	No 15	0.01639	0.01698	6.667	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-47	0.004007	0.0007144	0.014	No 14	0.002832	0.003474	7.143	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	BRGWC-52I	0.005	0.00063	0.014	No 13	0.003345	0.001869	46.15	None	No	0.01	NP (normality)
<b>Cobalt (mg/L)</b>	<b>BRGWC-50</b>	<b>1.5</b>	<b>1.3</b>	<b>0.014</b>	<b>Yes 13</b>	<b>1.392</b>	<b>0.06405</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>NP (normality)</b>
Combined Radium 226 + 228 (pCi/L)	BRGWC-25I	1.207	0.6677	5	No 13	0.9372	0.3624	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-27I	1.209	0.5555	5	No 13	0.882	0.4391	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-29I	1.686	1.156	5	No 13	1.421	0.3561	0	None	No	0.01	Param.

# Confidence Interval Summary - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/1/2020, 10:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	BRGWC-30I	1.205	0.6364	5	No	13	0.9209	0.3827	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-32S	1.163	0.4582	5	No	13	0.8107	0.474	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-45	0.8687	0.3896	5	No	14	0.6291	0.3382	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-47	1.536	0.897	5	No	14	1.217	0.4512	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-52I	2.148	1.297	5	No	13	1.722	0.5725	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-50	2.063	1.179	5	No	13	1.621	0.5942	0	None	No	0.01	Param.
Fluoride (mg/L)	BRGWC-25I	0.2994	0.1251	4	No	14	0.2243	0.1523	14.29	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BRGWC-27I	0.273	0.1423	4	No	14	0.2189	0.09837	21.43	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BRGWC-29I	0.2537	0.09087	4	No	14	0.1927	0.1342	14.29	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-30I	0.415	0.1335	4	No	14	0.2908	0.2329	14.29	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-32S	0.15	0.09	4	No	14	0.1257	0.06248	64.29	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-45	0.19	0.066	4	No	15	0.1972	0.2569	60	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-47	0.3418	0.09906	4	No	15	0.2689	0.2802	40	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-52I	0.2457	0.1229	4	No	13	0.1843	0.0826	7.692	None	No	0.01	Param.
Fluoride (mg/L)	BRGWC-50	0.9237	0.3135	4	No	14	0.6529	0.5001	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BRGWC-25I	0.005	0.00011	0.005	No	13	0.004624	0.001356	92.31	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-27I	0.005	0.000063	0.005	No	13	0.00462	0.001369	92.31	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-29I	0.0006	0.00027	0.005	No	12	0.0007483	0.001343	8.333	None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-30I	0.005	0.00011	0.005	No	13	0.004624	0.001356	92.31	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-45	0.005	0.00026	0.005	No	14	0.003966	0.002055	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-47	0.005	0.00012	0.005	No	14	0.003945	0.002096	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-50	0.005	0.000067	0.005	No	13	0.002407	0.002502	46.15	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-27I	0.0021	0.0014	0.089	No	13	0.005192	0.008793	15.38	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-29I	0.0043	0.0029	0.089	No	13	0.005054	0.006009	7.692	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-30I	0.01703	0.01143	0.089	No	13	0.01432	0.00404	7.692	None	sqrt(x)	0.01	Param.
Lithium (mg/L)	BRGWC-32S	0.025	0.002	0.089	No	13	0.005677	0.008577	15.38	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-45	0.003478	0.00306	0.089	No	13	0.003269	0.000281	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-47	0.04413	0.04021	0.089	No	14	0.04217	0.002763	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-52I	0.008252	0.003025	0.089	No	13	0.0064	0.005987	7.692	None	ln(x)	0.01	Param.
Lithium (mg/L)	BRGWC-50	0.04393	0.03761	0.089	No	13	0.04077	0.004246	0	None	No	0.01	Param.
Mercury (mg/L)	BRGWC-25I	0.0005	0.000083	0.002	No	11	0.0004203	0.0001776	81.82	None	No	0.006	NP (NDs)
Mercury (mg/L)	BRGWC-27I	0.0005	0.00005	0.002	No	11	0.0004179	0.0001826	81.82	None	No	0.006	NP (NDs)
Mercury (mg/L)	BRGWC-29I	0.0005	0.00007	0.002	No	11	0.0003825	0.0002016	72.73	None	No	0.006	NP (normality)
Mercury (mg/L)	BRGWC-30I	0.0005	0.00007	0.002	No	11	0.0003811	0.0002039	72.73	None	No	0.006	NP (normality)
Mercury (mg/L)	BRGWC-32S	0.0005	0.00009	0.002	No	11	0.0003884	0.0001912	72.73	None	No	0.006	NP (normality)
Molybdenum (mg/L)	BRGWC-25I	0.01	0.00081	0.01	No	12	0.008467	0.003579	83.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-30I	0.01	0.0022	0.01	No	12	0.008582	0.003326	83.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-45	0.01	0.00076	0.01	No	13	0.009289	0.002563	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-52I	0.01	0.0012	0.01	No	12	0.006283	0.003695	41.67	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BRGWC-50	0.01	0.0033	0.01	No	12	0.008792	0.002832	83.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-27I	0.003626	0.001989	0.05	No	13	0.005192	0.003458	30.77	Kaplan-Meier	x^(1/3)	0.01	Param.
Selenium (mg/L)	BRGWC-29I	0.01	0.0039	0.05	No	13	0.008069	0.002858	61.54	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-30I	0.01	0.0034	0.05	No	13	0.007962	0.003234	69.23	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-32S	0.1	0.0019	0.05	No	14	0.04472	0.04778	28.57	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-45	0.01	0.0029	0.05	No	14	0.009493	0.001898	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-47	0.01	0.0017	0.05	No	14	0.007057	0.004099	64.29	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-50	0.01	0.002	0.05	No	13	0.006546	0.003914	53.85	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-29I	0.0005	0.00016	0.002	No	12	0.0002033	0.00009471	8.333	None	No	0.01	NP (normality)

# Outlier Summary

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 10:26 AM

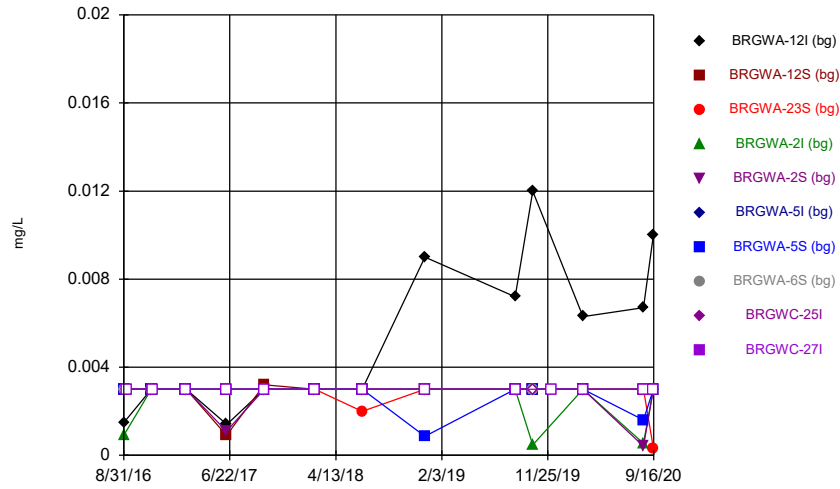
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	BRGWC-521 Calcium (mg/L)	BRGWA-51 Cobalt (mg/L)	BRGWC-521 Fluoride (mg/L)	BRGWC-291 Lead (mg/L)	BRGWC-45 Lithium (mg/L)	BRGWC-50 Sulfate as SO4 (mg/L)	BRGWC-291 Thallium (mg/L)	BRGWC-47 Total Dissolved Solids [TDS] (mg/L)
9/8/2016						<0.001 (o)		
11/16/2016	<0.01 (o)							
2/13/2018	<0.01 (o)							
2/14/2018			<0.005 (o)					
6/27/2018							31 (OX)	
7/31/2018				<0.25 (o)				
8/10/2018	410 (O)		1.6 (O)					
1/16/2019					589 (O)			



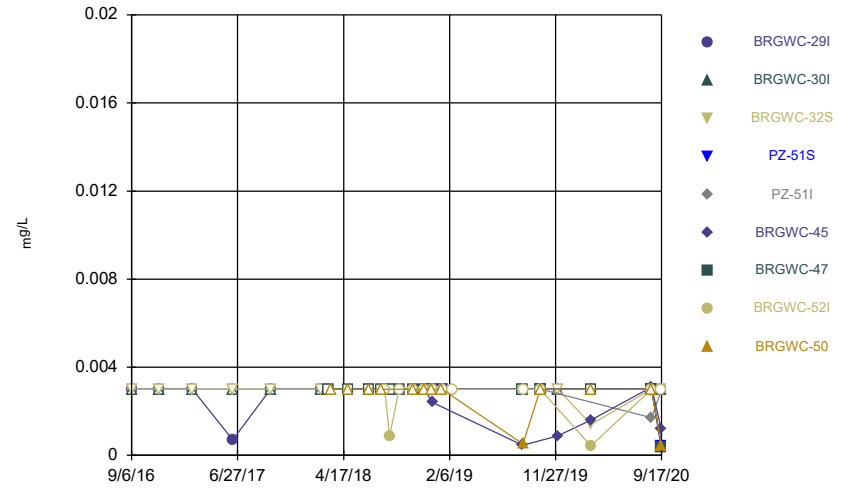
FIGURE A.

Time Series



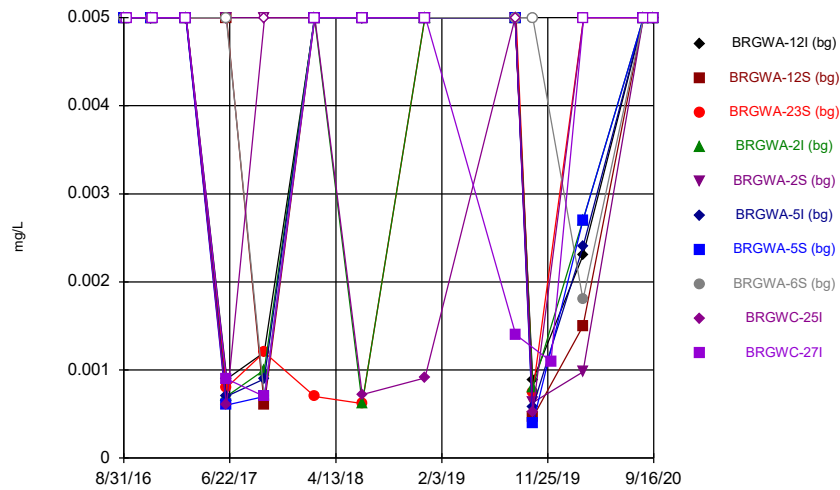
Constituent: Antimony Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



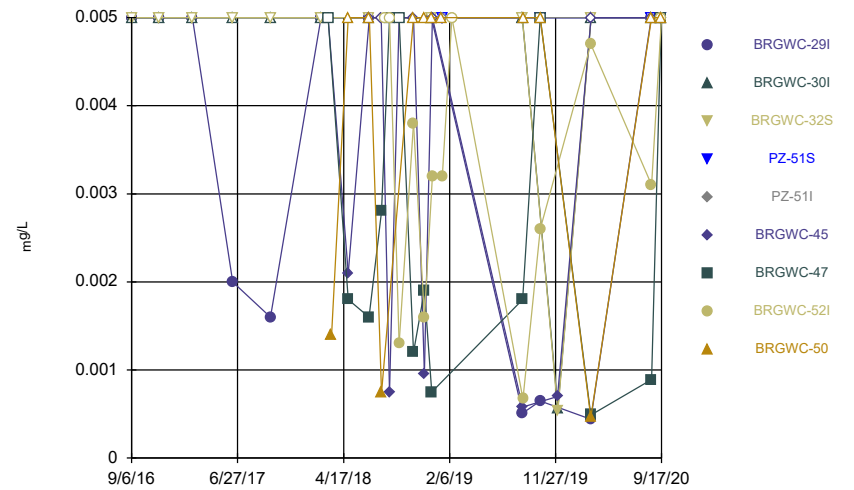
Constituent: Antimony Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



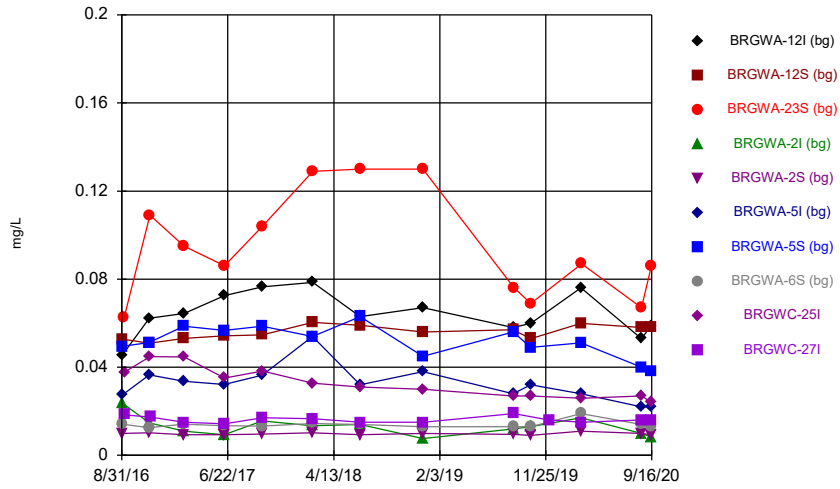
Constituent: Arsenic Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Arsenic Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

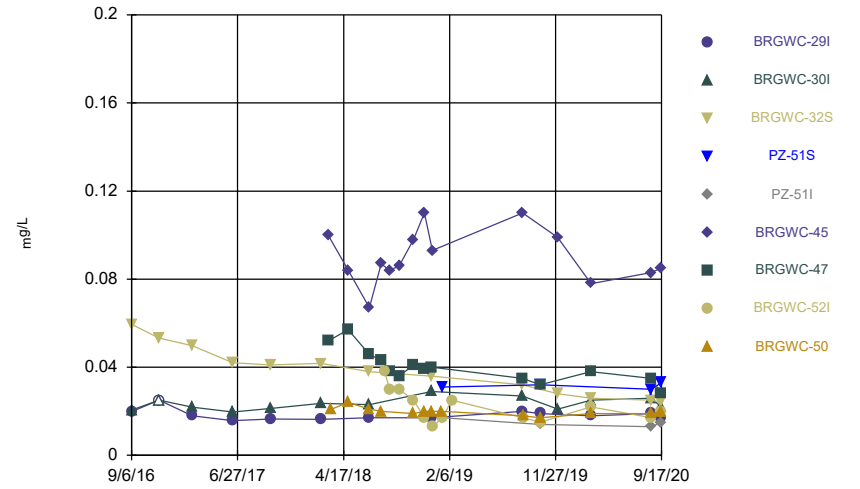
Time Series



Constituent: Barium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Hollow symbols indicate censored values.

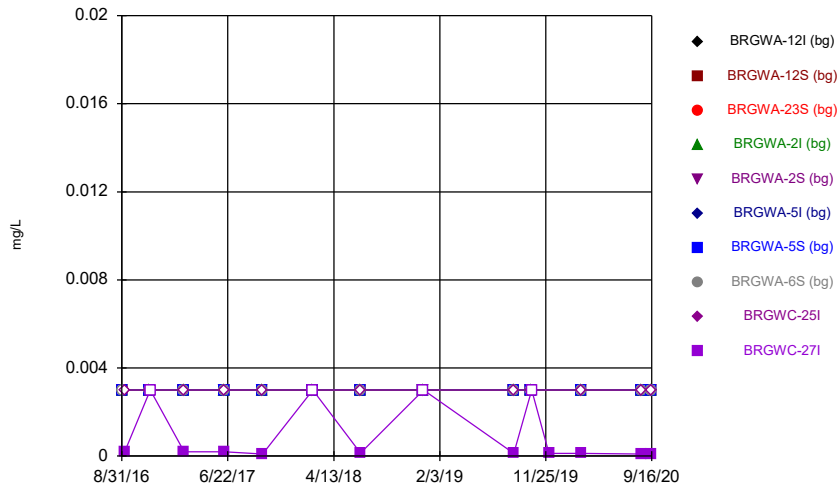
Time Series



Constituent: Barium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Hollow symbols indicate censored values.

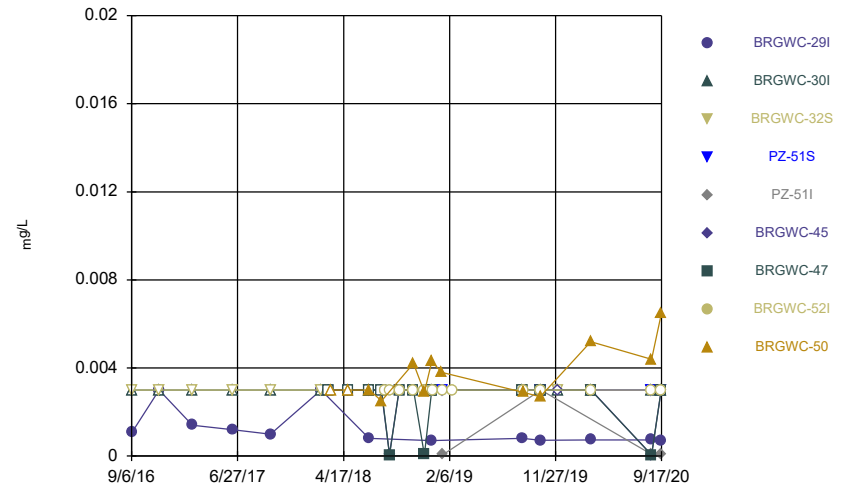
Time Series



Constituent: Beryllium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

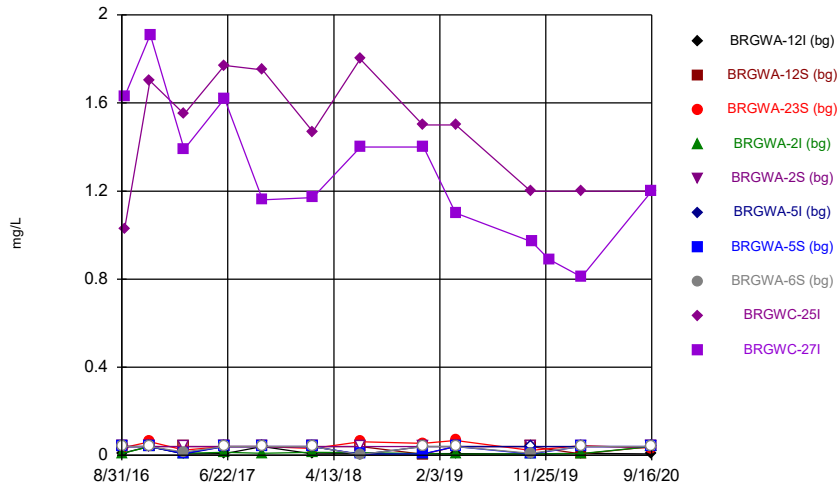
Hollow symbols indicate censored values.

Time Series



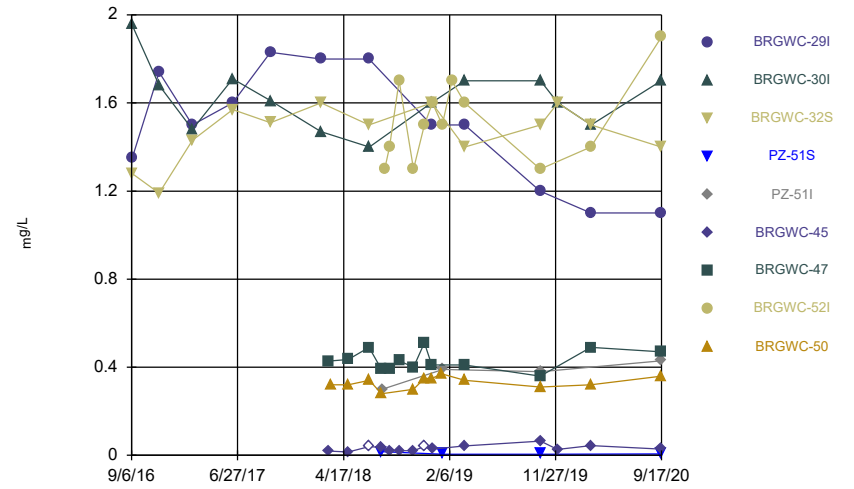
Constituent: Beryllium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



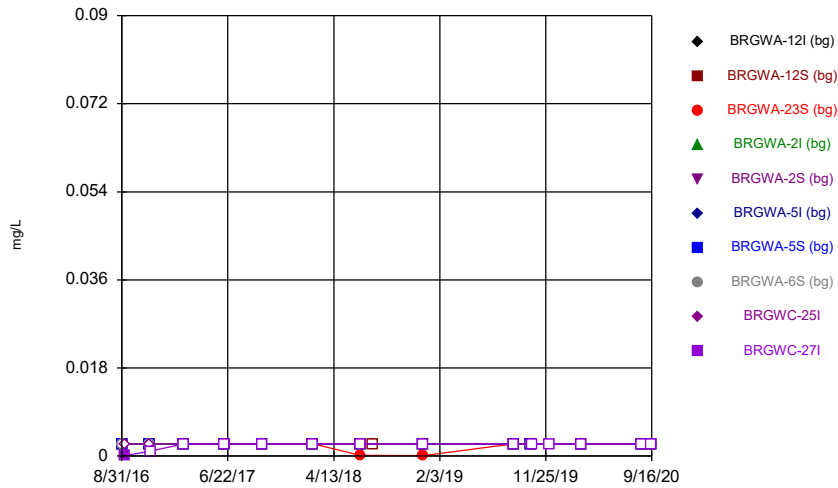
Constituent: Boron Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



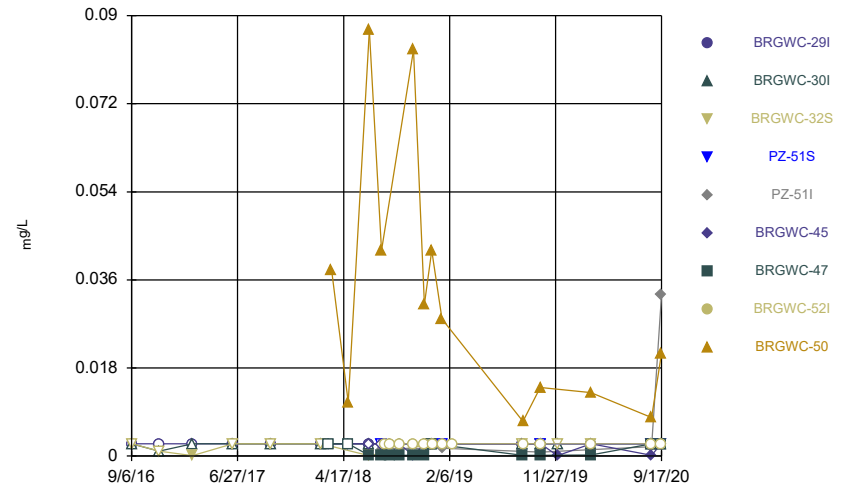
Constituent: Boron Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



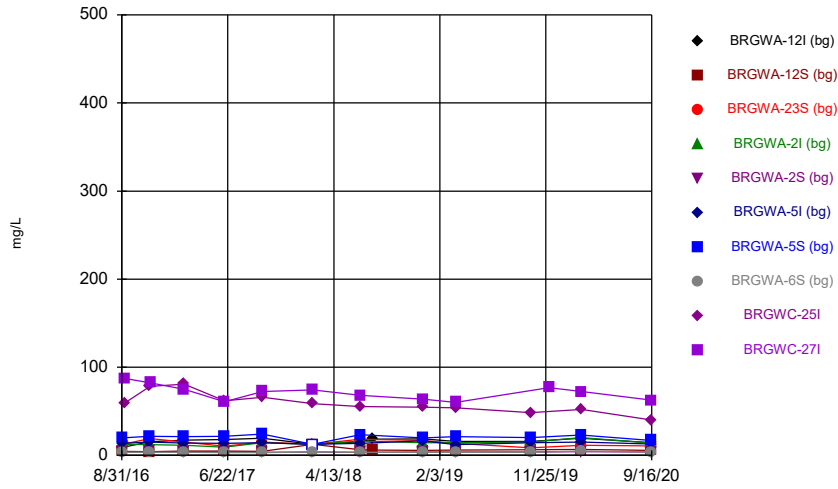
Constituent: Cadmium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



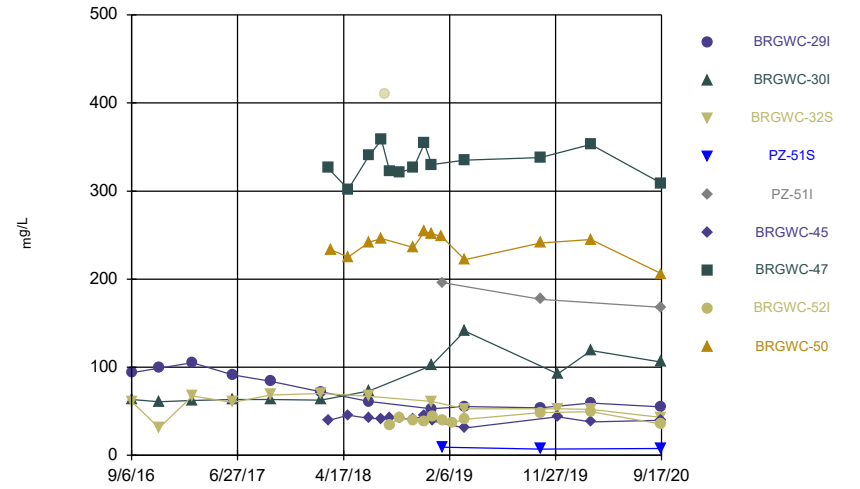
Constituent: Cadmium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



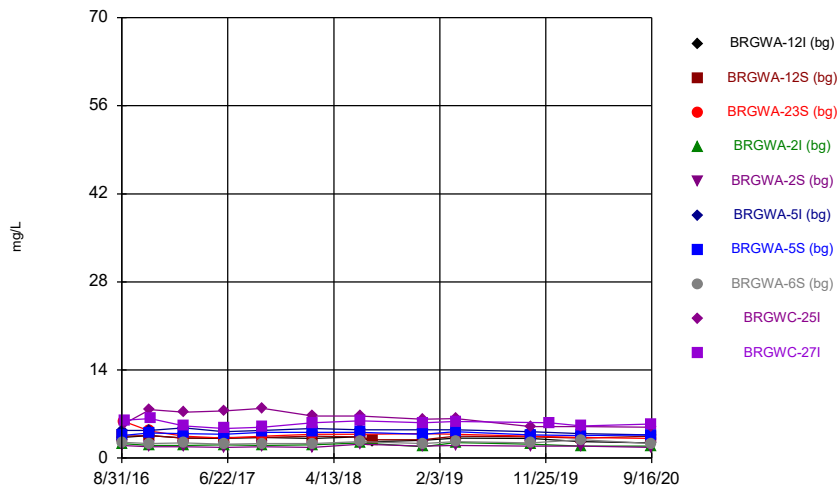
Constituent: Calcium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



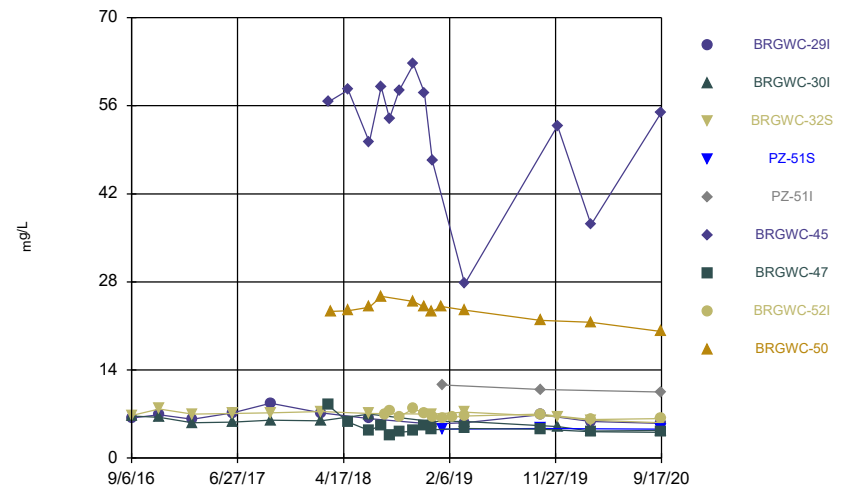
Constituent: Calcium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



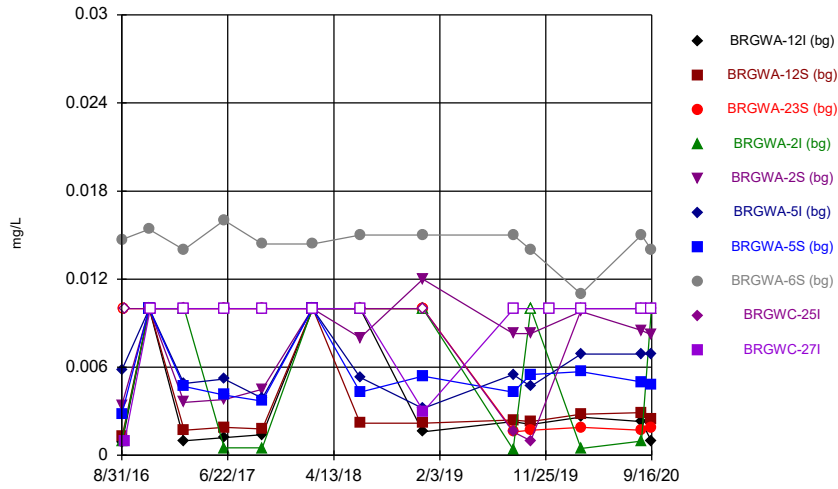
Constituent: Chloride, Total Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



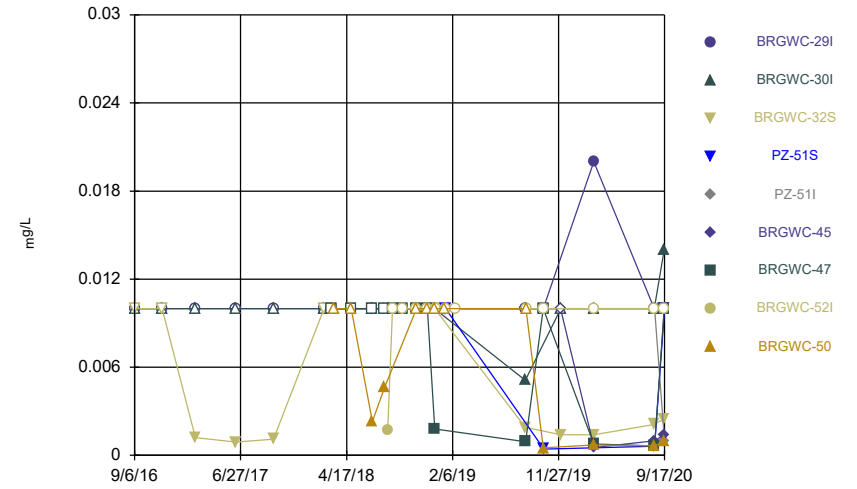
Constituent: Chloride, Total Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



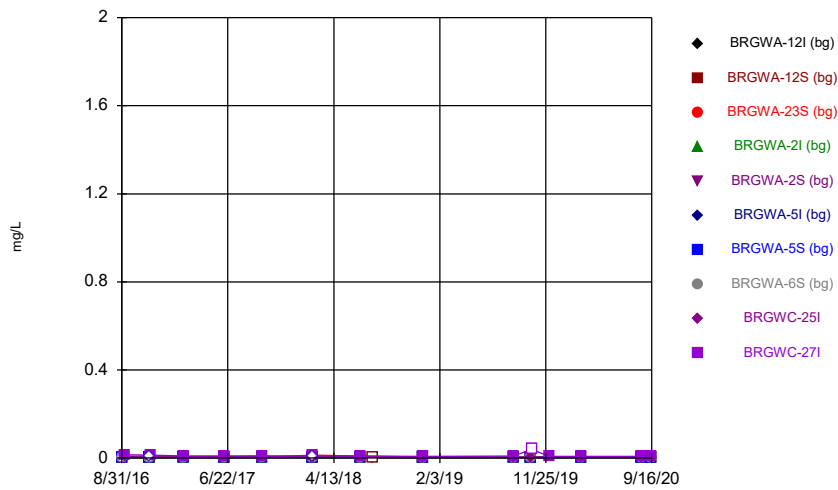
Constituent: Chromium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



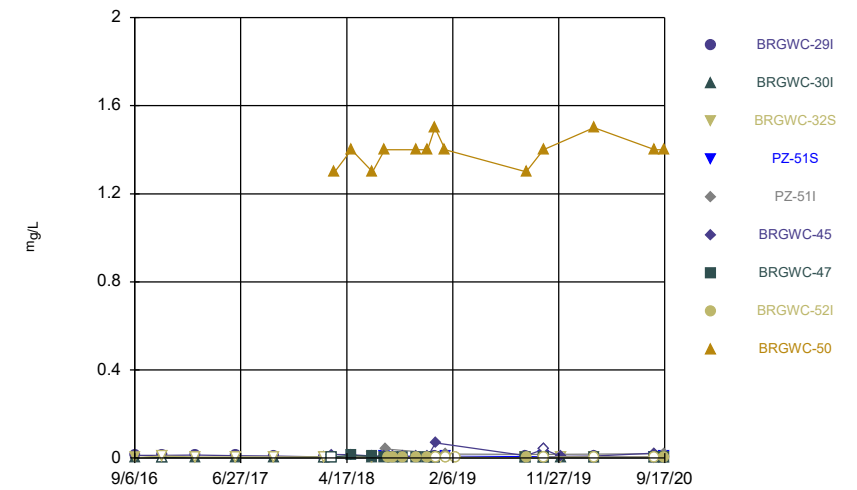
Constituent: Chromium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



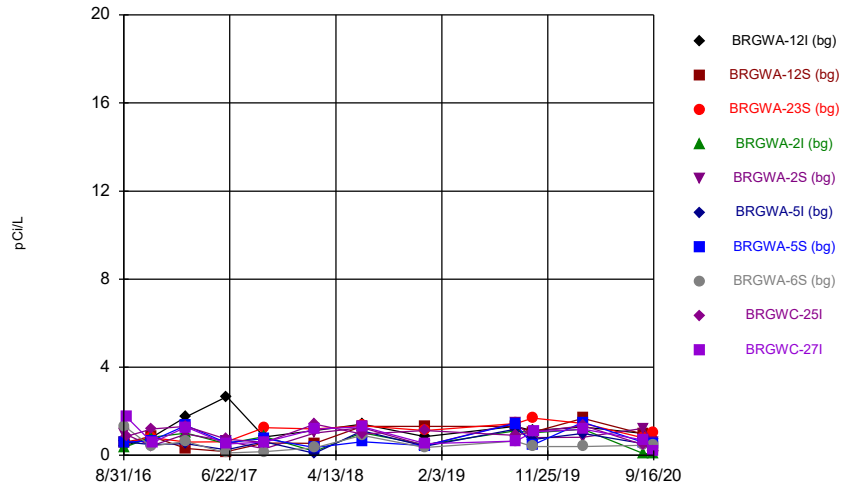
Constituent: Cobalt Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



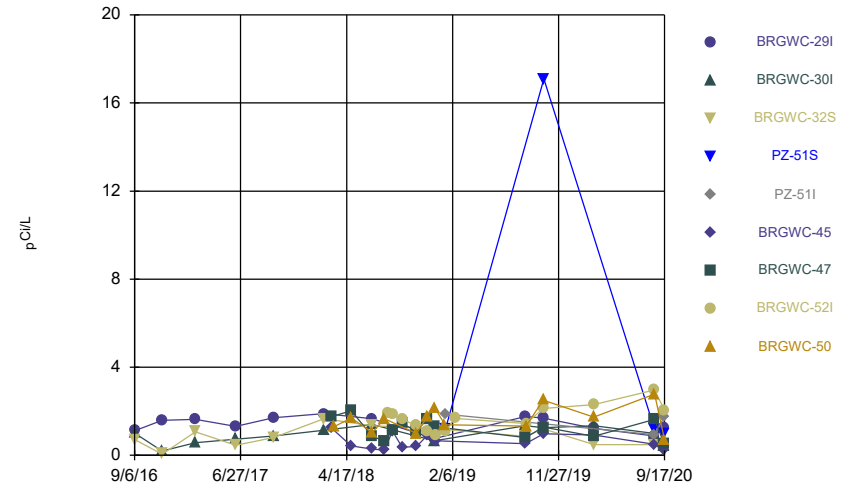
Constituent: Cobalt Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



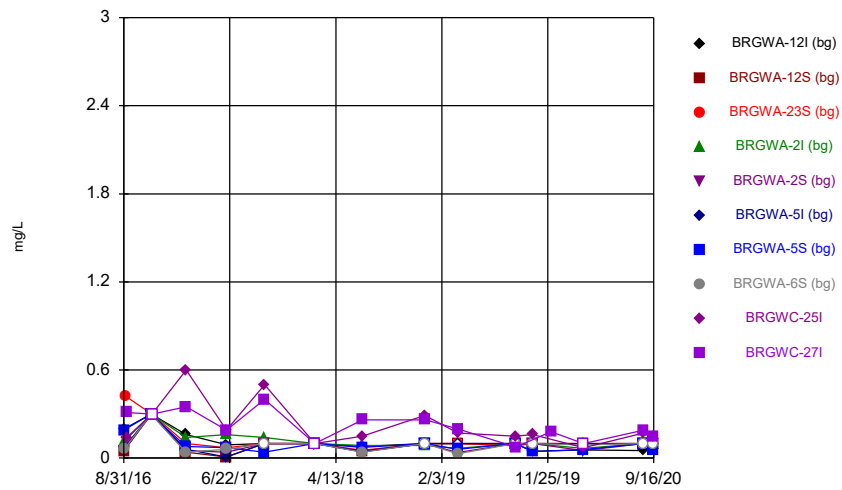
Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



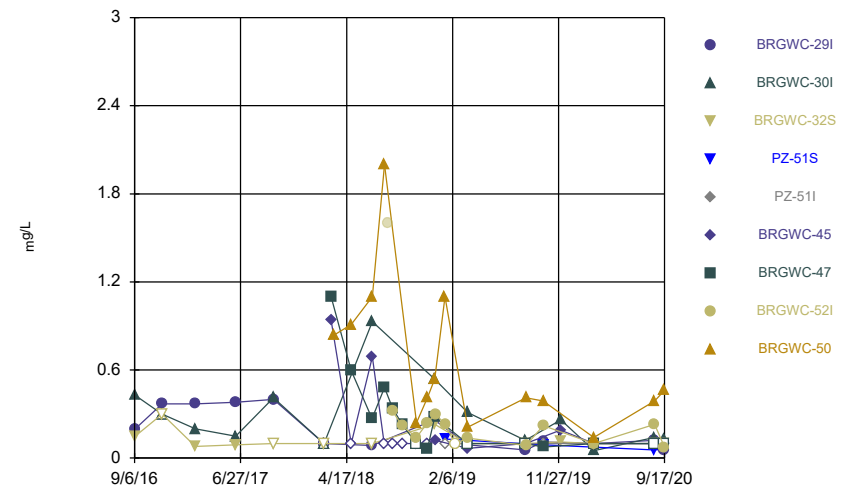
Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



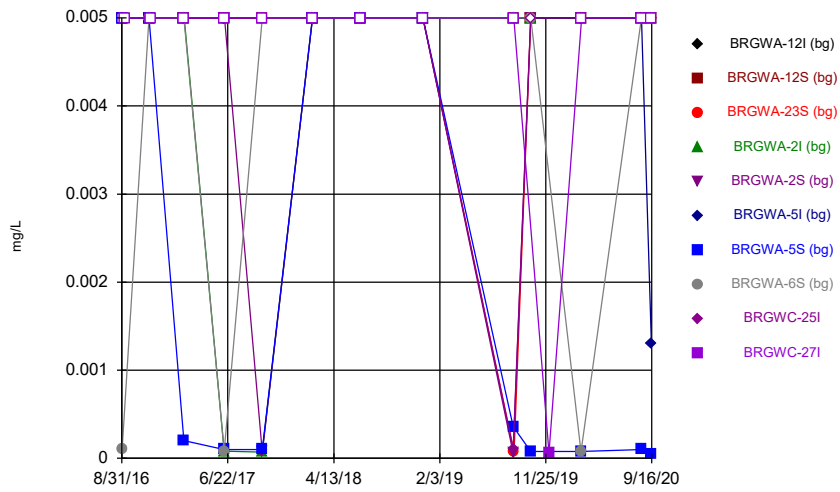
Constituent: Fluoride Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



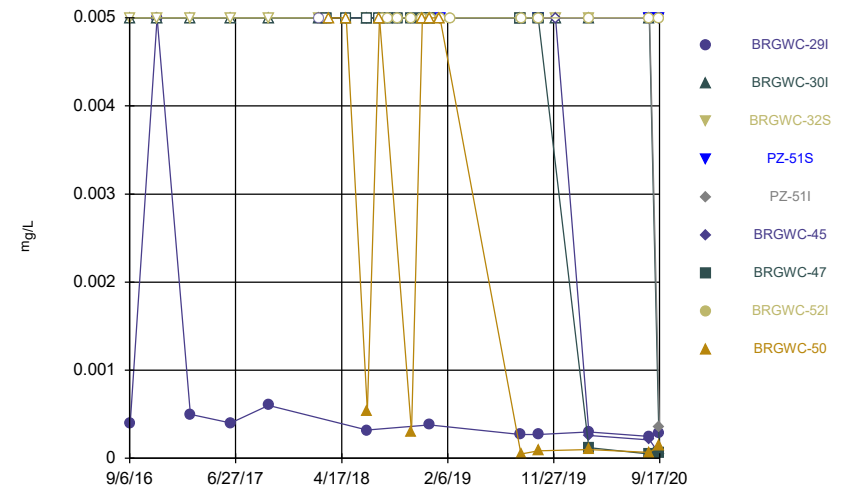
Constituent: Fluoride Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



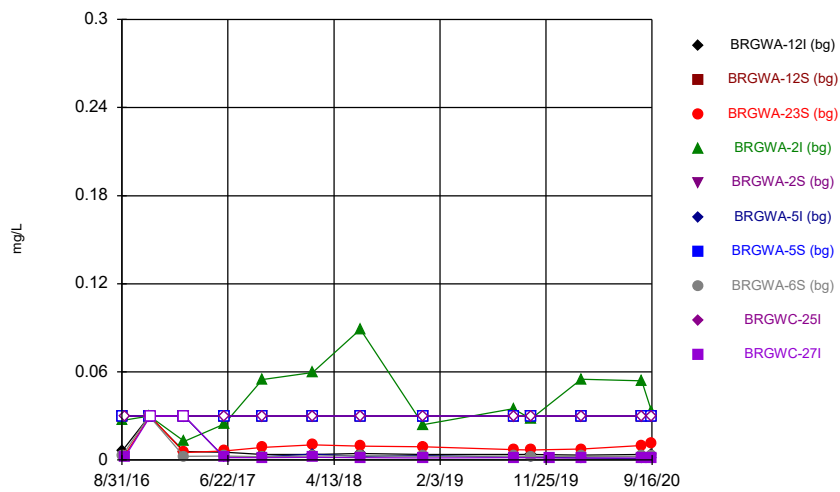
Constituent: Lead Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



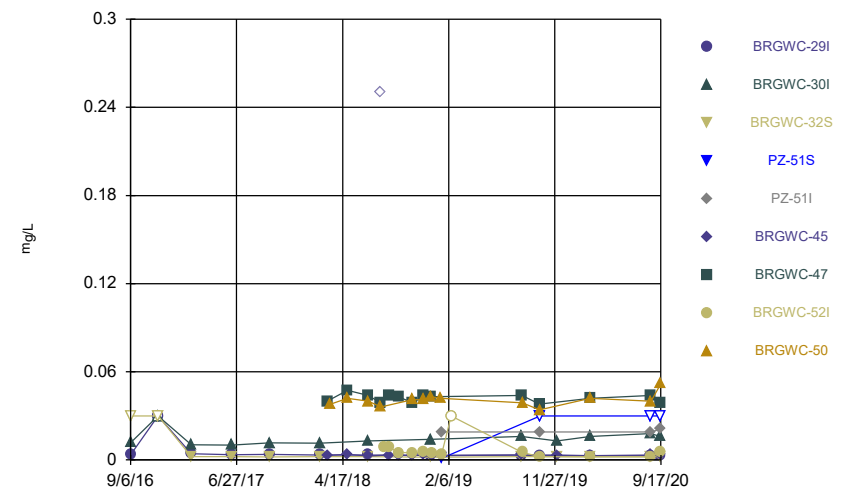
Constituent: Lead Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



Constituent: Lithium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

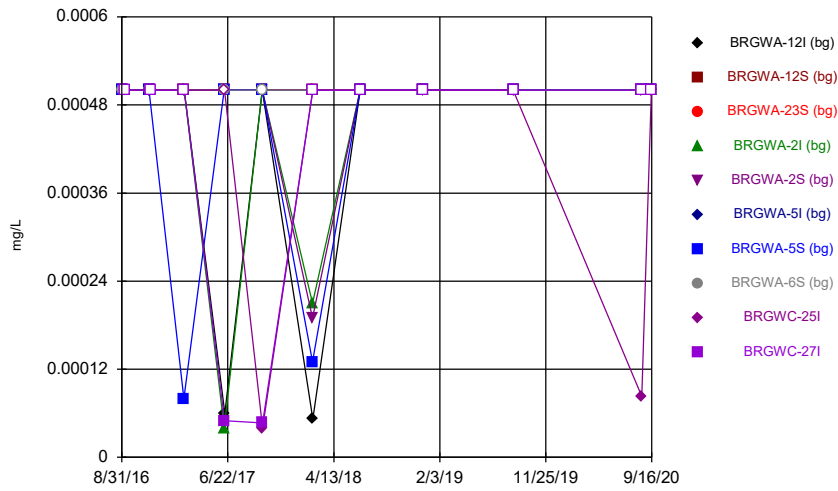
### Time Series



Constituent: Lithium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

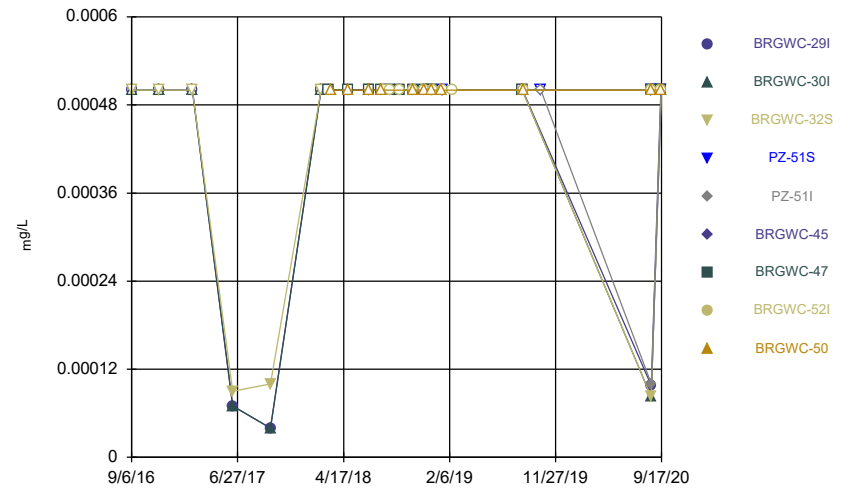


Time Series



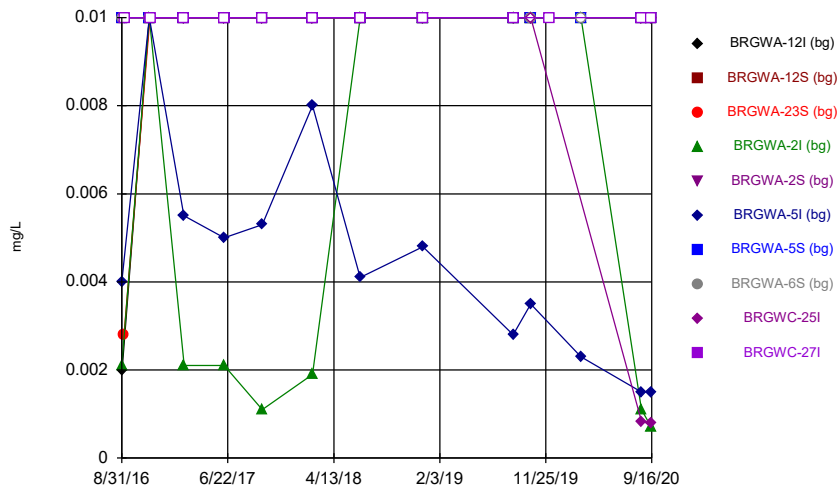
Constituent: Mercury Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



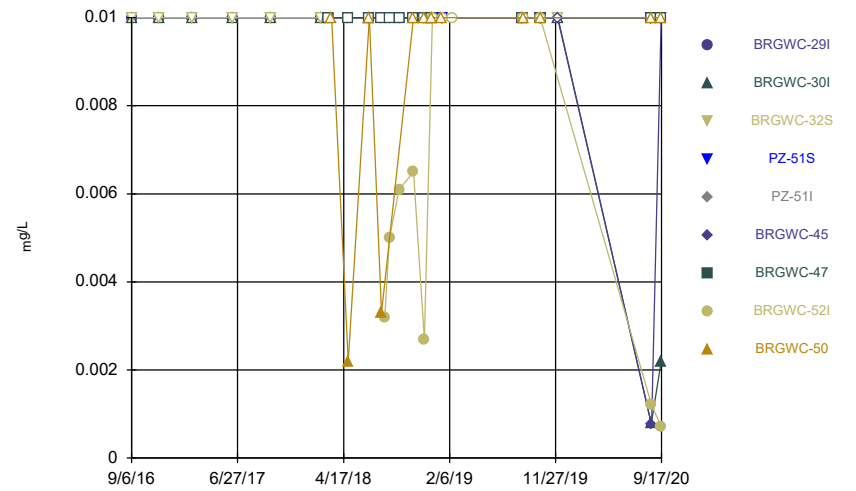
Constituent: Mercury Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



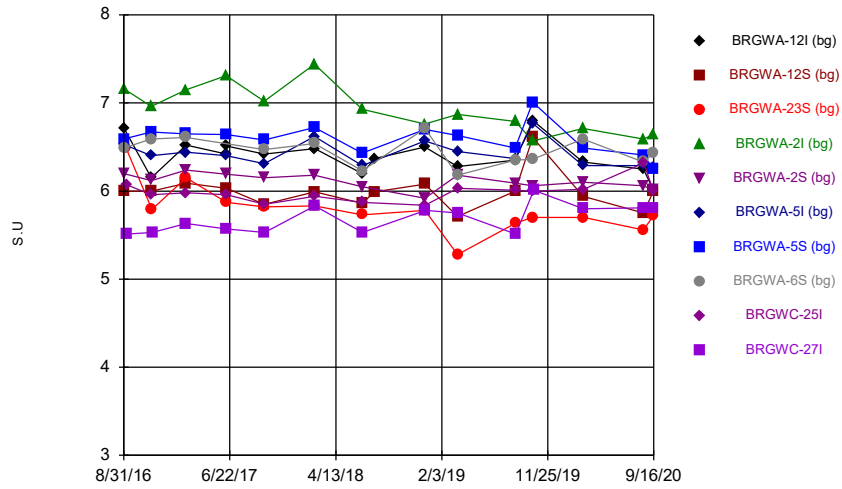
Constituent: Molybdenum Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



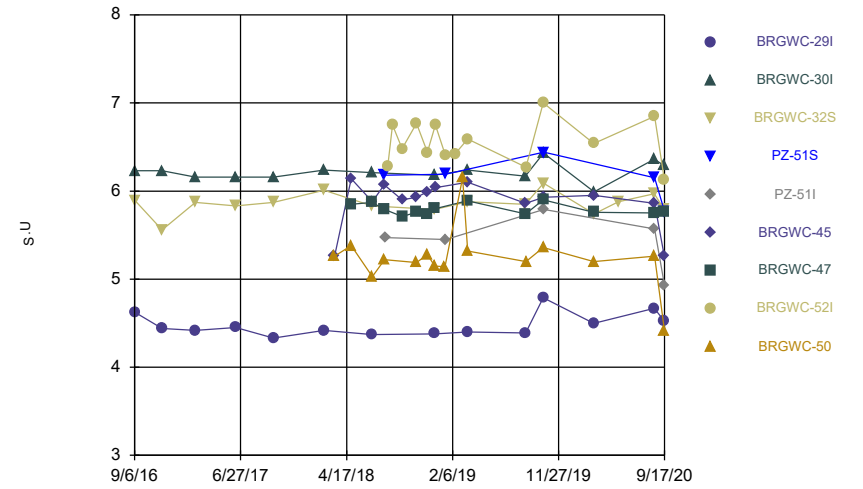
Constituent: Molybdenum Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



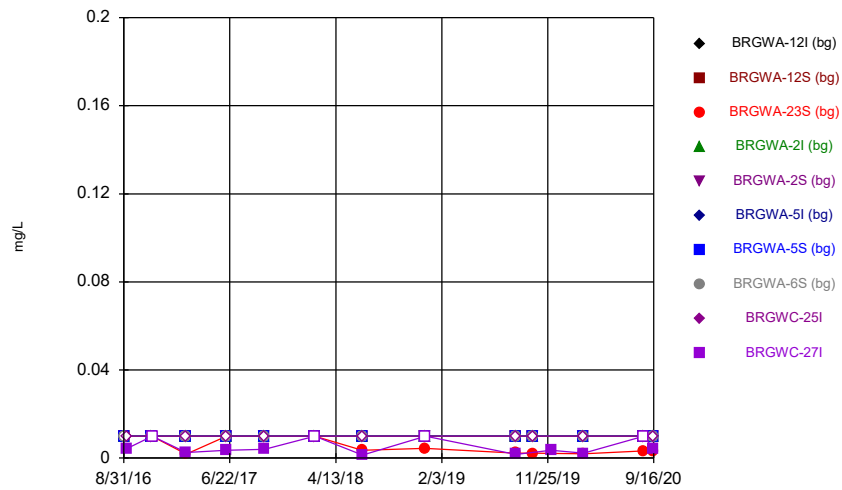
Constituent: pH, Field Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



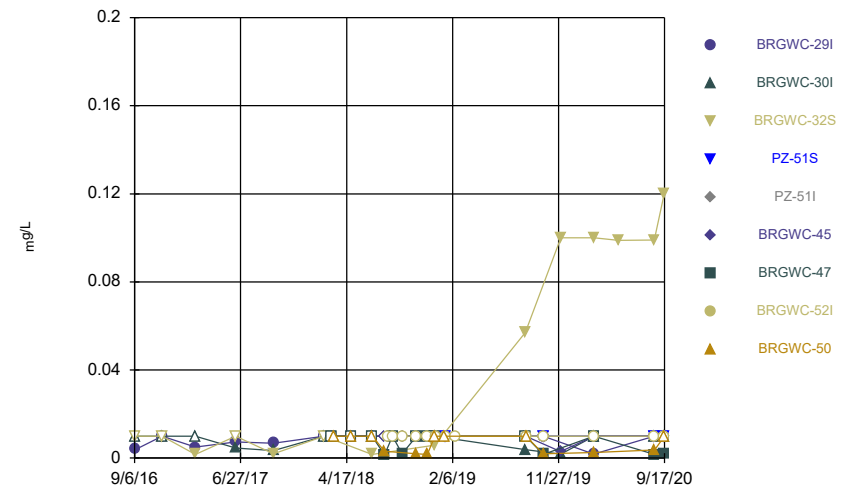
Constituent: pH, Field Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



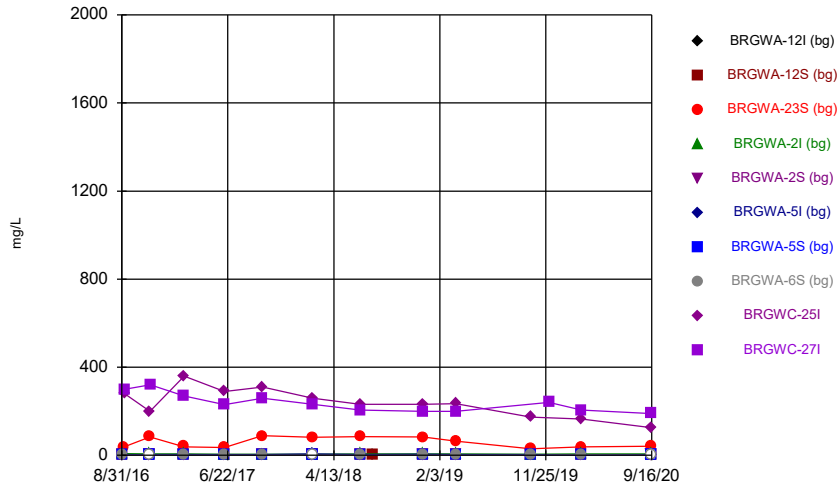
Constituent: Selenium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



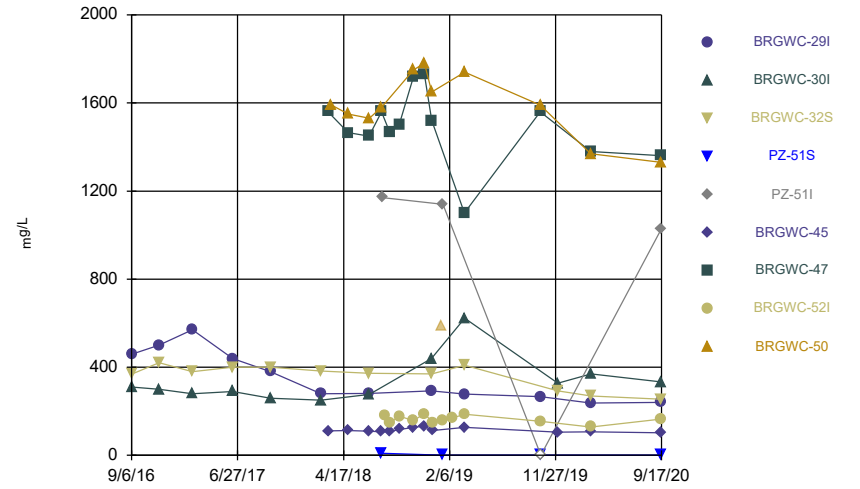
Constituent: Selenium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



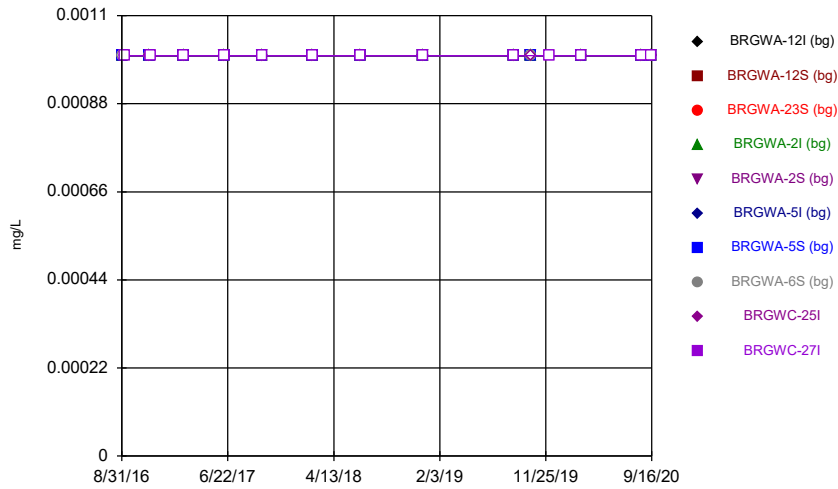
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



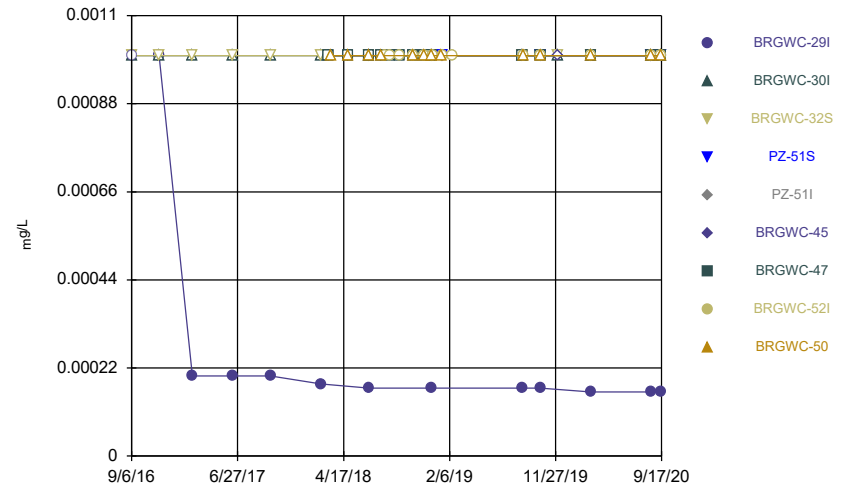
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



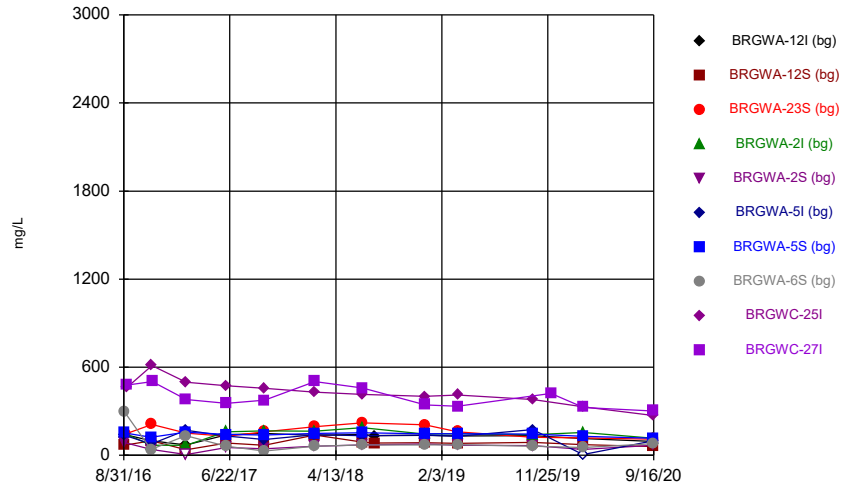
Constituent: Thallium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



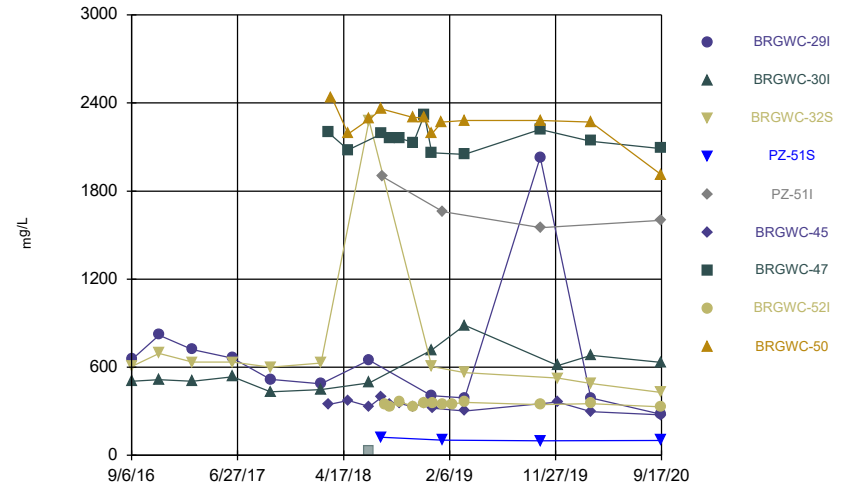
Constituent: Thallium Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 10:52 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP



# Time Series

Constituent: Antimony (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.003						
9/8/2016	<0.003	<0.003		<0.003					
11/18/2016	<0.003								
11/21/2016		<0.003	<0.003	<0.003					
2/21/2017	<0.003								
2/22/2017		<0.003	<0.003	<0.003					
6/13/2017	<0.003								
6/14/2017		0.0007 (J)	<0.003	<0.003					
9/27/2017	<0.003	<0.003	<0.003	<0.003					
2/14/2018	<0.003	<0.003	<0.003	<0.003					
3/6/2018							<0.003	<0.003	
5/1/2018							<0.003	<0.003 (D)	
6/27/2018	<0.003	<0.003		<0.003				<0.003	
6/28/2018			<0.003				<0.003		
7/31/2018							<0.003		
8/1/2018								<0.003	
8/10/2018									<0.003
8/23/2018							<0.003	<0.003	0.00085 (J)
9/19/2018							<0.003	<0.003	<0.003
10/29/2018							<0.003	<0.003	<0.003
11/28/2018							<0.003	<0.003	<0.003
12/18/2018		<0.003	<0.003						
12/19/2018				<0.003				<0.003	
12/20/2018	<0.003						0.0024 (J)		<0.003
1/17/2019									<0.003
1/18/2019					<0.003				
1/19/2019						<0.003			
2/13/2019									<0.003
8/27/2019			<0.003	<0.003					
8/28/2019	<0.003	<0.003					0.00046 (J)	<0.003	
8/29/2019									<0.003
10/16/2019		<0.003						<0.003	<0.003
10/18/2019					<0.003	<0.003			
12/3/2019							0.00088 (J)		
12/4/2019	<0.003		<0.003	<0.003					
3/4/2020	<0.003	<0.003						<0.003	0.00043 (J)
3/5/2020			<0.003	0.0014 (J)			0.0016 (J)		
8/19/2020	<0.003	<0.003	<0.003	<0.003					
8/20/2020					<0.003	0.0017 (J)	0.0031	<0.003	<0.003
9/15/2020		<0.003							
9/16/2020	<0.003		<0.003	<0.003			0.0012 (J)	0.00035 (J)	
9/17/2020					0.00043 (J)	<0.003			<0.003

# Time Series

Constituent: Antimony (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	<0.003
5/1/2018	<0.003
6/28/2018	<0.003
8/1/2018	<0.003
10/29/2018	<0.003
11/28/2018	<0.003
12/19/2018	<0.003
1/16/2019	<0.003
8/29/2019	0.00052 (J)
10/16/2019	<0.003
3/4/2020	<0.003
8/20/2020	<0.003
9/17/2020	0.00041 (J)





# Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.005						
9/8/2016	<0.005	<0.005		<0.005					
11/18/2016	<0.005								
11/21/2016		<0.005 (J)	<0.005	<0.005					
2/21/2017	<0.005								
2/22/2017		<0.005	<0.005	<0.005					
6/13/2017	0.0009 (J)								
6/14/2017		0.002 (J)	<0.005	<0.005					
9/27/2017	0.0007 (J)	0.0016 (J)	<0.005	<0.005					
2/14/2018	<0.005	<0.005	<0.005	<0.005					
3/6/2018							<0.005 (X)	<0.005 (X)	
5/1/2018							0.0021 (J)	0.0018 (JD)	
6/27/2018	<0.005	<0.005		<0.005				0.0016 (J)	
6/28/2018			<0.005 (X)				<0.005 (X)		
7/31/2018							<0.005		
8/1/2018								0.0028 (J)	
8/10/2018									<0.005
8/23/2018							0.00075 (J)	<0.005	<0.005
9/19/2018							<0.005	<0.005	0.0013 (J)
10/29/2018							<0.005	0.0012 (J)	0.0038 (J)
11/28/2018							0.00096 (J)	0.0019 (J)	0.0016 (J)
12/18/2018		<0.005	<0.005						
12/19/2018				<0.005				0.00075 (J)	
12/20/2018	<0.005						<0.005		0.0032 (J)
1/17/2019									0.0032 (J)
1/18/2019					<0.005				
1/19/2019						<0.005			
2/13/2019									<0.005
8/27/2019			<0.005	<0.005					
8/28/2019	0.0014 (J)	0.00051 (J)					0.00058 (J)	0.0018 (J)	
8/29/2019									0.00067 (J)
10/16/2019		0.00065 (J)						<0.005	0.0026 (J)
10/18/2019					<0.005	<0.005			
12/3/2019							0.0007 (J)		
12/4/2019	0.0011 (J)		0.00056 (J)	0.00053 (J)					
3/4/2020	<0.005	0.00044 (J)						0.00049 (J)	0.0047 (J)
3/5/2020			<0.005	<0.005			<0.005		
8/19/2020	<0.005	<0.005	<0.005	<0.005					
8/20/2020					<0.005	<0.005	<0.005	0.00089 (J)	0.0031 (J)
9/15/2020		<0.005							
9/16/2020	<0.005		<0.005	<0.005			<0.005	<0.005	
9/17/2020					<0.005	<0.005			<0.005

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	0.0014 (J)
5/1/2018	<0.005
6/28/2018	<0.005
8/1/2018	0.00074 (J)
10/29/2018	<0.005
11/28/2018	<0.005
12/19/2018	<0.005
1/16/2019	<0.005
8/29/2019	<0.005
10/16/2019	<0.005
3/4/2020	0.00046 (J)
8/20/2020	<0.005
9/17/2020	<0.005

# Time Series

Constituent: Barium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.0239	0.0099 (J)	0.0273	0.0495		
9/1/2016	0.0454	0.0528						0.0142	
9/6/2016			0.0624						
9/8/2016									0.0378
11/15/2016							0.0512	0.0126	
11/16/2016	0.0623	0.0509		0.0147	0.0102	0.0365			
11/17/2016			0.109						0.0448
2/20/2017						0.0336	0.0586	0.0142	
2/21/2017	0.0644	0.0531	0.095	0.0109	0.0094 (J)				0.0447
6/12/2017				0.0094 (J)		0.0322	0.0567	0.0134	
6/13/2017		0.0543	0.0861		0.0094 (J)				0.0351
6/14/2017	0.0726								
9/26/2017	0.0765	0.0547	0.104	0.0156	0.0096 (J)	0.0364	0.0586	0.0133	
9/27/2017									0.0383
2/13/2018				0.0134	0.0102	0.054	0.054	0.0145	
2/14/2018	0.0786	0.0603	0.129						0.0327
6/26/2018	0.063	0.059	0.13	0.014	0.0093 (J)	0.032	0.063	0.014	0.031
12/18/2018	0.067	0.056	0.13	0.0076 (J)	0.01	0.038	0.045	0.013	0.03
8/27/2019	0.058	0.057		0.012	0.0095 (J)	0.028	0.056	0.013	0.027
8/29/2019			0.076						
10/15/2019	0.06	0.053	0.069	0.013	0.0091 (J)	0.032	0.049	0.013	0.027
3/3/2020	0.076	0.06		0.017	0.011	0.028	0.051	0.019	
3/4/2020			0.087						0.026
8/18/2020	0.053	0.058	0.067	0.01 (J)	0.01	0.022	0.04	0.014	
8/19/2020									0.027
9/15/2020	0.059	0.058	0.086	0.0083 (J)	0.0094 (J)	0.022	0.038	0.013	0.024

# Time Series

Constituent: Barium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			0.0206						
9/8/2016	0.0184	0.0199		0.0593					
11/18/2016	0.0173								
11/21/2016		<0.05 (JB)	<0.05 (JB)	0.0532 (BR)					
2/21/2017	0.015								
2/22/2017		0.0179	0.0219	0.0498					
6/13/2017	0.0143								
6/14/2017		0.0157	0.0197	0.0421					
9/27/2017	0.017	0.0165	0.0213	0.0411					
2/14/2018	0.0166	0.0163	0.0236	0.0417					
3/6/2018							0.1	0.0519	
5/1/2018							0.084	0.057 (D)	
6/27/2018	0.015	0.017		0.038				0.046	
6/28/2018			0.023				0.067		
7/31/2018							0.087 (J+X)		
8/1/2018								0.043 (J+X)	
8/10/2018									0.038
8/23/2018							0.084	0.038	0.03 (JX)
9/19/2018							0.086	0.036	0.03
10/29/2018							0.098 (J+X)	0.041 (J+X)	0.025 (J+X)
11/28/2018							0.11	0.039	0.017
12/18/2018		0.017	0.029						
12/19/2018				0.036				0.04	
12/20/2018	0.015						0.093		0.013
1/17/2019									0.017
1/18/2019					0.031				
1/19/2019						0.017			
2/13/2019									0.025
8/27/2019			0.027	0.032					
8/28/2019	0.019	0.02					0.11	0.035	
8/29/2019									0.017
10/16/2019		0.019						0.032	0.015
10/18/2019					0.032	0.014			
12/3/2019							0.099		
12/4/2019	0.016		0.021	0.028					
3/4/2020	0.015	0.018						0.038	0.022
3/5/2020			0.025	0.026			0.078		
8/19/2020	0.016	0.019	0.026	0.025					
8/20/2020					0.03	0.013	0.083	0.035	0.017
9/15/2020		0.017							
9/16/2020	0.016		0.022	0.024			0.085	0.028	
9/17/2020					0.033	0.015			0.02

# Time Series

Constituent: Barium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	0.021
5/1/2018	0.024
6/28/2018	0.021
8/1/2018	0.02 (J+X)
10/29/2018	0.019 (J+X)
11/28/2018	0.02
12/19/2018	0.02
1/16/2019	0.02
8/29/2019	0.018
10/16/2019	0.017
3/4/2020	0.019
8/20/2020	0.019
9/17/2020	0.02



# Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.003						
9/8/2016	0.0002 (J)	0.0011 (J)		<0.003					
11/18/2016	<0.003 (J)								
11/21/2016		<0.003 (J)	<0.003	<0.003					
2/21/2017	0.0002 (J)								
2/22/2017		0.0014 (J)	<0.003	<0.003					
6/13/2017	0.0002 (J)								
6/14/2017		0.0012 (J)	<0.003	<0.003					
9/27/2017	0.0001 (J)	0.001 (J)	<0.003	<0.003					
2/14/2018	<0.003	<0.003	<0.003	<0.003					
3/6/2018							<0.003	<0.003	
5/1/2018							<0.003	<0.003 (D)	
6/27/2018	0.00014 (J)	0.0008 (J)		<0.003				<0.003	
6/28/2018			<0.003				<0.003		
7/31/2018							<0.003		
8/1/2018								<0.003	
8/10/2018									<0.003
8/23/2018							7.9E-05 (J)	5.5E-05 (J)	<0.003
9/19/2018							<0.003	<0.003	<0.003
10/29/2018							<0.003	<0.003	<0.003
11/28/2018							<0.003	5.6E-05 (J)	<0.003
12/18/2018		0.00071 (J)	<0.003						
12/19/2018				<0.003				<0.003 (X)	
12/20/2018	<0.003 (X)						<0.003		<0.003
1/17/2019									<0.003
1/18/2019					<0.003				
1/19/2019						6.4E-05 (J)			
2/13/2019									<0.003
8/27/2019			<0.003	<0.003					
8/28/2019	0.00012 (J)	0.0008 (J)					<0.003	<0.003	
8/29/2019									<0.003
10/16/2019		0.00072 (J)						<0.003	<0.003
10/17/2019	<0.003		<0.003	<0.003			<0.003		
10/18/2019					<0.003	<0.003			
12/3/2019							<0.003		
12/4/2019	0.00012 (J)		<0.003	<0.003					
3/4/2020	0.00012 (J)	0.00073 (J)						<0.003	<0.003
3/5/2020			<0.003	<0.003			<0.003		
8/19/2020	9.9E-05 (J)	0.00074 (J)	<0.003	<0.003					
8/20/2020					<0.003	7.7E-05 (J)	4.6E-05 (J)	4.7E-05 (J)	<0.003
9/15/2020		0.00071 (J)							
9/16/2020	0.00011 (J)		<0.003	<0.003			<0.003	<0.003	
9/17/2020					<0.003	9.6E-05 (J)			<0.003

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-50
3/15/2018	<0.003
5/1/2018	<0.003
6/28/2018	0.003 (J)
8/1/2018	0.0025 (J)
10/29/2018	0.0042
11/28/2018	0.0029 (J)
12/19/2018	0.0043
1/16/2019	0.0038
8/29/2019	0.0029 (J)
10/16/2019	0.0027 (J)
3/4/2020	0.0052
8/20/2020	0.0044
9/17/2020	0.0065



# Time Series

Constituent: Boron (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.0072 (J)	<0.04	<0.04	<0.04		
9/1/2016	0.0093 (J)	<0.04						<0.04	
9/6/2016			0.0362 (J)						
9/8/2016									1.03
11/15/2016							<0.04 (B)	<0.04 (B)	
11/16/2016	<0.04	<0.04		<0.04	<0.04	<0.04			
11/17/2016			0.0617						1.7
2/20/2017						0.0066 (J)	0.0093 (J)	0.0157 (J)	
2/21/2017	0.0071 (J)	<0.04	0.0245 (J)	0.0088 (J)	<0.04				1.55
6/12/2017				0.0133 (J)		<0.04	<0.04	<0.04	
6/13/2017		<0.04	<0.04		<0.04				1.77
6/14/2017	0.0078 (J)								
9/26/2017	<0.04	<0.04	<0.04	0.0093 (J)	<0.04	<0.04	<0.04	<0.04	
9/27/2017									1.75
2/13/2018				0.0141 (J)	<0.04	<0.04	<0.04	<0.04	
2/14/2018	0.0068 (J)	<0.04	0.0314 (J)						1.47
6/26/2018	0.008 (J)	<0.04	0.062	0.012 (J)	<0.04	0.0042 (J)	0.0056 (J)	0.0041 (J)	1.8
12/18/2018	0.0083 (J)	0.0053 (J)	0.055	0.0086 (J)	<0.04	<0.04	0.0062 (J)	<0.04	1.5
3/19/2019	0.008 (J)	<0.04	0.068	0.00565 (JD)	<0.04	<0.04	<0.04	<0.04	
3/20/2019									1.5 (D)
10/15/2019	0.006 (J)	<0.04	0.022 (J)	0.0067 (J)	<0.04	<0.04	0.006 (J)	0.01 (J)	1.2
3/3/2020	0.01 (J)	0.0065 (J)		0.0082 (J)	<0.04	<0.04	<0.04	<0.04	
3/4/2020			0.044 (J)						1.2
9/15/2020	0.0071 (J)	<0.04	0.033 (J)	<0.04	<0.04	<0.04	<0.04	<0.04	1.2

# Time Series

Constituent: Boron (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			1.96						
9/8/2016	1.63	1.35		1.28					
11/18/2016	1.91								
11/21/2016		1.74	1.68	1.19					
2/21/2017	1.39								
2/22/2017		1.5	1.48	1.43					
6/13/2017	1.62								
6/14/2017		1.6	1.71	1.57					
9/27/2017	1.16	1.83	1.61	1.51					
2/14/2018	1.17	1.8	1.47	1.6					
3/6/2018							0.0198 (J)	0.428	
5/1/2018							0.015 (J)	0.435 (D)	
6/27/2018	1.4 (J+X)	1.8 (J+X)		1.5 (J+X)				0.49 (J+X)	
6/28/2018			1.4				<0.04 (X)		
7/31/2018							0.035 (J)		
8/1/2018								0.39	
8/2/2018					0.016 (J)				
8/3/2018						0.3			
8/10/2018									1.3
8/23/2018							0.022 (J)	0.39	1.4
9/19/2018							0.021 (J)	0.43	1.7
10/29/2018							0.021 (J)	0.4	1.3
11/28/2018							<0.04 (X)	0.51	1.5
12/18/2018		1.5	1.6						
12/19/2018				1.6				0.41	
12/20/2018	1.4						0.028 (J)		1.6
1/17/2019									1.5
1/18/2019					0.0057 (J)				
1/19/2019						0.39			
2/13/2019									1.7
3/19/2019	1.1							0.41	
3/20/2019		1.5	1.7	1.4			0.043		1.6 (D)
10/16/2019		1.2						0.36	1.3
10/17/2019	0.97		1.7	1.5			0.064		
10/18/2019					0.0057 (J)	0.38			
12/3/2019							0.027 (J)		
12/4/2019	0.89		1.6	1.6					
3/4/2020	0.81	1.1						0.49	1.4
3/5/2020			1.5	1.5			0.044 (J)		
9/15/2020		1.1							
9/16/2020	1.2		1.7	1.4			0.028 (J)	0.47	
9/17/2020					0.0063 (J)	0.43			1.9

# Time Series

Constituent: Boron (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	0.32
5/1/2018	0.32
6/28/2018	0.34
8/1/2018	0.28
10/29/2018	0.3
11/28/2018	0.35
12/19/2018	0.35
1/16/2019	0.37
3/20/2019	0.34
10/16/2019	0.31
3/4/2020	0.32
9/17/2020	0.36



# Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.0025						
9/8/2016	7E-05 (J)	<0.0025		<0.0025					
11/18/2016	<0.001 (J)								
11/21/2016		<0.0025	<0.001 (J)	<0.001 (J)					
2/21/2017	<0.0025								
2/22/2017		<0.0025	<0.0025	0.0001 (J)					
6/13/2017	<0.0025								
6/14/2017		<0.0025	<0.0025	<0.0025					
9/27/2017	<0.0025	<0.0025	<0.0025	<0.0025					
2/14/2018	<0.0025	<0.0025	<0.0025	<0.0025					
3/6/2018							<0.0025	<0.0025	
5/1/2018							<0.0025	<0.0025 (D)	
6/27/2018	<0.0025	<0.0025		0.00011 (J)				0.00014 (J)	
6/28/2018			<0.0025				<0.0025		
7/31/2018							<0.0025		
8/1/2018								0.00011 (J)	
8/2/2018					<0.0025				
8/3/2018						0.0015			
8/10/2018									<0.0025
8/23/2018							<0.0025	0.00018 (J)	<0.0025
9/19/2018							<0.0025	0.00015 (J)	<0.0025
10/29/2018							9.8E-05 (J)	0.00019 (J)	<0.0025
11/28/2018							<0.0025	0.00022 (J)	<0.0025
12/18/2018		<0.0025	<0.0025						
12/19/2018				<0.0025 (X)				<0.0025	
12/20/2018	<0.0025						<0.0025 (X)		<0.0025
1/17/2019									<0.0025
1/18/2019					<0.0025				
1/19/2019						0.0016			
2/13/2019									<0.0025
8/27/2019			<0.0025	<0.0025					
8/28/2019	<0.0025	<0.0025					<0.0025	0.00017 (J)	
8/29/2019									<0.0025
10/16/2019		<0.0025						0.00018 (J)	<0.0025
10/17/2019	<0.0025		<0.0025	<0.0025			<0.0025		
10/18/2019					<0.0025	0.00083 (J)			
12/3/2019							0.00011 (J)		
12/4/2019	<0.0025		<0.0025	<0.0025					
3/4/2020	<0.0025	<0.0025						0.00024 (J)	<0.0025
3/5/2020			<0.0025	<0.0025			<0.0025		
8/19/2020	<0.0025	<0.0025	<0.0025	<0.0025					
8/20/2020					<0.0025	0.0019 (J)	0.00014 (J)	<0.0025	<0.0025
9/15/2020		<0.0025							
9/16/2020	<0.0025		<0.0025	<0.0025			<0.0025	<0.0025	
9/17/2020					<0.0025	0.033			<0.0025

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	0.038
5/1/2018	0.011
6/28/2018	0.087
8/1/2018	0.042
10/29/2018	0.083
11/28/2018	0.031
12/19/2018	0.042
1/16/2019	0.028
8/29/2019	0.0071
10/16/2019	0.014
3/4/2020	0.013
8/20/2020	0.0079
9/17/2020	0.021

# Time Series

Constituent: Calcium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				12.6	4.09	13.5	19.6		
9/1/2016	8.98	4.61						3.3	
9/6/2016			12.8						
9/8/2016									59.4
11/15/2016							21.7	3.44	
11/16/2016	15.4	4.17		12.1	4.25	14.9			
11/17/2016			19.2						78.4
2/20/2017						13.9	21.1	3.52	
2/21/2017	17.4	5	15.1	11.4	4.02				80.9
6/12/2017				9.34		13.7	21.5	3.11	
6/13/2017		4.98	10.2		3.84				62
6/14/2017	18.1								
9/26/2017	19.3	4.49	15	14.3	3.31	14.4	24	3.15	
9/27/2017									65.8
2/13/2018				<25	3.94	<25	<25	3.65	
2/14/2018	<25	<25	<25						58.8
6/26/2018	15.5 (J)	6.4	18.5 (J)	16 (J)	3.6	13.5 (J)	23.5 (J)	3.3	55.5
7/31/2018	18.2 (J)	6.1							
12/18/2018	18.7 (J)	5.5	16.8 (J)	14.5 (J)	3.8	16.4 (J)	19.8 (J)	3.5	54.7
3/19/2019	15.9 (J)	5.9	13.5 (J)	14.3 (JD)	3.9	12.3 (J)	21.4 (J)	3.6	
3/20/2019									53.95 (D)
10/15/2019	15.9	6.2	8.6	15.1	3.7	14.4	20	3.5	48.3
3/3/2020	19.4	6.8		20	4	14.9	23.2	5	
3/4/2020			11.5						52
9/15/2020	14.5	5.7	10.7	14.1	3.9	12.7	16.8	3.7	40.1

# Time Series

Constituent: Calcium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			63.3						
9/8/2016	87.2	93.9		60.5					
11/18/2016	82.4								
11/21/2016		99.1	60.7	31.1					
2/21/2017	75.1								
2/22/2017		105	62.1	67.3					
6/13/2017	61								
6/14/2017		91.3	63.5	60.2					
9/27/2017	72.6	84	63.5	68.4					
2/14/2018	74.1	72.1	62.8	70.2					
3/6/2018							39.5	326	
5/1/2018							45.5	302 (D)	
6/27/2018	68.2	61.1		67.1				340	
6/28/2018			73.3				41.9		
7/31/2018							41.5		
8/1/2018								358	
8/10/2018									410 (O)
8/23/2018							42.3	323	33.9
9/19/2018							41.9	321	42.3
10/29/2018							40.8	326	39.8
11/28/2018							45.1	354	38.2
12/18/2018		52.9	102						
12/19/2018				61.2				330	
12/20/2018	63.9						39		43.2
1/17/2019									39.4
1/18/2019					9.1				
1/19/2019						196			
2/13/2019									36.9
3/19/2019	60.2							335	
3/20/2019		55.4	141	52.8			31.2		40.85 (D)
10/16/2019		54						338	48.4
10/18/2019					7.1	177			
12/3/2019							43.7		
12/4/2019	76.8		92.6	52.7					
3/4/2020	72.3	59.3						353	49.5
3/5/2020			119	52.1			37.9		
9/15/2020		55.1							
9/16/2020	62.5		106	43.1			39.7	309	
9/17/2020					7.7	168			35.4



# Time Series

Constituent: Calcium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	233
5/1/2018	225
6/28/2018	242
8/1/2018	246
10/29/2018	236
11/28/2018	254
12/19/2018	252
1/16/2019	248
3/20/2019	222
10/16/2019	241
3/4/2020	245
9/17/2020	206

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				2.3	2	4.4	3.6		
9/1/2016	3.3	3.5						2.5	
9/6/2016			5.8						
9/8/2016									5.5
11/15/2016							4	2.3	
11/16/2016	3.6	3.6		2	1.8	4.4			
11/17/2016			4.3						7.7
2/20/2017						4.8	3.9	2.4	
2/21/2017	3.2	3.2	3.5	2	1.8				7.3
6/12/2017				2.1		4.2	3.8	2.2	
6/13/2017		3.3	3.2		1.7				7.5
6/14/2017	3.1								
9/26/2017	3.3	3.3	3.5	2	1.8	4.4	4.1	2.3	
9/27/2017									7.9
2/13/2018				2.1	1.7	4.7	4.1	2.3	
2/14/2018	3.1	3.5	3.8						6.7
6/26/2018	3.4	3.4	3.8	2.4	2.2	4.5	4.1	2.6	6.7
7/31/2018	2.6	2.9							
12/18/2018	2.8	2.9	3.9	1.8	1.9	4.5	3.8	2.3	6.2
3/19/2019	3.2	3.5	3.8	2.45 (D)	2	4.5	4.2	2.6	
3/20/2019									6.3 (D)
10/15/2019	3.1	3.4	3.5	2.2	1.9	4.2	3.7	2.4	5
3/3/2020	2.6	3.2		1.9	1.9	3.9	3.6	2.9	
3/4/2020			3.3						5
9/15/2020	2.4	3.5	3.1	1.9	1.7	3.7	3.7	2.3	4.9

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			6.7						
9/8/2016	6	6.4		6.8					
11/18/2016	6.3								
11/21/2016		6.9	6.5	7.8					
2/21/2017	5.1								
2/22/2017		6.2	5.6	7					
6/13/2017	4.7								
6/14/2017		7.2	5.7	7.1					
9/27/2017	4.9	8.7	6	7.2					
2/14/2018	5.6	7.2	5.9	7.4					
3/6/2018							56.6	8.4	
5/1/2018							58.5	5.7 (D)	
6/27/2018	5.9	6.3		7.1				4.4	
6/28/2018			7 (J-X)				50.2 (J-X)		
7/31/2018							59		
8/1/2018								5.2	
8/10/2018									6.9
8/23/2018							54	3.6	7.5
9/19/2018							58.4	4.1	6.6
10/29/2018							62.6	4.3	7.8
11/28/2018							58.1	5.1	7.2
12/18/2018		5.4	5.8						
12/19/2018				7 (J-X)				4.5 (J-X)	
12/20/2018	5.6 (J-X)						47.2 (J-X)		6.6 (J-X)
1/17/2019									6.4
1/18/2019					4.6				
1/19/2019						11.6			
2/13/2019									6.5
3/19/2019	5.8							4.7	
3/20/2019		5.6	5.8	7.3			27.7		6.7 (D)
10/16/2019		6.9						4.6	7
10/18/2019					4.7	10.9			
12/3/2019							52.8		
12/4/2019	5.6		5	6.6					
3/4/2020	5.1	5.8						4.2	6.1
3/5/2020			4.3	6			37.1		
9/15/2020		5.5							
9/16/2020	5.4		4.4	5.6			54.9	4.1	
9/17/2020					4.6	10.5			6.3

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-50
3/15/2018	23.3
5/1/2018	23.4
6/28/2018	24 (J-X)
8/1/2018	25.7
10/29/2018	24.9
11/28/2018	24
12/19/2018	23.3 (J-X)
1/16/2019	24.1
3/20/2019	23.5
10/16/2019	21.9
3/4/2020	21.6
9/17/2020	20.1

# Time Series

Constituent: Chromium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.001 (J)	0.0034 (J)	0.0058 (J)	0.0028 (J)		
9/1/2016	0.0009 (J)	0.0013 (J)						0.0147	
9/6/2016			<0.01						
9/8/2016									<0.01
11/15/2016							<0.01 (JB)	0.0154 (B)	
11/16/2016	<0.01 (J)	<0.01		<0.01	<0.01 (J)	<0.01 (J)			
11/17/2016			<0.01						<0.01
2/20/2017						0.0049 (J)	0.0047 (J)	0.014	
2/21/2017	0.001 (J)	0.0017 (J)	<0.01	<0.01	0.0036 (J)				<0.01
6/12/2017				0.0005 (J)		0.0052 (J)	0.0041 (J)	0.016	
6/13/2017		0.0019 (J)	<0.01		0.0038 (J)				<0.01
6/14/2017	0.0012 (J)								
9/26/2017	0.0014 (J)	0.0018 (J)	<0.01	0.0005 (J)	0.0045 (J)	0.0039 (J)	0.0037 (J)	0.0144	
9/27/2017									<0.01
2/13/2018				<0.01	<0.01	<0.01	<0.01	0.0144	
2/14/2018	<0.01	<0.01	<0.01						<0.01
6/26/2018	<0.01	0.0022 (J)	<0.01	<0.01	0.008 (J)	0.0053 (J)	0.0043 (J)	0.015	<0.01
12/18/2018	0.0016 (J)	0.0022 (J)	<0.01	<0.01	0.012	0.0032 (J)	0.0054 (J)	0.015	<0.01
8/27/2019	0.0023 (J)	0.0024 (J)		0.0004 (J)	0.0083 (J)	0.0055 (J)	0.0043 (J)	0.015	0.0016 (J)
8/29/2019			0.0016 (J)						
10/15/2019	0.0021 (J)	0.0023 (J)	0.0017 (J)	<0.01	0.0083 (J)	0.0047 (J)	0.0055 (J)	0.014	0.00098 (J)
3/3/2020	0.0026 (J)	0.0028 (J)		0.00047 (J)	0.0098 (J)	0.0069 (J)	0.0057 (J)	0.011	
3/4/2020			0.0019 (J)						<0.01
8/18/2020	0.0023 (J)	0.0029 (J)	0.0017 (J)	0.00096 (J)	0.0085 (J)	0.0069 (J)	0.005 (J)	0.015	
8/19/2020									<0.01
9/15/2020	0.00096 (J)	0.0025 (J)	0.0019 (J)	<0.01	0.0082 (J)	0.0069 (J)	0.0048 (J)	0.014	<0.01

# Time Series

Constituent: Chromium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.01						
9/8/2016	0.001 (J)	<0.01		<0.01					
11/18/2016	<0.01								
11/21/2016		<0.01	<0.01	<0.01					
2/21/2017	<0.01								
2/22/2017		<0.01	<0.01	0.0012 (J)					
6/13/2017	<0.01								
6/14/2017		<0.01	<0.01	0.0009 (J)					
9/27/2017	<0.01	<0.01	<0.01	0.0011 (J)					
2/14/2018	<0.01	<0.01	<0.01	<0.01					
3/6/2018							<0.01	<0.01	
5/1/2018							<0.01	<0.01 (D)	
6/27/2018	<0.01	<0.01		<0.01				<0.01	
6/28/2018			<0.01				<0.01		
7/31/2018							<0.01		
8/1/2018								<0.01	
8/10/2018									0.0017 (J)
8/23/2018							<0.01	<0.01	<0.01
9/19/2018							<0.01	<0.01	<0.01
10/29/2018							<0.01	<0.01	<0.01
11/28/2018							<0.01	<0.01	<0.01
12/18/2018		<0.01	<0.01						
12/19/2018				<0.01				0.0018 (J)	
12/20/2018	0.003 (J)						<0.01		<0.01
1/17/2019									<0.01
1/18/2019					<0.01				
1/19/2019						<0.01			
2/13/2019									<0.01
8/27/2019			0.0051 (J)	0.0019 (J)					
8/28/2019	<0.01	<0.01					<0.01	0.00092 (J)	
8/29/2019									<0.01
10/16/2019		<0.01						<0.01	<0.01
10/18/2019					0.00042 (J)	<0.01			
12/3/2019							<0.01		
12/4/2019	<0.01		<0.01	0.0014 (J)					
3/4/2020	<0.01	0.02						0.00078 (J)	<0.01
3/5/2020			<0.01	0.0014 (J)			0.00053 (J)		
8/19/2020	<0.01	<0.01	<0.01	0.0021 (J)					
8/20/2020					0.00063 (J)	<0.01	0.001 (J)	0.00064 (J)	<0.01
9/15/2020		<0.01							
9/16/2020	<0.01		0.014	0.0025 (J)			0.0014 (J)	<0.01	
9/17/2020					<0.01	0.00098 (J)			<0.01

# Time Series

Constituent: Chromium (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-50
3/15/2018	<0.01
5/1/2018	<0.01
6/28/2018	0.0023 (J)
8/1/2018	0.0046 (J)
10/29/2018	<0.01
11/28/2018	<0.01
12/19/2018	<0.01
1/16/2019	<0.01
8/29/2019	<0.01
10/16/2019	0.0005 (J)
3/4/2020	0.00071 (J)
8/20/2020	0.00065 (J)
9/17/2020	0.00098 (J)

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.0016 (J)	0.0034 (J)	0.0013 (J)	<0.005		
9/1/2016	<0.005	<0.005						<0.005	
9/6/2016			0.0028 (J)						
9/8/2016									0.0073 (J)
11/15/2016							<0.005	<0.005	
11/16/2016	<0.005	<0.005		<0.005	<0.005	<0.01 (o)			
11/17/2016			<0.01 (J)						<0.01 (J)
2/20/2017						0.0012 (J)	0.0009 (J)	<0.005	
2/21/2017	<0.005	<0.005	0.0045 (J)	<0.005	0.0028 (J)				0.0079 (J)
6/12/2017				<0.005		0.0011 (J)	0.0006 (J)	0.0003 (J)	
6/13/2017		<0.005	0.0036 (J)		0.0025 (J)				0.0083 (J)
6/14/2017	<0.005								
9/26/2017	<0.005	<0.005	0.0037 (J)	<0.005	0.002 (J)	0.0016 (J)	0.0005 (J)	0.0003 (J)	
9/27/2017									0.0087 (J)
2/13/2018				<0.005	<0.005	<0.01 (o)	<0.005	<0.005	
2/14/2018	<0.005	<0.005	0.0135						<0.005
6/26/2018	<0.005	<0.005	0.0098 (J)	<0.005	0.0019 (J)	0.0009 (J)	0.00052 (J)	<0.005	0.006 (J)
7/31/2018	<0.005	<0.005							
12/18/2018	<0.005	<0.005	0.0057 (J)	<0.005	0.0032 (J)	0.00062 (J)	<0.005	<0.005	0.0055 (J)
8/27/2019	<0.005	<0.005		<0.005	0.0012 (J)	0.00068 (J)	0.00042 (J)	<0.005	0.0042 (J)
8/29/2019			0.0015 (J)						
10/15/2019	<0.005	<0.005	0.0011 (J)	<0.005	0.00097 (J)	0.00083 (J)	<0.005	<0.005	0.0043 (J)
3/3/2020	<0.005	<0.005		<0.005	0.0015 (J)	0.00043 (J)	<0.005	0.0011 (J)	
3/4/2020			0.0012 (J)						0.0039 (J)
8/18/2020	<0.005	<0.005	0.00067 (J)	<0.005	0.0014 (J)	0.00048 (J)	<0.005	0.00061 (J)	
8/19/2020									0.0039 (J)
9/15/2020	<0.005	<0.005	0.00076 (J)	<0.005	0.001 (J)	0.0005 (J)	<0.005	<0.005	0.0035 (J)



# Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			0.0006 (J)						
9/8/2016	0.0149	0.0122		0.0025 (J)					
11/18/2016	0.0131								
11/21/2016		0.0122	<0.005	<0.01 (J)					
2/21/2017	0.0099 (J)								
2/22/2017		0.0136	0.0016 (J)	<0.005					
6/13/2017	0.0094 (J)								
6/14/2017		0.0113	0.0015 (J)	<0.005					
9/27/2017	0.0095 (J)	0.0094 (J)	0.0007 (J)	<0.005					
2/14/2018	0.0112	<0.005	<0.005	<0.005					
3/6/2018							0.0162	<0.005	
5/1/2018							0.015	0.0125 (D)	
6/27/2018	0.0093 (J)	0.0069 (J)		<0.005				0.0076 (J)	
6/28/2018			0.00078 (J)				0.01		
7/31/2018							0.0098 (J)		
8/1/2018								0.004 (J)	
8/2/2018					0.0079 (J)				
8/3/2018						0.041			
8/10/2018									0.0043 (J)
8/23/2018							0.0093 (J)	0.0016 (J)	0.0026 (J)
9/19/2018							0.0084 (J)	0.0018 (J)	0.0028 (J)
10/29/2018							0.0064 (J)	0.0014 (J)	0.0015 (J)
11/28/2018							0.0071 (J)	0.0016 (J)	0.0012 (J)
12/18/2018		0.0067 (J)	0.0011 (J)						
12/19/2018				<0.005				0.0014 (J)	
12/20/2018	0.0081 (J)						0.069		<0.005
1/17/2019									<0.005
1/18/2019					0.0082 (J)				
1/19/2019						0.018			
2/13/2019									<0.005
8/27/2019			0.0014 (J)	<0.005					
8/28/2019	0.01	0.0061					0.011	0.00037 (J)	
8/29/2019									0.00063 (J)
10/16/2019		0.0058						0.00032 (J)	<0.005
10/17/2019	<0.04 (J)		<0.005	<0.005			<0.04 (J)		
10/18/2019					0.0063	0.017			
12/3/2019							0.0076		
12/4/2019	0.0086		0.0012 (J)	<0.005					
3/4/2020	0.008	0.007						0.0011 (J)	<0.005
3/5/2020			0.0011 (J)	<0.005			0.0091		
8/19/2020	0.0078	0.0065	0.0008 (J)	<0.005					
8/20/2020					0.0039 (J)	0.02	0.022	0.00043 (J)	<0.005
9/15/2020		0.0064							
9/16/2020	0.008		0.0008 (J)	<0.005			0.0049 (J)	0.00053 (J)	
9/17/2020					0.0062	0.022			0.00046 (J)

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	1.3
5/1/2018	1.4
6/28/2018	1.3
8/1/2018	1.4
10/29/2018	1.4
11/28/2018	1.4
12/19/2018	1.5
1/16/2019	1.4
8/29/2019	1.3
10/16/2019	1.4
3/4/2020	1.5
8/20/2020	1.4
9/17/2020	1.4

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/11/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.351 (U)	1 (U)	0.62 (U)	0.603 (U)		
9/1/2016	0.428 (U)	0.566 (U)						1.33	
9/6/2016			0.585 (U)						
9/8/2016									0.862 (U)
11/15/2016							0.645 (U)	0.412 (U)	
11/16/2016	0.799 (U)	0.863 (U)		0.824 (U)	0.43 (U)	0.493 (U)			
11/17/2016			0.804 (U)						1.2 (U)
2/20/2017						0.534 (U)	1.36	0.633 (U)	
2/21/2017	1.75 (U)	0.318 (U)	0.595 (U)	1.01 (U)	0.96 (U)				1.31
6/12/2017				0.532 (U)		0.254 (U)	0.566 (U)	0.112 (U)	
6/13/2017		0.163 (U)	0.618 (U)		0.645 (U)				0.738 (U)
6/14/2017	2.66								
9/26/2017	0.841 (U)	0.56 (U)	1.26 (U)	0.845 (U)	0.299 (U)	0.62 (U)	0.762 (U)	0.167 (U)	
9/27/2017									0.583 (U)
2/13/2018				0.176 (U)	1.01 (U)	0.0914 (U)	0.349 (U)	0.347 (U)	
2/14/2018	1.13 (UX)	0.537 (U)	1.2 (U)						1.41 (J+X)
6/26/2018	1.42 (J+X)	1.31 (UX)	1.34 (U)	1.02 (U)	1.26 (J+X)	1.11 (U)	0.614 (U)	0.903 (U)	0.968 (U)
12/18/2018	0.855 (U)	1.31 (J+X)	1.13 (U)	0.487 (U)	0.44 (U)	0.42 (U)	0.445 (U)	0.353 (U)	1.13 (U)
8/27/2019	1.31	1.32		1.11	1.47	1.19	1.44	0.65 (U)	0.91 (U)
8/29/2019			1.45 (U)						
10/15/2019	1.13 (U)	1.05 (U)	1.69	1.02 (U)	0.807 (U)	0.714 (U)	0.467 (U)	0.402 (U)	1.06 (U)
3/3/2020	1.29 (U)	1.68		1.18 (U)	0.818 (U)	0.996 (U)	1.5	0.397 (U)	
3/4/2020			1.45						1.34
8/18/2020	0.988 (U)	0.969 (U)	0.784 (U)	0.0861 (U)	1.22 (U)	0.53 (U)	0.581 (U)	0.453 (U)	
8/19/2020									0.467 (U)
9/15/2020	0.762 (U)	0.359 (U)	1.04 (U)	0.0583 (U)	0.579 (U)	0.215 (U)	0.55 (U)	0.474 (U)	0.205 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			1.01 (U)						
9/8/2016	1.74	1.13		0.706 (U)					
11/18/2016	0.571 (U)								
11/21/2016		1.59	0.201 (U)	0.0569 (U)					
2/21/2017	1.28 (U)								
2/22/2017		1.64	0.57 (U)	1.07 (U)					
6/13/2017	0.521 (U)								
6/14/2017		1.32	0.726 (U)	0.459 (U)					
9/27/2017	0.595 (U)	1.7	0.884 (U)	0.807 (U)					
2/14/2018	1.18 (U)	1.89 (J+X)	1.14 (U)	1.67 (J+X)					
3/6/2018							1.25 (U)	1.75 (J+X)	
5/1/2018							0.423 (U)	2.02 (D)	
6/27/2018	1.3 (U)	1.66 (J+X)		1.34 (UX)				0.878 (U)	
6/28/2018			1.4 (UX)				0.283 (U)		
7/31/2018							0.243 (U)		
8/1/2018								0.638 (U)	
8/10/2018									1.91
8/23/2018							1.1 (U)	1.14 (U)	1.86 (J+X)
9/19/2018							0.369 (U)	1.45 (UX)	1.64 (UX)
10/29/2018							0.401 (U)	1.09 (U)	1.36 (U)
11/28/2018							0.901 (U)	1.67 (UX)	1.07 (U)
12/18/2018		0.759 (U)	0.661 (U)						
12/19/2018				1.21 (U)				1.3	
12/20/2018	0.527 (U)						0.657 (U)		0.892 (U)
1/17/2019									1.1 (U)
1/18/2019					1.22				
1/19/2019						1.86			
2/13/2019									1.68
8/27/2019			1.35	0.86 (U)					
8/28/2019	0.643 (U)	1.76					0.528 (U)	0.804 (U)	
8/29/2019									1.44
10/16/2019		1.69 (U)						1.28 (U)	2.13
10/17/2019	1.07 (U)		1.25 (U)	1.2 (U)			0.977 (U)		
10/18/2019					17.1 (U)				
3/4/2020	1.18	1.23						0.862 (U)	2.3
3/5/2020			1.35	0.483 (U)			0.921 (U)		
8/19/2020	0.684 (U)	0.876 (U)	1 (U)	0.482 (U)					
8/20/2020					1.19	0.937 (U)	0.501 (U)	1.64	2.97
9/15/2020		1.23 (U)							
9/16/2020	0.175 (U)		0.43 (U)	0.195 (U)			0.254 (U)	0.51 (U)	
9/17/2020					0.952 (U)	1.76			2.04

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-50
3/15/2018	1.31
5/1/2018	1.69 (J+X)
6/28/2018	1.04 (U)
8/1/2018	1.67
10/29/2018	0.992 (U)
11/28/2018	1.76 (UX)
12/19/2018	2.15 (J+X)
1/16/2019	1.39
8/29/2019	1.33
10/16/2019	2.51
3/4/2020	1.73
8/20/2020	2.78
9/17/2020	0.717 (U)

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.11 (J)	0.05 (J)	0.07 (J)	0.19 (J)		
9/1/2016	0.2 (J)	0.05 (J)						0.06 (J)	
9/6/2016			0.42						
9/8/2016									0.14 (J)
11/15/2016							<0.3 (J)	<0.3 (J)	
11/16/2016	<0.3 (J)	<0.3 (J)		<0.3 (J)	<0.3 (J)	<0.3 (J)			
11/17/2016			<0.3 (JB)						<0.3 (JB)
2/20/2017						0.06 (J)	0.08 (J)	0.04 (J)	
2/21/2017	0.16 (J)	0.04 (J)	0.1 (J)	0.14 (J)	0.05 (J)				0.6
6/12/2017				0.16 (J)		0.008 (J)	0.07 (J)	0.06 (J)	
6/13/2017		0.008 (J)	0.07 (J)		0.04 (J)				0.19 (J)
6/14/2017	0.09 (J)								
9/26/2017	0.1 (J)	<0.1	<0.1	0.14 (J)	<0.1	<0.1	0.04 (J)	<0.1	
9/27/2017									0.5
2/13/2018				<0.1	<0.1	<0.1	<0.1	<0.1	
2/14/2018	<0.1	<0.1	<0.1						<0.1
6/26/2018	0.079 (J)	0.042 (J)	0.053 (J)	0.085 (J)	0.048 (J)	0.045 (J)	0.072 (J)	0.041 (J)	0.15 (J)
12/18/2018	<0.1	<0.1	<0.1	0.085 (J)	<0.1	<0.1	<0.1	<0.1	0.29 (J)
3/19/2019	<0.1	<0.1	<0.1	0.0655 (JD)	0.037 (J)	<0.1	0.06 (J)	0.03 (J)	
3/20/2019									0.17 (JD)
8/27/2019	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	0.15 (J)
8/29/2019			0.084 (J)						
10/15/2019	0.047 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	0.045 (J)	<0.1	0.16 (J)
3/3/2020	0.056 (J)	<0.1		0.066 (J)	0.05 (J)	<0.1	0.057 (J)	0.09 (J)	
3/4/2020			<0.1						0.07 (J)
8/18/2020	0.052 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
8/19/2020									0.17
9/15/2020	0.062 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	0.051 (J)	<0.1	0.15

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			0.43						
9/8/2016	0.31	0.2 (J)		0.15 (J)					
11/18/2016	<0.3 (JB)								
11/21/2016		0.37	<0.3 (J)	<0.3 (J)					
2/21/2017	0.35								
2/22/2017		0.37	0.2 (J)	0.08 (J)					
6/13/2017	0.19 (J)								
6/14/2017		0.38	0.15 (J)	0.09 (J)					
9/27/2017	0.4	0.4	0.41	<0.1					
2/14/2018	<0.1	<0.1	<0.1	<0.1					
3/6/2018							0.94	1.1	
5/1/2018							<0.1	0.595 (D)	
6/27/2018	0.26 (J)	0.085 (J)		<0.1				0.27 (J)	
6/28/2018			0.93 (J+X)				0.69 (J+X)		
7/31/2018							<0.1		
8/1/2018								0.48	
8/10/2018									1.6 (O)
8/23/2018							<0.1	0.34	0.32
9/19/2018							<0.1	0.23 (J)	0.22 (J)
10/29/2018							<0.1	<0.1	0.14 (J)
11/28/2018							<0.1	0.063 (J)	0.24 (J)
12/18/2018		0.26 (J)	0.54						
12/19/2018				0.23 (J)				0.28 (J)	
12/20/2018	0.26 (J)						0.12 (J)		0.3
1/17/2019									0.23 (J)
1/18/2019					0.13 (J)				
1/19/2019						<0.1			
2/13/2019									<0.1
3/19/2019	0.2 (J)							<0.1	
3/20/2019		0.091 (J)	0.31	<0.1			0.066 (J)		0.135 (JD)
8/27/2019			0.12 (J)	<0.1					
8/28/2019	0.074 (J)	0.055 (J)					<0.1	<0.1	
8/29/2019									0.087 (J)
10/16/2019		0.11 (J)						0.076 (J)	0.22 (J)
10/18/2019					0.09 (J)	<0.1			
12/3/2019							0.19 (J)		
12/4/2019	0.18 (J)		0.26 (J)	0.11 (J)					
3/4/2020	<0.1	<0.1						<0.1	0.1 (J)
3/5/2020			0.051 (J)	<0.1			<0.1		
8/19/2020	0.19	0.12	0.14	<0.1					
8/20/2020					0.056 (J)	<0.1	<0.1	<0.1	0.23
9/15/2020		0.057 (J)							
9/16/2020	0.15		0.13	<0.1			0.052 (J)	<0.1	
9/17/2020					0.062 (J)	<0.1			0.074 (J)

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	0.84 (JX)
5/1/2018	0.91
6/28/2018	1.1 (J+X)
8/1/2018	2
10/29/2018	0.24 (J)
11/28/2018	0.41
12/19/2018	0.54
1/16/2019	1.1
3/20/2019	0.21 (J)
8/29/2019	0.41
10/16/2019	0.39
3/4/2020	0.14 (J)
8/20/2020	0.39
9/17/2020	0.46



# Time Series

Constituent: Lead (mg/L) Analysis Run 11/1/2020 10:57 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				<0.005	<0.005	<0.005	<0.005		
9/1/2016	<0.005	<0.005						0.0001 (J)	
9/6/2016			<0.005						
9/8/2016									<0.005
11/15/2016							<0.005	<0.005	
11/16/2016	<0.005	<0.005		<0.005	<0.005	<0.005			
11/17/2016			<0.005						<0.005
2/20/2017						<0.005	0.0002 (J)	<0.005	
2/21/2017	<0.005	<0.005	<0.005	<0.005	<0.005				<0.005
6/12/2017				8E-05 (J)		<0.005	0.0001 (J)	8E-05 (J)	
6/13/2017		<0.005	<0.005		<0.005				<0.005
6/14/2017	<0.005								
9/26/2017	<0.005	<0.005	<0.005	7E-05 (J)	7E-05 (J)	<0.005	0.0001 (J)	<0.005	
9/27/2017									<0.005
2/13/2018				<0.005	<0.005	<0.005	<0.005	<0.005	
2/14/2018	<0.005	<0.005	<0.005						<0.005
6/26/2018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
12/18/2018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/27/2019	<0.005	<0.005		<0.005	5.8E-05 (J)	<0.005	0.00036 (J)	<0.005	0.00011 (J)
8/29/2019			7E-05 (J)						
10/15/2019	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	7.9E-05 (J)	<0.005	<0.005
3/3/2020	<0.005	<0.005		<0.005	<0.005	<0.005	7.9E-05 (J)	7.3E-05 (J)	
3/4/2020			<0.005						<0.005
8/18/2020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0001 (J)	<0.005	
8/19/2020									<0.005
9/15/2020	<0.005	<0.005	<0.005	<0.005	<0.005	0.0013 (J)	4.3E-05 (J)	<0.005	<0.005

# Time Series

Constituent: Lead (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.005						
9/8/2016	<0.005	0.0004 (J)		<0.005					
11/18/2016	<0.005								
11/21/2016		<0.005 (J)	<0.005	<0.005					
2/21/2017	<0.005								
2/22/2017		0.0005 (J)	<0.005	<0.005					
6/13/2017	<0.005								
6/14/2017		0.0004 (J)	<0.005	<0.005					
9/27/2017	<0.005	0.0006 (J)	<0.005	<0.005					
2/14/2018	<0.005	<0.005 (o)	<0.005	<0.005					
3/6/2018							<0.005	<0.005	
5/1/2018							<0.005	<0.005 (D)	
6/27/2018	<0.005	0.00032 (J)		<0.005				<0.005	
6/28/2018			<0.005				<0.005		
7/31/2018							<0.005		
8/1/2018								<0.005	
8/10/2018									<0.005
8/23/2018							<0.005	<0.005	<0.005
9/19/2018							<0.005	<0.005	<0.005
10/29/2018							<0.005	<0.005	<0.005
11/28/2018							<0.005	<0.005	<0.005
12/18/2018		0.00038 (J)	<0.005						
12/19/2018				<0.005				<0.005	
12/20/2018	<0.005						<0.005		<0.005
1/17/2019									<0.005
1/18/2019					<0.005				
1/19/2019						<0.005			
2/13/2019									<0.005
8/27/2019			<0.005	<0.005					
8/28/2019	<0.005	0.00027 (J)					<0.005	<0.005	
8/29/2019									<0.005
10/16/2019		0.00027 (J)						<0.005	<0.005
10/18/2019					<0.005	<0.005			
12/3/2019							<0.005		
12/4/2019	6.3E-05 (J)		<0.005	<0.005					
3/4/2020	<0.005	0.0003 (J)						0.00012 (J)	<0.005
3/5/2020			<0.005	<0.005			0.00026 (J)		
8/19/2020	<0.005	0.00025 (J)	<0.005	<0.005					
8/20/2020					<0.005	<0.005	0.00021 (J)	4.8E-05 (J)	<0.005
9/15/2020		0.00029 (J)							
9/16/2020	<0.005		0.00011 (J)	<0.005			5.3E-05 (J)	6.6E-05 (J)	
9/17/2020					<0.005	0.00036 (J)			<0.005

# Time Series

Constituent: Lead (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-50
3/15/2018	<0.005
5/1/2018	<0.005
6/28/2018	0.00054 (J)
8/1/2018	<0.005
10/29/2018	0.0003 (J)
11/28/2018	<0.005
12/19/2018	<0.005
1/16/2019	<0.005
8/29/2019	4.9E-05 (J)
10/16/2019	8.5E-05 (J)
3/4/2020	0.0001 (J)
8/20/2020	6.7E-05 (J)
9/17/2020	0.00015 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.0268 (J)	<0.03	<0.03	<0.03		
9/1/2016	0.0061 (J)	<0.03						0.003 (J)	
9/6/2016			0.0028 (J)						
9/8/2016									<0.03
11/15/2016							<0.03	<0.03	
11/16/2016	<0.03	<0.03		<0.03	<0.03	<0.03			
11/17/2016			<0.03						<0.03
2/20/2017						<0.03	<0.03	0.0025 (J)	
2/21/2017	0.0058 (J)	<0.03	0.0052 (J)	0.0128 (J)	<0.03				<0.03
6/12/2017				0.0245 (J)		0.0019 (J)	<0.03	0.0027 (J)	
6/13/2017		<0.03	0.0061 (J)		<0.03				<0.03
6/14/2017	0.0054 (J)								
9/26/2017	0.0037 (J)	<0.03	0.0087 (J)	0.0549	<0.03	0.0022 (J)	<0.03	0.0023 (J)	
9/27/2017									<0.03
2/13/2018				0.0595	<0.03	0.0041 (J)	<0.03	0.0027 (J)	
2/14/2018	0.0038 (J)	<0.03	0.0104 (J)						<0.03
6/26/2018	0.0045 (J)	<0.03	0.0095 (J)	0.089	<0.03	0.0025 (J)	<0.03	0.0029 (J)	<0.03
12/18/2018	0.0038 (J)	<0.03	0.0091 (J)	0.024 (J)	<0.03	0.0032 (J)	<0.03	0.0026 (J)	<0.03
8/27/2019	0.0039 (J)	<0.03		0.035	<0.03	0.0019 (J)	<0.03	0.0028 (J)	<0.03
8/29/2019			0.007 (J)						
10/15/2019	0.0037 (J)	<0.03	0.0069 (J)	0.028 (J)	<0.03	0.002 (J)	<0.03	0.0024 (J)	<0.03
3/3/2020	0.0033 (J)	<0.03		0.055	<0.03	0.0013 (J)	<0.03	0.0026 (J)	
3/4/2020			0.0074 (J)						<0.03
8/18/2020	0.0039 (J)	<0.03	0.0099 (J)	0.054	<0.03	0.00095 (J)	<0.03	0.0026 (J)	
8/19/2020									<0.03
9/15/2020	0.0037 (J)	<0.03	0.011 (J)	0.033	<0.03	0.001 (J)	<0.03	0.0027 (J)	<0.03

# Time Series

Constituent: Lithium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			0.0117 (J)						
9/8/2016	0.0021 (J)	0.004 (J)		<0.03					
11/18/2016	<0.03								
11/21/2016		<0.03	<0.03	<0.03					
2/21/2017	<0.03								
2/22/2017		0.0043 (J)	0.0103 (J)	0.0023 (J)					
6/13/2017	0.0017 (J)								
6/14/2017		0.0036 (J)	0.0101 (J)	0.0022 (J)					
9/27/2017	0.0016 (J)	0.0038 (J)	0.0116 (J)	0.0021 (J)					
2/14/2018	0.0018 (J)	0.0034 (J)	0.0115 (J)	0.0023 (J)					
3/6/2018							0.0031 (J)	0.0399 (J)	
5/1/2018							0.0038 (J)	0.0475 (D)	
6/27/2018	0.0016 (J)	0.0034 (J)		0.0023 (J)				0.044 (J)	
6/28/2018			0.013 (J)				0.0028 (J)		
7/31/2018							<0.25 (o)		
8/1/2018								0.039 (J)	
8/10/2018									0.0087 (J)
8/23/2018							0.0033 (J)	0.044 (J)	0.0089 (J)
9/19/2018							0.0033 (J)	0.043 (J)	0.005 (J)
10/29/2018							0.003 (J)	0.039 (J)	0.0048 (J)
11/28/2018							0.0035 (J)	0.044 (J)	0.0052 (J)
12/18/2018		0.0032 (J)	0.014 (J)						
12/19/2018				0.0018 (J)				0.043 (J)	
12/20/2018	0.0015 (J)						0.003 (J)		0.0042 (J)
1/17/2019									0.0039 (J)
1/18/2019					0.0012 (J)				
1/19/2019						0.019 (J)			
2/13/2019									<0.03
8/27/2019			0.016 (J)	0.0022 (J)					
8/28/2019	0.0016 (J)	0.0033 (J)					0.0034 (J)	0.044	
8/29/2019									0.0052 (J)
10/16/2019		0.0029 (J)						0.038	0.0023 (J)
10/18/2019					<0.03	0.019 (J)			
12/3/2019							0.0033 (J)		
12/4/2019	0.0014 (J)		0.013 (J)	0.0022 (J)					
3/4/2020	0.0014 (J)	0.0029 (J)						0.042	0.002 (J)
3/5/2020			0.016 (J)	0.0022 (J)			0.003 (J)		
8/19/2020	0.0014 (J)	0.0029 (J)	0.018 (J)	0.002 (J)					
8/20/2020					<0.03	0.019 (J)	0.0034 (J)	0.044	0.0022 (J)
9/15/2020		0.003 (J)							
9/16/2020	0.0014 (J)		0.016 (J)	0.0022 (J)			0.0036 (J)	0.039	
9/17/2020					<0.03	0.021 (J)			0.0058 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	0.038 (J)
5/1/2018	0.042 (J)
6/28/2018	0.04 (J)
8/1/2018	0.036 (J)
10/29/2018	0.041 (J)
11/28/2018	0.041 (J)
12/19/2018	0.043 (J)
1/16/2019	0.042 (J)
8/29/2019	0.039
10/16/2019	0.034
3/4/2020	0.042
8/20/2020	0.04
9/17/2020	0.052



# Time Series

Constituent: Mercury (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.0005						
9/8/2016	<0.0005	<0.0005		<0.0005					
11/18/2016	<0.0005								
11/21/2016		<0.0005	<0.0005	<0.0005					
2/21/2017	<0.0005								
2/22/2017		<0.0005	<0.0005	<0.0005					
6/13/2017	5E-05 (J)								
6/14/2017		7E-05 (J)	7E-05 (J)	9E-05 (J)					
9/27/2017	4.7E-05 (J)	4E-05 (J)	4E-05 (J)	0.0001 (J)					
2/14/2018	<0.0005	<0.0005	<0.0005	<0.0005					
3/6/2018							<0.0005	<0.0005	
5/1/2018							<0.0005	<0.0005 (D)	
6/27/2018	<0.0005	<0.0005		<0.0005				<0.0005	
6/28/2018			<0.0005				<0.0005		
7/31/2018							<0.0005		
8/1/2018								<0.0005	
8/10/2018									<0.0005
8/23/2018							<0.0005	<0.0005	<0.0005
9/19/2018							<0.0005	<0.0005	<0.0005
10/29/2018							<0.0005	<0.0005	<0.0005
11/28/2018							<0.0005	<0.0005	<0.0005
12/18/2018		<0.0005	<0.0005						
12/19/2018				<0.0005				<0.0005	
12/20/2018	<0.0005						<0.0005		<0.0005
1/17/2019									<0.0005
1/18/2019					<0.0005				
1/19/2019						<0.0005			
2/13/2019									<0.0005
8/27/2019			<0.0005	<0.0005					
8/28/2019	<0.0005	<0.0005					<0.0005	<0.0005	
8/29/2019									<0.0005
10/18/2019					<0.0005	<0.0005			
8/19/2020	<0.0005	9.8E-05 (J)	8.2E-05 (J)	8.2E-05 (J)					
8/20/2020					<0.0005	9.9E-05 (J)	<0.0005	<0.0005	<0.0005
9/15/2020		<0.0005							
9/16/2020	<0.0005		<0.0005	<0.0005			<0.0005	<0.0005	
9/17/2020					<0.0005	<0.0005			<0.0005



# Time Series

Constituent: Mercury (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	<0.0005
5/1/2018	<0.0005
6/28/2018	<0.0005
8/1/2018	<0.0005
10/29/2018	<0.0005
11/28/2018	<0.0005
12/19/2018	<0.0005
1/16/2019	<0.0005
8/29/2019	<0.0005
8/20/2020	<0.0005
9/17/2020	<0.0005

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				0.0021 (J)	<0.01	0.004 (J)	<0.01		
9/1/2016	0.002 (J)	<0.01						<0.01	
9/6/2016			0.0028 (J)						
9/8/2016									<0.01
11/15/2016							<0.01	<0.01	
11/16/2016	<0.01	<0.01		<0.01	<0.01	<0.01 (J)			
11/17/2016			<0.01						<0.01
2/20/2017						0.0055 (J)	<0.01	<0.01	
2/21/2017	<0.01	<0.01	<0.01	0.0021 (J)	<0.01				<0.01
6/12/2017				0.0021 (J)		0.005 (J)	<0.01	<0.01	
6/13/2017		<0.01	<0.01		<0.01				<0.01
6/14/2017	<0.01								
9/26/2017	<0.01	<0.01	<0.01	0.0011 (J)	<0.01	0.0053 (J)	<0.01	<0.01	
9/27/2017									<0.01
2/13/2018				0.0019 (J)	<0.01	0.008 (J)	<0.01	<0.01	
2/14/2018	<0.01	<0.01	<0.01						<0.01
6/26/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.0041 (J)	<0.01	<0.01	<0.01
12/18/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.0048 (J)	<0.01	<0.01	<0.01
8/27/2019	<0.01	<0.01		<0.01	<0.01	0.0028 (J)	<0.01	<0.01	<0.01
8/29/2019			<0.01						
10/15/2019	<0.01	<0.01	<0.01	<0.01	<0.01	0.0035 (J)	<0.01	<0.01	<0.01
3/3/2020				<0.01	<0.01	0.0023 (J)	<0.01	<0.01	
8/18/2020	<0.01	<0.01	<0.01	0.0011 (J)	<0.01	0.0015 (J)	<0.01	<0.01	
8/19/2020									0.00081 (J)
9/15/2020	<0.01	<0.01	<0.01	0.0007 (J)	<0.01	0.0015 (J)	<0.01	<0.01	0.0008 (J)

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.01						
9/8/2016	<0.01	<0.01		<0.01					
11/18/2016	<0.01								
11/21/2016		<0.01	<0.01	<0.01					
2/21/2017	<0.01								
2/22/2017		<0.01	<0.01	<0.01					
6/13/2017	<0.01								
6/14/2017		<0.01	<0.01	<0.01					
9/27/2017	<0.01	<0.01	<0.01	<0.01					
2/14/2018	<0.01	<0.01	<0.01	<0.01					
3/6/2018							<0.01	<0.01	
5/1/2018							<0.01	<0.01 (D)	
6/27/2018	<0.01	<0.01		<0.01				<0.01	
6/28/2018			<0.01				<0.01		
7/31/2018							<0.01		
8/1/2018								<0.01	
8/10/2018									0.0032 (J)
8/23/2018							<0.01	<0.01	0.005 (J)
9/19/2018							<0.01	<0.01	0.0061 (J)
10/29/2018							<0.01	<0.01	0.0065 (J)
11/28/2018							<0.01	<0.01	0.0027 (J)
12/18/2018		<0.01	<0.01						
12/19/2018				<0.01				<0.01	
12/20/2018	<0.01						<0.01		<0.01
1/17/2019									<0.01
1/18/2019					<0.01				
1/19/2019						<0.01			
2/13/2019									<0.01
8/27/2019			<0.01	<0.01					
8/28/2019	<0.01	<0.01					<0.01	<0.01	
8/29/2019									<0.01
10/16/2019		<0.01						<0.01	<0.01
10/18/2019					<0.01	<0.01			
12/3/2019							<0.01		
12/4/2019	<0.01		<0.01	<0.01					
8/19/2020	<0.01	<0.01	0.00078 (J)	<0.01					
8/20/2020					<0.01	<0.01	0.00076 (J)	<0.01	0.0012 (J)
9/15/2020		<0.01							
9/16/2020	<0.01		0.0022 (J)	<0.01			<0.01	<0.01	
9/17/2020					<0.01	<0.01			0.0007 (J)

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	<0.01
5/1/2018	0.0022 (J)
6/28/2018	<0.01
8/1/2018	0.0033 (J)
10/29/2018	<0.01
11/28/2018	<0.01
12/19/2018	<0.01
1/16/2019	<0.01
8/29/2019	<0.01
10/16/2019	<0.01
8/20/2020	<0.01
9/17/2020	<0.01

# Time Series

Constituent: pH, Field (S.U) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				7.16	6.2	6.53	6.59		
9/1/2016	6.71	6						6.49	
9/6/2016			6.49						
9/8/2016									6.07
11/15/2016							6.67	6.59	
11/16/2016	6.15	6		6.96	6.12	6.4			5.96
11/17/2016			5.79						
2/20/2017						6.44	6.65	6.61	
2/21/2017	6.52	6.09	6.15	7.15	6.24				5.98
6/12/2017				7.31		6.4	6.64		
6/13/2017	6.42	6.03	5.87		6.19				5.96
6/14/2017	6.51								
9/26/2017	6.42	5.85	5.82	7.02	6.15	6.31	6.58	6.47	
9/27/2017									5.85
2/13/2018				7.44	6.18	6.62	6.72	6.54	
2/14/2018	6.48	5.99	5.83						5.94
6/26/2018	6.2	5.86	5.73	6.93	6.05	6.29	6.43	6.23	5.87
7/31/2018	6.37	5.99							
12/18/2018	6.5	6.08	5.78	6.76	5.92	6.57	6.7	6.71	5.84
3/19/2019	6.28	5.71	5.28	6.87	6.18	6.45	6.63	6.18	
3/20/2019									6.03
8/27/2019	6.35	6		6.79	6.09	6.37	6.49	6.35	6.01
8/29/2019			5.64						
10/15/2019	6.8	6.61	5.7	6.57	6.06	6.77	7.01	6.36	6
3/3/2020	6.33	5.94		6.71	6.1	6.29	6.49	6.59	
3/4/2020			5.7						6.02
8/18/2020	6.25	5.75	5.56	6.59	6.06	6.29	6.41	6.33	
8/19/2020									6.32
9/15/2020	6.01	6	5.72	6.64	6.01	6.27	6.25	6.43	6

# Time Series

Constituent: pH, Field (S.U) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			6.23						
9/8/2016	5.51	4.62		5.89					
11/18/2016	5.53								
11/21/2016		4.44	6.23	5.56					
2/21/2017	5.63								
2/22/2017		4.42	6.16	5.87					
6/13/2017	5.57								
6/14/2017		4.45	6.16	5.83					
9/27/2017	5.53	4.33	6.16	5.87					
2/14/2018	5.83	4.42	6.24	6.01					
3/15/2018							5.26		
5/1/2018							6.14	5.85	
6/27/2018	5.53	4.37		5.83				5.87	
6/28/2018			6.21				5.88		
7/31/2018							6.07		
8/1/2018								5.79	
8/2/2018					6.18				
8/3/2018						5.47			
8/10/2018									6.28
8/23/2018									6.75
9/19/2018							5.9	5.71	6.48
10/29/2018							5.93	5.76	6.77
11/28/2018							5.99	5.74	6.44
12/18/2018		4.38	6.18						
12/19/2018				5.79				5.8	
12/20/2018	5.78						6.04		6.75
1/17/2019									6.41
1/18/2019					6.19				
1/19/2019						5.45			
2/13/2019									6.42
3/19/2019	5.75							5.89	
3/20/2019		4.4	6.24	5.88			6.1		6.59
8/27/2019			6.17	5.85					
8/28/2019	5.51	4.39					5.86	5.74	
8/29/2019									6.27
10/16/2019		4.79						5.9	7
10/17/2019	6.01 (D)		6.43	6.09			5.93		
10/18/2019					6.44	5.79			
3/4/2020	5.8	4.5						5.76	6.54
3/5/2020			5.99	5.74			5.95		
5/12/2020				5.88					
8/19/2020	5.81	4.67	6.36	5.97					
8/20/2020					6.15	5.57	5.86	5.75	6.85
9/15/2020		4.53							
9/16/2020	5.81		6.29	5.79			5.27	5.76	
9/17/2020					5.77	4.93			6.12

# Time Series

Constituent: pH, Field (S.U) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	5.26
5/1/2018	5.38
6/28/2018	5.03
8/1/2018	5.22
10/29/2018	5.19
11/28/2018	5.28
12/19/2018	5.15
1/16/2019	5.14
3/6/2019	6.15
3/20/2019	5.32
8/29/2019	5.2
10/16/2019	5.36
3/4/2020	5.2
8/20/2020	5.26
9/17/2020	4.41





# Time Series

Constituent: Selenium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.01						
9/8/2016	0.0043 (J)	0.0039 (J)		<0.01					
11/18/2016	<0.01 (J)								
11/21/2016		<0.01 (J)	<0.01	<0.01					
2/21/2017	0.0025 (J)								
2/22/2017		0.005 (J)	<0.01	0.0017 (J)					
6/13/2017	0.0036 (J)								
6/14/2017		0.0074 (J)	0.0045 (J)	<0.01					
9/27/2017	0.004 (J)	0.0068 (J)	0.0034 (J)	0.0019 (J)					
2/14/2018	<0.01	<0.01	<0.01	<0.01					
3/6/2018							<0.01	<0.01	
5/1/2018							<0.01	<0.01 (D)	
6/27/2018	0.0014 (J)	<0.01		0.0017 (J)				<0.01	
6/28/2018			<0.01				<0.01		
7/31/2018							<0.01		
8/1/2018								0.0015 (J)	
8/10/2018									<0.01
8/23/2018							<0.01	<0.01 (X)	<0.01
9/19/2018							<0.01	0.002 (J)	<0.01
10/29/2018							<0.01	<0.01	<0.01
11/28/2018							<0.01	<0.01	<0.01
12/18/2018		<0.01	<0.01						
12/19/2018				0.0059 (J)				<0.01	
12/20/2018	<0.01						<0.01		<0.01
1/17/2019									<0.01
1/18/2019					<0.01				
1/19/2019						<0.01			
2/13/2019									<0.01
8/27/2019			0.0038 (J)	0.057					
8/28/2019	0.0017 (J)	<0.01					<0.01	<0.01	
8/29/2019									<0.01
10/16/2019		<0.01						0.0017 (J)	<0.01
10/18/2019					<0.01	<0.01			
12/3/2019							0.0029 (J)		
12/4/2019	0.0036 (J)		0.0018 (J)	0.1					
3/4/2020	0.0022 (J)	0.0018 (J)						<0.01	<0.01
3/5/2020			<0.01	0.1			<0.01		
5/12/2020				0.0989					
8/19/2020	<0.01	<0.01	<0.01	0.099					
8/20/2020					<0.01	<0.01	<0.01	0.0016 (J)	<0.01
9/15/2020		<0.01							
9/16/2020	0.0042 (J)		<0.01	0.12			<0.01	0.002 (J)	
9/17/2020					<0.01	<0.01			<0.01

# Time Series

Constituent: Selenium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-50
3/15/2018	<0.01
5/1/2018	<0.01
6/28/2018	<0.01
8/1/2018	0.0031 (J)
10/29/2018	0.002 (J)
11/28/2018	0.0017 (J)
12/19/2018	<0.01
1/16/2019	<0.01
8/29/2019	<0.01
10/16/2019	0.002 (J)
3/4/2020	0.0026 (J)
8/20/2020	0.0037 (J)
9/17/2020	<0.01

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				7.5	0.38 (J)	2.7	0.81 (J)		
9/1/2016	2.7	1.7						0.6 (J)	
9/6/2016			38						
9/8/2016									280
11/15/2016							<1 (J)	<1 (J)	
11/16/2016	3.6	1.2		6.6	<1 (J)	3.4			
11/17/2016			84						200
2/20/2017						3.9 (B-01)	1 (B-01)	0.98 (J)	
2/21/2017	3	1.1	39	6.1	1.5				360
6/12/2017				5		3.7	0.94 (J)	0.54 (J)	
6/13/2017		1.1	35		0.67 (J)				290
6/14/2017	2.6								
9/26/2017	2.5	1.3	89	5.4	0.62 (J)	4.1	0.92 (J)	0.53 (J)	
9/27/2017									310
2/13/2018				4.7 (J)	<1	6.6	<1	<1	
2/14/2018	2.1 (J)	<1	82.2						260
6/26/2018	2	0.84 (J)	84.2	6.2	0.69 (J)	3.5	0.91 (J)	0.54 (J)	231
7/31/2018	1.9	0.63 (J)							
12/18/2018	2.1	0.66 (J)	83.4	5.9	0.72 (J)	4.3	0.68 (J)	0.39 (J)	231
3/19/2019	2.2	0.75 (J)	65	6 (D)	0.78 (J)	3	0.74 (J)	0.68 (J)	
3/20/2019									235 (D)
10/15/2019	1.9	0.61 (J)	30	5.2	0.47 (J)	3.8	0.68 (J)	0.48 (J)	174
3/3/2020	1.8	0.51 (J)		7.1	0.93 (J)	2.8	0.71 (J)	2.5	
3/4/2020			38.6						165
9/15/2020	1.7	<1	41.5	5.9	<1	1.7	<1	<1	126

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			310						
9/8/2016	300	460		370					
11/18/2016	320								
11/21/2016		500	300	420					
2/21/2017	270								
2/22/2017		570	280	380					
6/13/2017	230								
6/14/2017		440	290	400					
9/27/2017	260	380	260	400					
2/14/2018	232	280	250	383					
3/6/2018							111	1560	
5/1/2018							112	1465 (D)	
6/27/2018	205	281		372				1450	
6/28/2018			276				109		
7/31/2018							107		
8/1/2018								1560	
8/2/2018					8.9				
8/3/2018						1170			
8/10/2018									183
8/23/2018							108	1470	145
9/19/2018							117	1500	178
10/29/2018							127	1720	157
11/28/2018							133	1730	189
12/18/2018		293	440						
12/19/2018				370				1520	
12/20/2018	200						113		150
1/17/2019									157
1/18/2019					0.64 (J)				
1/19/2019						1140			
2/13/2019									169
3/19/2019	199							1100	
3/20/2019		278	623	409			127		186.5 (D)
10/16/2019		266						1560	155
10/18/2019					0.76 (J)	<1			
12/3/2019							105		
12/4/2019	241		327	293					
3/4/2020	205	238						1380	129
3/5/2020			369	269			106		
9/15/2020		241							
9/16/2020	190		334	255			103	1360	
9/17/2020					0.53 (J)	1030			165

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	1590
5/1/2018	1550
6/28/2018	1530
8/1/2018	1580
10/29/2018	1750
11/28/2018	1780
12/19/2018	1650
1/16/2019	589 (O)
3/20/2019	1740
10/16/2019	1590
3/4/2020	1370
9/17/2020	1330



# Time Series

Constituent: Thallium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			<0.001						
9/8/2016	<0.001	<0.001 (o)		<0.001					
11/18/2016	<0.001								
11/21/2016		<0.001 (J)	<0.001	<0.001					
2/21/2017	<0.001								
2/22/2017		0.0002 (J)	<0.001	<0.001					
6/13/2017	<0.001								
6/14/2017		0.0002 (J)	<0.001	<0.001					
9/27/2017	<0.001	0.0002 (J)	<0.001	<0.001					
2/14/2018	<0.001	0.00018 (J)	<0.001	<0.001					
3/6/2018							<0.001	<0.001	
5/1/2018							<0.001	<0.001 (D)	
6/27/2018	<0.001	0.00017 (J)		<0.001				<0.001	
6/28/2018			<0.001				<0.001		
7/31/2018							<0.001		
8/1/2018								<0.001	
8/10/2018									<0.001
8/23/2018							<0.001	<0.001	<0.001
9/19/2018							<0.001	<0.001	<0.001
10/29/2018							<0.001	<0.001	<0.001
11/28/2018							<0.001	<0.001	<0.001
12/18/2018		0.00017 (J)	<0.001						
12/19/2018				<0.001				<0.001	
12/20/2018	<0.001						<0.001		<0.001
1/17/2019									<0.001
1/18/2019					<0.001				
1/19/2019						<0.001			
2/13/2019									<0.001
8/27/2019			<0.001	<0.001					
8/28/2019	<0.001	0.00017 (J)					<0.001	<0.001	
8/29/2019									<0.001
10/16/2019		0.00017 (J)						<0.001	<0.001
10/18/2019					<0.001	<0.001			
12/3/2019							<0.001		
12/4/2019	<0.001		<0.001	<0.001					
3/4/2020	<0.001	0.00016 (J)						<0.001	<0.001
3/5/2020			<0.001	<0.001			<0.001		
8/19/2020	<0.001	0.00016 (J)	<0.001	<0.001					
8/20/2020					<0.001	<0.001	<0.001	<0.001	<0.001
9/15/2020		0.00016 (J)							
9/16/2020	<0.001		<0.001	<0.001			<0.001	<0.001	
9/17/2020					<0.001	<0.001			<0.001

# Time Series

Constituent: Thallium (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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BRGWC-50

3/15/2018	<0.001
5/1/2018	<0.001
6/28/2018	<0.001
8/1/2018	<0.001
10/29/2018	<0.001
11/28/2018	<0.001
12/19/2018	<0.001
1/16/2019	<0.001
8/29/2019	<0.001
10/16/2019	<0.001
3/4/2020	<0.001
8/20/2020	<0.001
9/17/2020	<0.001



# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I
8/31/2016				151	88	138	154		
9/1/2016	142	69						299	
9/6/2016			146						
9/8/2016									460
11/15/2016							123	41	
11/16/2016	100	100		69	41	77			
11/17/2016			211						611
2/20/2017						170	158	133	
2/21/2017	71	37	151	68	<10				497
6/12/2017				161		132	142	61	
6/13/2017		84	130		53				474
6/14/2017	140								
9/26/2017	149	68	160	167	45	108	138	29	
9/27/2017									457
2/13/2018				165	63	141	150	61	
2/14/2018	137	138	194						431
6/26/2018	142	90	221	188	71	133	154	71	414
7/31/2018	133	83							
12/18/2018	135	85	208	145 (X)	78 (X)	138 (X)	147	70 (X)	401
3/19/2019	132 (JX)	82 (JX)	161 (JX)	146.5 (D)	68	130	146	72	
3/20/2019									410.5 (D)
10/15/2019	134	89	124	140	66	175	144	63	380
3/3/2020	115	72		155	41	<10	130	54	
3/4/2020			118						330
9/15/2020	95	60	109	116	69	100	116	79	272

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-30I	BRGWC-32S	PZ-51S	PZ-51I	BRGWC-45	BRGWC-47	BRGWC-52I
9/6/2016			505						
9/8/2016	478	654		607					
11/18/2016	503								
11/21/2016		819	515	695					
2/21/2017	380								
2/22/2017		721	504	635					
6/13/2017	354								
6/14/2017		661	536	635					
9/27/2017	376	518	432	601					
2/14/2018	503 (JX)	487	448	628					
3/6/2018							346	2200	
5/1/2018							374	2080 (D)	
6/27/2018	458 (X)	648 (X)		2280				31 (OX)	
6/28/2018			494				333		
7/31/2018							393		
8/1/2018								2190	
8/2/2018					123				
8/3/2018						1900			
8/10/2018									344
8/23/2018							350	2160	333
9/19/2018							353	2160	364
10/29/2018							329	2130	334
11/28/2018							358	2320	357
12/18/2018		407	715						
12/19/2018				605				2060	
12/20/2018	344						322		355
1/17/2019									347
1/18/2019					103				
1/19/2019						1660			
2/13/2019									350
3/19/2019	334 (JX)							2050 (JX)	
3/20/2019		391	885	564			302		360 (D)
10/16/2019		2030						2220	346
10/18/2019					99	1550			
12/3/2019							362		
12/4/2019	422		612	526					
3/4/2020	326	391						2140	351
3/5/2020			681	489			297		
9/15/2020		281							
9/16/2020	301		634	428			275	2090	
9/17/2020					101	1600			329

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/1/2020 10:58 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

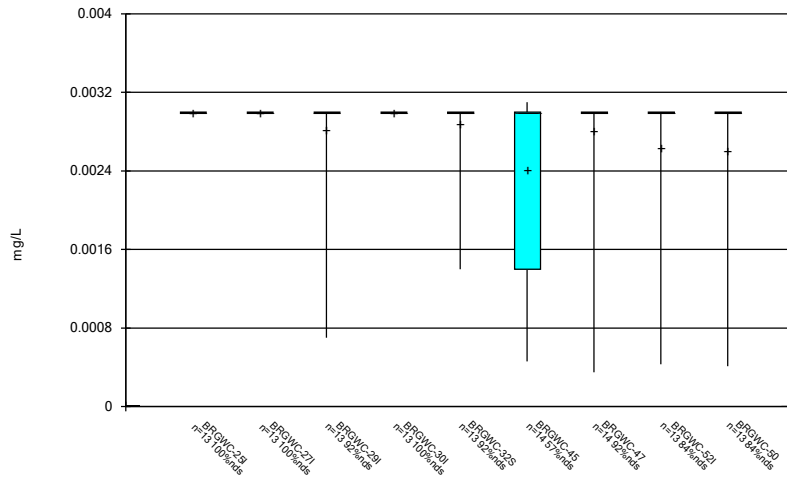
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BRGWC-50

3/15/2018	2440
5/1/2018	2190
6/28/2018	2290
8/1/2018	2360
10/29/2018	2300
11/28/2018	2300
12/19/2018	2190
1/16/2019	2270
3/20/2019	2280
10/16/2019	2280
3/4/2020	2270
9/17/2020	1910

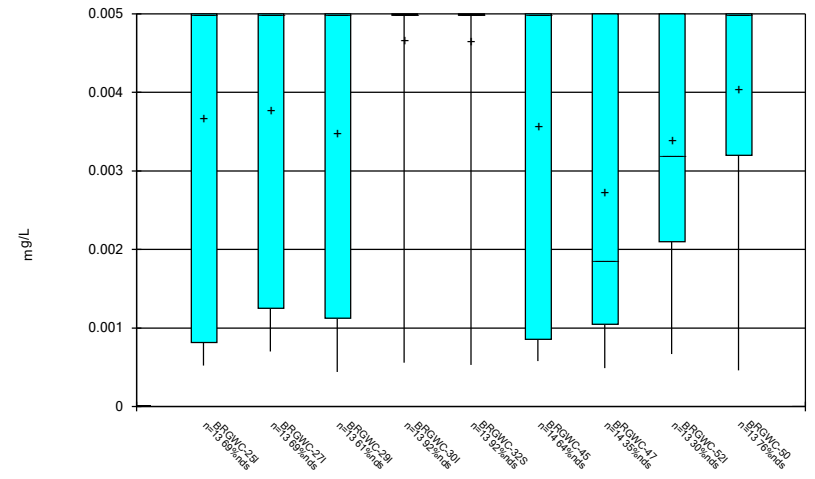
FIGURE B.

Box & Whiskers Plot



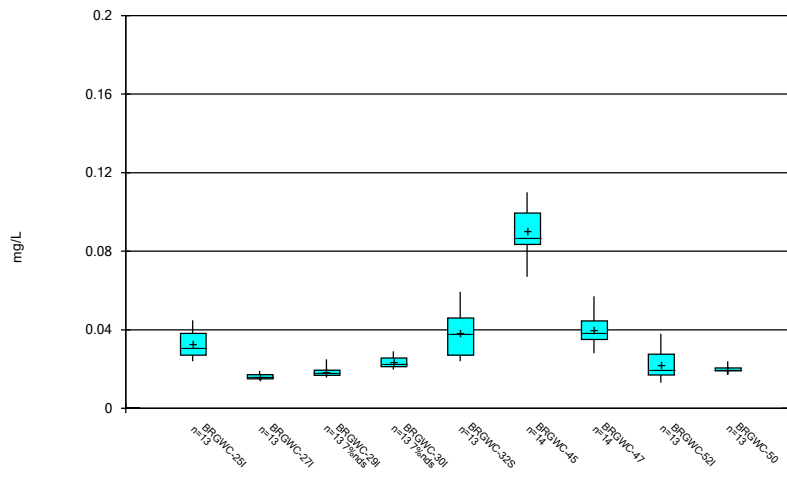
Constituent: Antimony Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



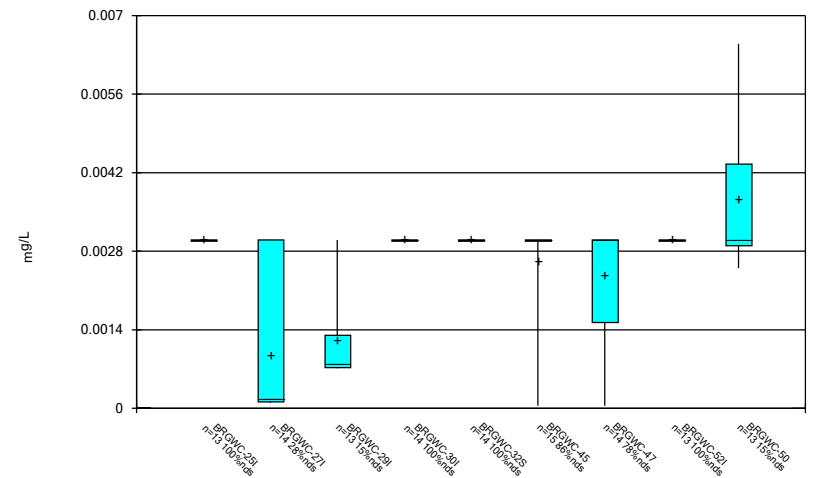
Constituent: Arsenic Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



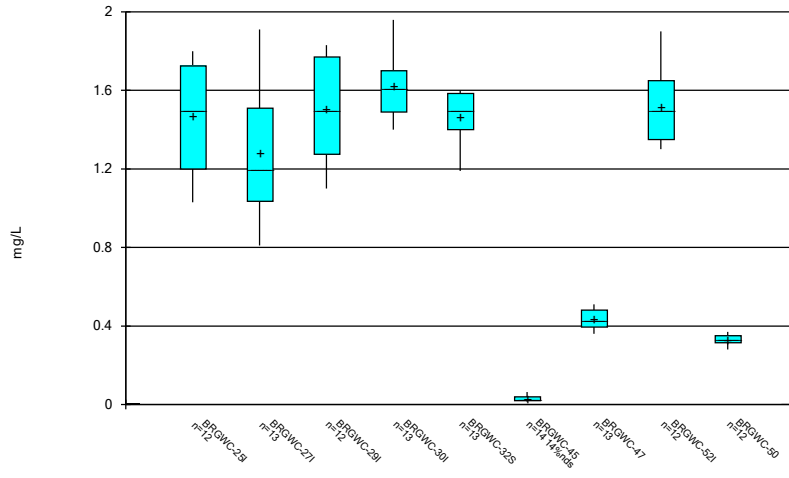
Constituent: Barium Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



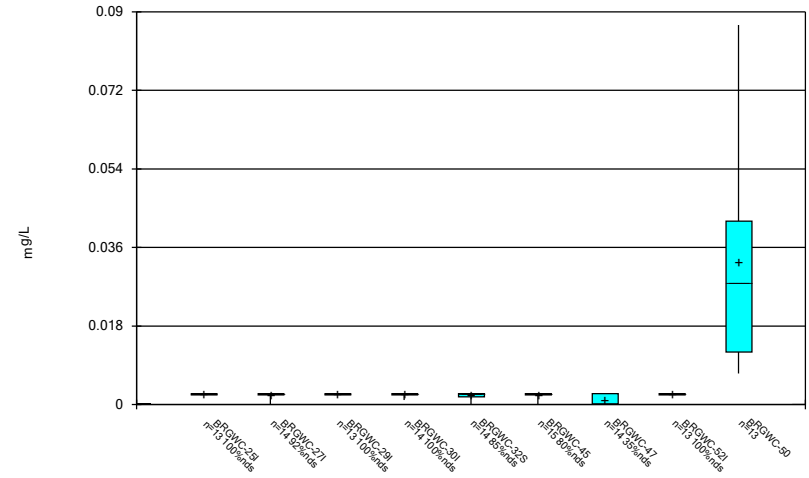
Constituent: Beryllium Analysis Run 11/1/2020 10:18 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



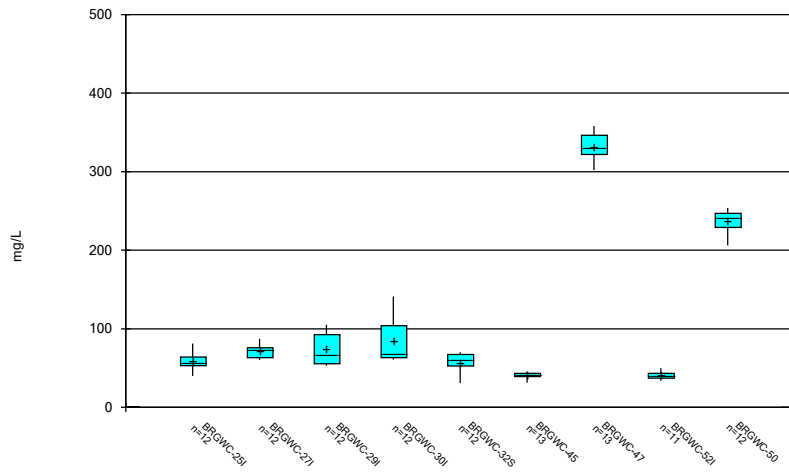
Constituent: Boron Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



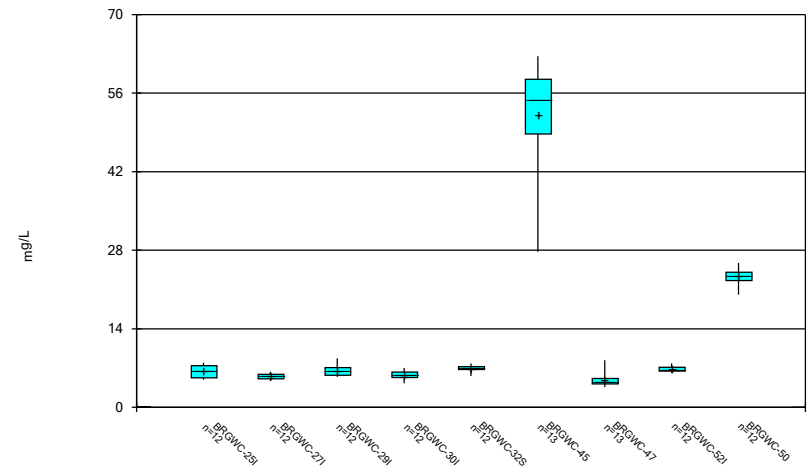
Constituent: Cadmium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



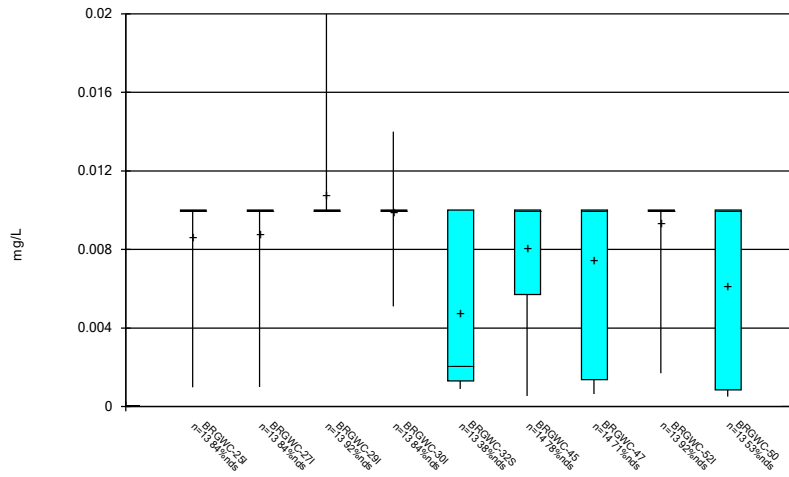
Constituent: Calcium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



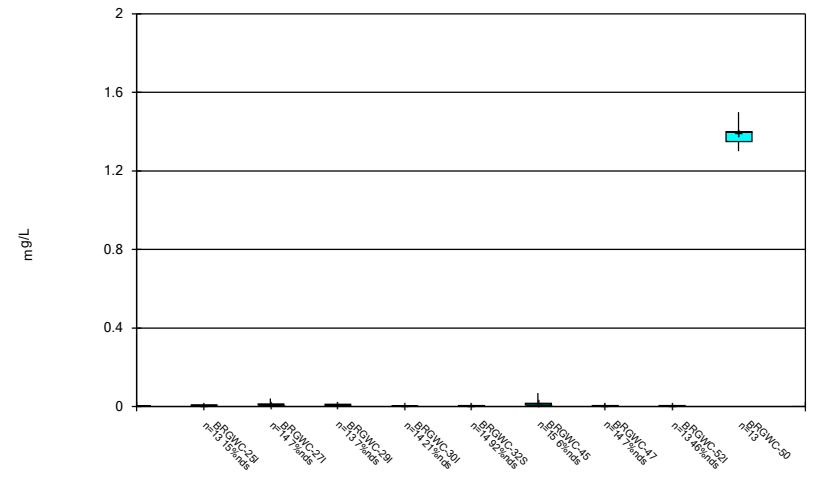
Constituent: Chloride, Total Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



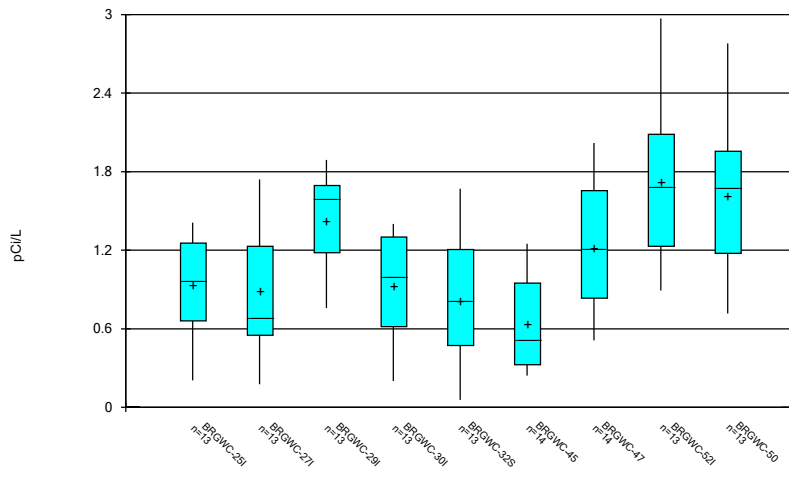
Constituent: Chromium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



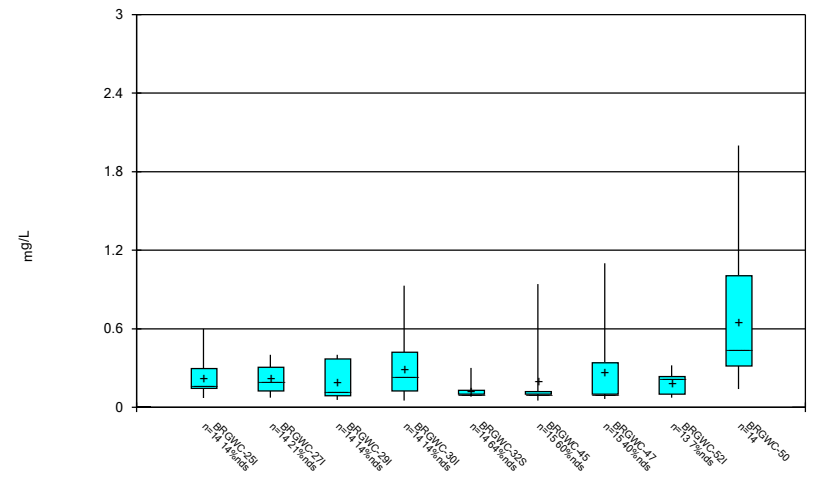
Constituent: Cobalt Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



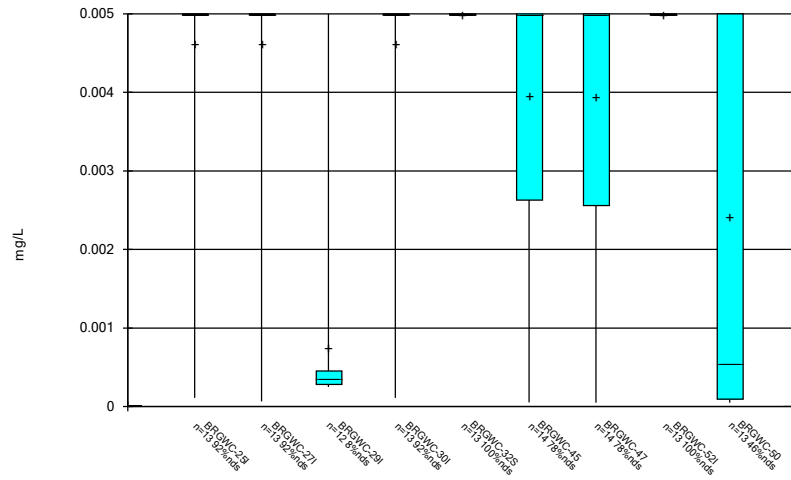
Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



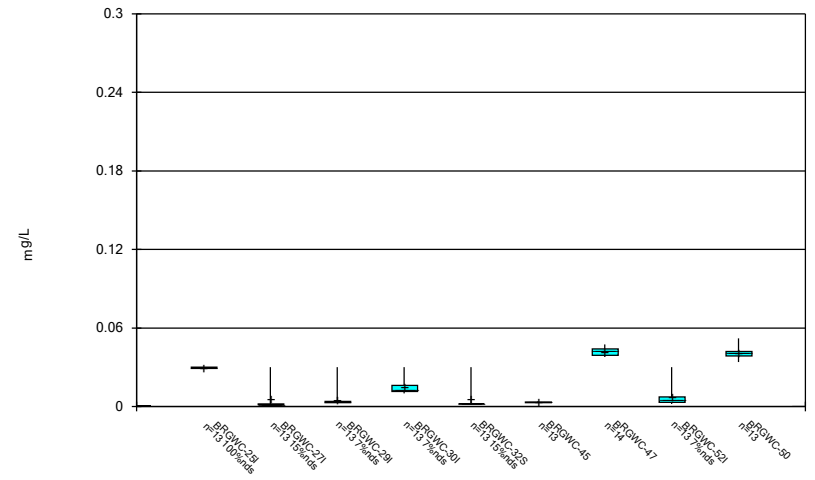
Constituent: Fluoride Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



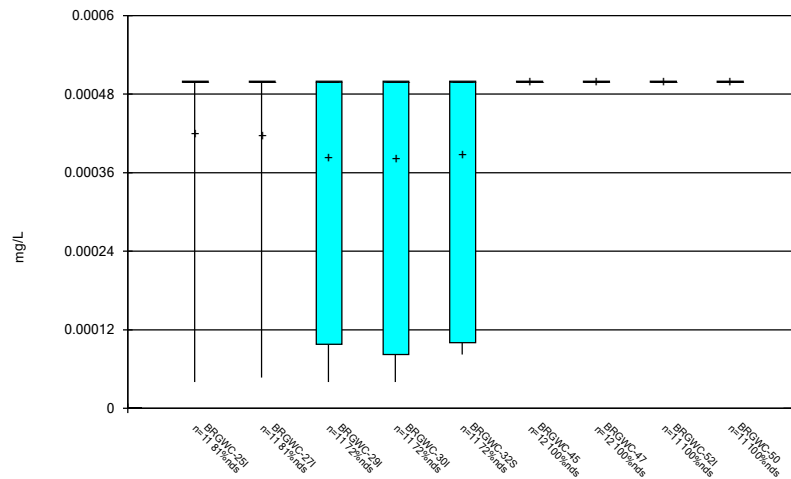
Constituent: Lead Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



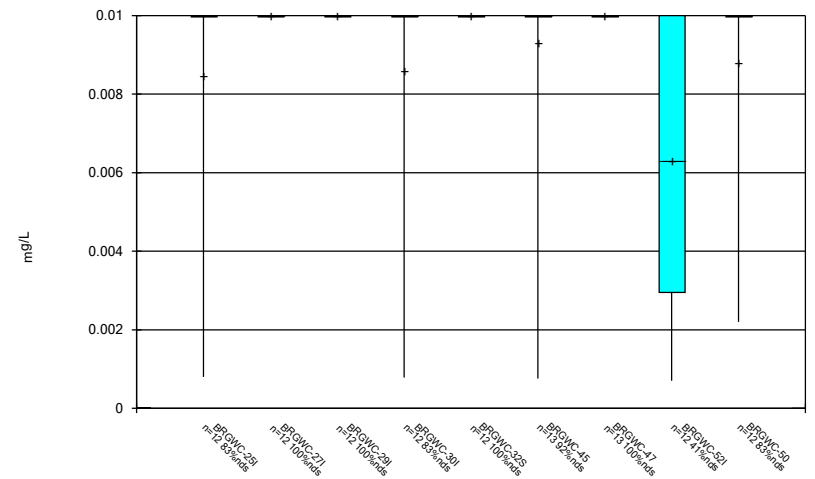
Constituent: Lithium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



Constituent: Mercury Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

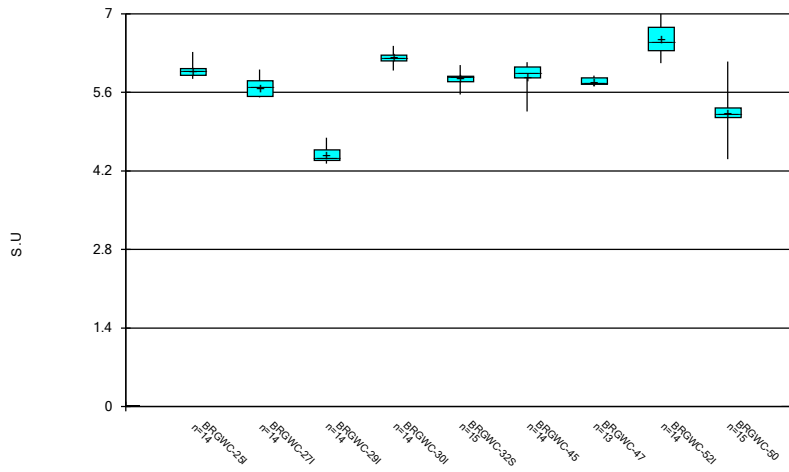
### Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

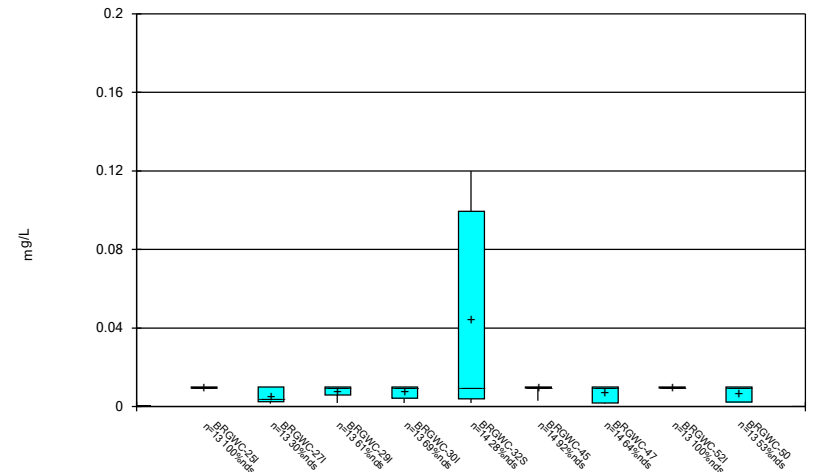


Box & Whiskers Plot



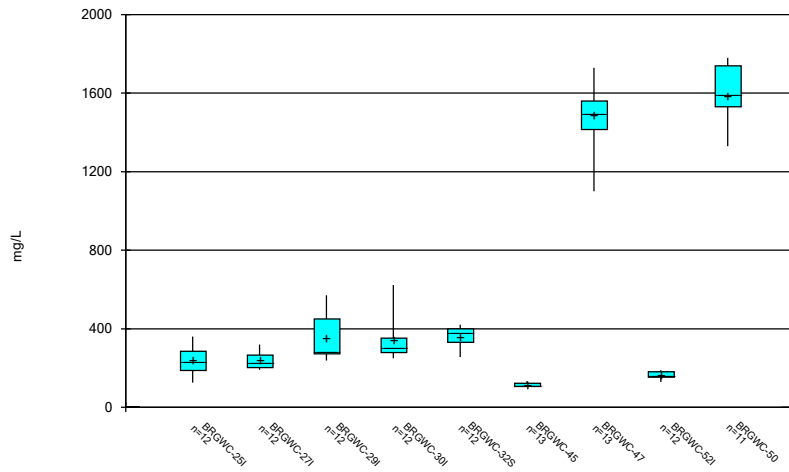
Constituent: pH, Field Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



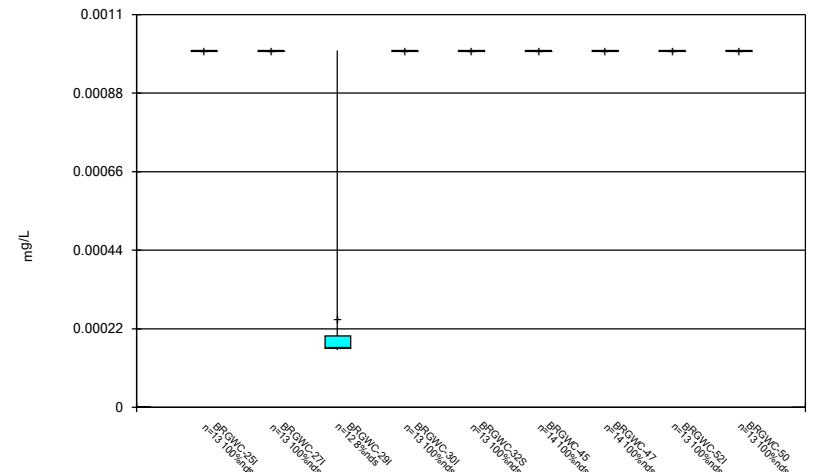
Constituent: Selenium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



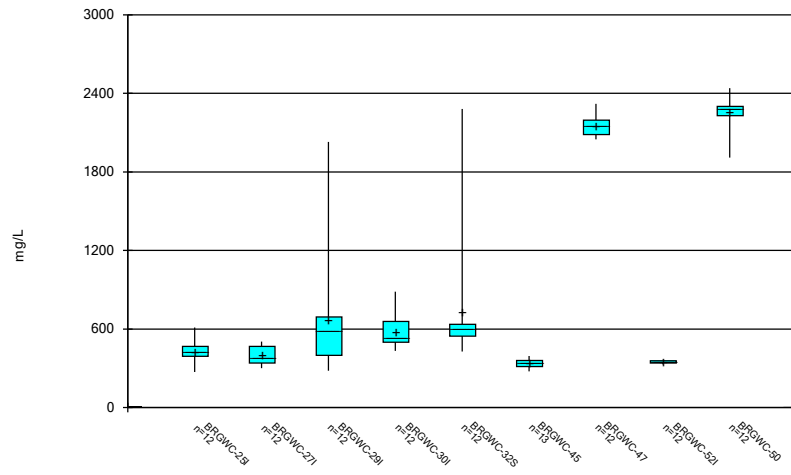
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



Constituent: Thallium Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 10:19 AM View: Descriptive B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

FIGURE C.

# Outlier Summary

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 10:26 AM

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	BRGWC-521 Calcium (mg/L)	BRGWA-51 Cobalt (mg/L)	BRGWC-521 Fluoride (mg/L)	BRGWC-291 Lead (mg/L)	BRGWC-45 Lithium (mg/L)	BRGWC-50 Sulfate as SO4 (mg/L)	BRGWC-291 Thallium (mg/L)	BRGWC-47 Total Dissolved Solids [TDS] (mg/L)
9/8/2016						<0.001 (o)		
11/16/2016	<0.01 (o)							
2/13/2018	<0.01 (o)							
2/14/2018			<0.005 (o)					
6/27/2018							31 (OX)	
7/31/2018				<0.25 (o)				
8/10/2018	410 (O)		1.6 (O)					
1/16/2019					589 (O)			

FIGURE D.

# Federal Interwell Prediction Limit Summary - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	9/15/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	9/16/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	9/15/2020	1.1	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	9/16/2020	1.7	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	9/16/2020	1.4	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	9/16/2020	0.47	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	9/17/2020	1.9	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	9/17/2020	0.36	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	9/15/2020	40.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	9/16/2020	62.5	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	9/15/2020	55.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	9/16/2020	106	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	9/16/2020	43.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	9/16/2020	39.7	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	9/16/2020	309	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	9/17/2020	35.4	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	9/17/2020	206	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-27I	5.036	n/a	9/16/2020	5.4	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-29I	5.036	n/a	9/15/2020	5.5	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-32S	5.036	n/a	9/16/2020	5.6	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.036	n/a	9/16/2020	54.9	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-52I	5.036	n/a	9/17/2020	6.3	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.036	n/a	9/17/2020	20.1	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	9/17/2020	0.46	Yes	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
pH, Field (S.U)	BRGWC-29I	7.08	5.584	9/15/2020	4.53	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-45	7.08	5.584	9/16/2020	5.27	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.08	5.584	9/17/2020	4.41	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	9/15/2020	126	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	9/16/2020	190	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	9/15/2020	241	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	9/16/2020	334	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	9/16/2020	255	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	9/16/2020	103	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	9/16/2020	1360	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	9/17/2020	165	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	9/17/2020	1330	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	299	n/a	9/16/2020	301	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	9/16/2020	634	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	9/16/2020	428	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	9/16/2020	2090	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	9/17/2020	329	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	9/17/2020	1910	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2

# Federal Interwell Prediction Limit Summary - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	9/15/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	9/16/2020	1.2	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	9/15/2020	1.1	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	9/16/2020	1.7	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	9/16/2020	1.4	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	9/16/2020	0.028J	No	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	9/16/2020	0.47	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	9/17/2020	1.9	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	9/17/2020	0.36	Yes	96	n/a	n/a	57.29	n/a	n/a	0.0002102	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	9/15/2020	40.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	9/16/2020	62.5	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	9/15/2020	55.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	9/16/2020	106	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	9/16/2020	43.1	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	9/16/2020	39.7	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	9/16/2020	309	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	9/17/2020	35.4	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	9/17/2020	206	Yes	98	n/a	n/a	6.122	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-25I	5.036	n/a	9/15/2020	4.9	No	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-27I	5.036	n/a	9/16/2020	5.4	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-29I	5.036	n/a	9/15/2020	5.5	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-30I	5.036	n/a	9/16/2020	4.4	No	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-32S	5.036	n/a	9/16/2020	5.6	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.036	n/a	9/16/2020	54.9	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-47	5.036	n/a	9/16/2020	4.1	No	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-52I	5.036	n/a	9/17/2020	6.3	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.036	n/a	9/17/2020	20.1	Yes	98	1.742	0.2583	0	None	sqrt(x)	0.0008358	Param Inter 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	9/15/2020	0.15	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	9/16/2020	0.15	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	9/15/2020	0.057J	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	9/16/2020	0.13	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	9/16/2020	0.1ND	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	9/16/2020	0.052J	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	9/16/2020	0.1ND	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	9/17/2020	0.074J	No	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	9/17/2020	0.46	Yes	112	n/a	n/a	54.46	n/a	n/a	0.0001579	NP Inter (NDs) 1 of 2
pH, Field (S.U)	BRGWC-25I	7.08	5.584	9/15/2020	6	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-27I	7.08	5.584	9/16/2020	5.81	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-29I	7.08	5.584	9/15/2020	4.53	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-30I	7.08	5.584	9/16/2020	6.29	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-32S	7.08	5.584	9/16/2020	5.79	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-45	7.08	5.584	9/16/2020	5.27	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-47	7.08	5.584	9/16/2020	5.76	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-52I	7.08	5.584	9/17/2020	6.12	No	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.08	5.584	9/17/2020	4.41	Yes	114	6.332	0.3867	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	9/15/2020	126	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	9/16/2020	190	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	9/15/2020	241	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	9/16/2020	334	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	9/16/2020	255	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2

# Federal Interwell Prediction Limit Summary - All Results

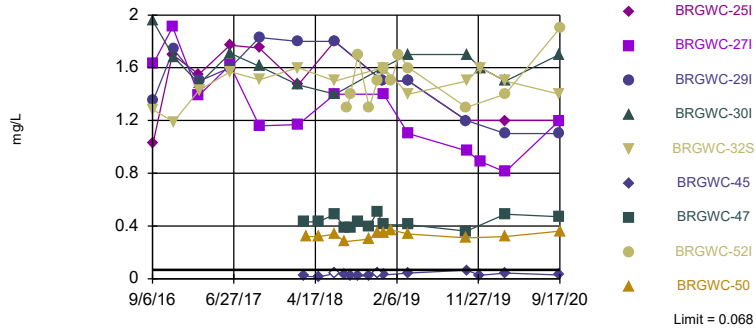
Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	9/16/2020	103	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	9/16/2020	1360	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	9/17/2020	165	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	9/17/2020	1330	Yes	98	n/a	n/a	11.22	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-25I	299	n/a	9/15/2020	272	No	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	299	n/a	9/16/2020	301	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	299	n/a	9/15/2020	281	No	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	9/16/2020	634	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	9/16/2020	428	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-45	299	n/a	9/16/2020	275	No	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	9/16/2020	2090	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	9/17/2020	329	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	9/17/2020	1910	Yes	98	n/a	n/a	2.041	n/a	n/a	0.0002014	NP Inter (normality) 1 of 2



Exceeds Limit: BRGWC-25I, BRGWC-27I,  
BRGWC-29I, BRGWC-30I, BRGWC-32S,  
BRGWC-47, BRGWC-52I, BRGWC-50

Prediction Limit  
Interwell Non-parametric

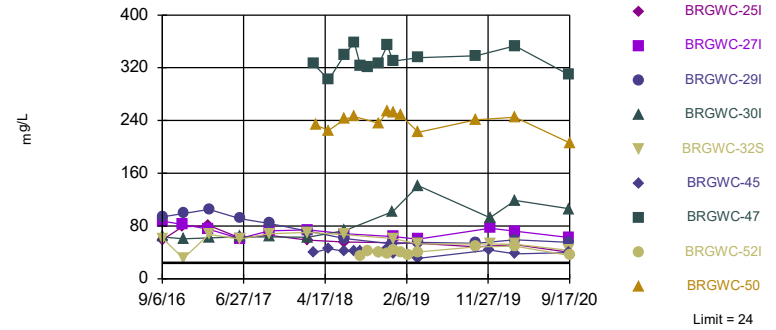


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 96 background values. 57.29% NDs. Annual per-constituent alpha = 0.003776. Individual comparison alpha = 0.0002102 (1 of 2). Comparing 9 points to limit.

Constituent: Boron Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-25I, BRGWC-27I,  
BRGWC-29I, BRGWC-30I, BRGWC-32S,  
BRGWC-45, BRGWC-47, BRGWC-52I,...

Prediction Limit  
Interwell Non-parametric

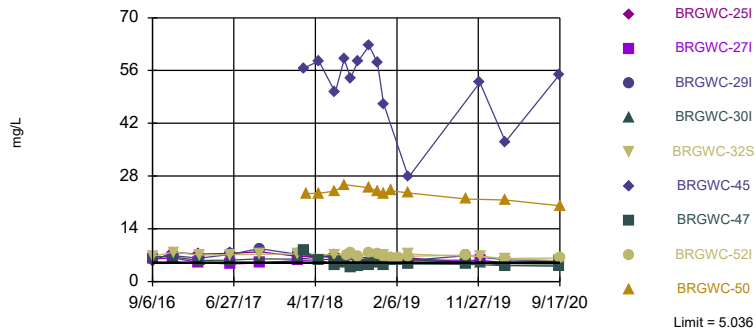


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 98 background values. 6.122% NDs. Annual per-constituent alpha = 0.003619. Individual comparison alpha = 0.0002014 (1 of 2). Comparing 9 points to limit.

Constituent: Calcium Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-27I, BRGWC-29I,  
BRGWC-32S, BRGWC-45, BRGWC-52I,  
BRGWC-50

Prediction Limit  
Interwell Parametric

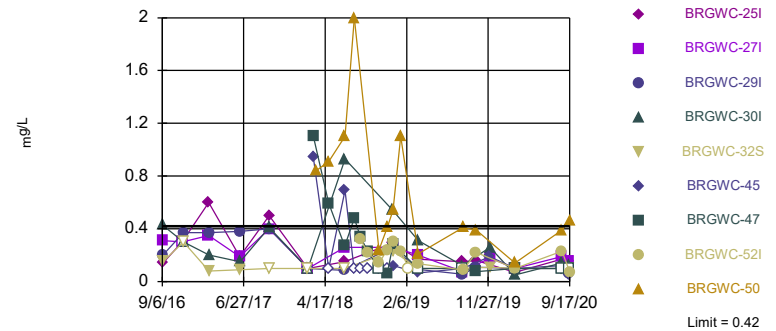


Background Data Summary (based on square root transformation): Mean=1.742, Std. Dev.=0.2583, n=98. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.966, critical = 0.966. Kappa = 1.943 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0008358. Comparing 9 points to limit.

Constituent: Chloride, Total Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-50

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 112 background values. 54.46% NDs. Annual per-constituent alpha = 0.002838. Individual comparison alpha = 0.0001579 (1 of 2). Comparing 9 points to limit.

Constituent: Fluoride Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP



# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	1.03	1.35	1.28	1.63				
11/15/2016								
11/16/2016								
11/17/2016	1.7							
11/18/2016				1.91				
11/21/2016		1.74	1.19					
2/20/2017								
2/21/2017	1.55			1.39				
2/22/2017		1.5	1.43					
6/12/2017								
6/13/2017	1.77			1.62				
6/14/2017		1.6	1.57					
9/26/2017								
9/27/2017	1.75	1.83	1.51	1.16				
2/13/2018								
2/14/2018	1.47	1.8	1.6	1.17				
3/6/2018					0.428	0.0198 (J)		
3/15/2018							0.32	
5/1/2018					0.435 (D)	0.015 (J)	0.32	
6/26/2018	1.8							
6/27/2018		1.8 (J+X)	1.5 (J+X)	1.4 (J+X)	0.49 (J+X)			
6/28/2018						<0.04 (X)	0.34	
7/31/2018						0.035 (J)		
8/1/2018					0.39		0.28	
8/10/2018								1.3
8/23/2018					0.39	0.022 (J)		1.4
9/19/2018					0.43	0.021 (J)		1.7
10/29/2018					0.4	0.021 (J)	0.3	1.3
11/28/2018					0.51	<0.04 (X)	0.35	1.5
12/18/2018	1.5	1.5						
12/19/2018			1.6		0.41		0.35	
12/20/2018				1.4		0.028 (J)		1.6
1/16/2019							0.37	
1/17/2019								1.5
2/13/2019								1.7
3/19/2019				1.1	0.41			
3/20/2019	1.5 (D)	1.5	1.4			0.043	0.34	1.6 (D)
10/15/2019	1.2							
10/16/2019		1.2			0.36		0.31	1.3
10/17/2019			1.5	0.97		0.064		
12/3/2019						0.027 (J)		
12/4/2019			1.6	0.89				
3/3/2020								
3/4/2020	1.2	1.1		0.81	0.49		0.32	1.4
3/5/2020			1.5			0.044 (J)		
9/15/2020	1.2	1.1						
9/16/2020			1.4	1.2	0.47	0.028 (J)		
9/17/2020							0.36	1.9



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 11/11/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	93.9	60.5	87.2	59.4				
11/15/2016								
11/16/2016								
11/17/2016				78.4				
11/18/2016			82.4					
11/21/2016	99.1	31.1						
2/20/2017								
2/21/2017			75.1	80.9				
2/22/2017	105	67.3						
6/12/2017								
6/13/2017			61	62				
6/14/2017	91.3	60.2						
9/26/2017								
9/27/2017	84	68.4	72.6	65.8				
2/13/2018								
2/14/2018	72.1	70.2	74.1	58.8				
3/6/2018					39.5	326		
3/15/2018							233	
5/1/2018					45.5	302 (D)	225	
6/26/2018				55.5				
6/27/2018	61.1	67.1	68.2			340		
6/28/2018					41.9		242	
7/31/2018					41.5			
8/1/2018						358	246	
8/10/2018								410 (O)
8/23/2018					42.3	323		33.9
9/19/2018					41.9	321		42.3
10/29/2018					40.8	326	236	39.8
11/28/2018					45.1	354	254	38.2
12/18/2018	52.9			54.7				
12/19/2018		61.2				330	252	
12/20/2018			63.9		39			43.2
1/16/2019							248	
1/17/2019								39.4
2/13/2019								36.9
3/19/2019			60.2			335		
3/20/2019	55.4	52.8		53.95 (D)	31.2		222	40.85 (D)
10/15/2019				48.3				
10/16/2019	54					338	241	48.4
12/3/2019					43.7			
12/4/2019		52.7	76.8					
3/3/2020								
3/4/2020	59.3		72.3	52		353	245	49.5
3/5/2020		52.1			37.9			
9/15/2020	55.1			40.1				
9/16/2020		43.1	62.5		39.7	309		
9/17/2020							206	35.4



# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-25I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	6.4	6.8	6	5.5				
11/15/2016								
11/16/2016								
11/17/2016				7.7				
11/18/2016			6.3					
11/21/2016	6.9	7.8						
2/20/2017								
2/21/2017			5.1	7.3				
2/22/2017	6.2	7						
6/12/2017								
6/13/2017			4.7	7.5				
6/14/2017	7.2	7.1						
9/26/2017								
9/27/2017	8.7	7.2	4.9	7.9				
2/13/2018								
2/14/2018	7.2	7.4	5.6	6.7				
3/6/2018					8.4	56.6		
3/15/2018							23.3	
5/1/2018					5.7 (D)	58.5	23.4	
6/26/2018				6.7				
6/27/2018	6.3	7.1	5.9		4.4			
6/28/2018						50.2 (J-X)	24 (J-X)	
7/31/2018						59		
8/1/2018					5.2		25.7	
8/10/2018								6.9
8/23/2018					3.6	54		7.5
9/19/2018					4.1	58.4		6.6
10/29/2018					4.3	62.6	24.9	7.8
11/28/2018					5.1	58.1	24	7.2
12/18/2018	5.4			6.2				
12/19/2018		7 (J-X)			4.5 (J-X)		23.3 (J-X)	
12/20/2018			5.6 (J-X)			47.2 (J-X)		6.6 (J-X)
1/16/2019							24.1	
1/17/2019								6.4
2/13/2019								6.5
3/19/2019			5.8		4.7			
3/20/2019	5.6	7.3		6.3 (D)		27.7	23.5	6.7 (D)
10/15/2019				5				
10/16/2019	6.9				4.6		21.9	7
12/3/2019						52.8		
12/4/2019		6.6	5.6					
3/3/2020								
3/4/2020	5.8		5.1	5	4.2		21.6	6.1
3/5/2020		6				37.1		
9/15/2020	5.5			4.9				
9/16/2020		5.6	5.4		4.1	54.9		
9/17/2020							20.1	6.3







# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	0.14 (J)	0.31	0.2 (J)	0.15 (J)				
11/15/2016								
11/16/2016								
11/17/2016	<0.3 (JB)							
11/18/2016		<0.3 (JB)						
11/21/2016			0.37	<0.3 (J)				
2/20/2017								
2/21/2017	0.6	0.35						
2/22/2017			0.37	0.08 (J)				
6/12/2017								
6/13/2017	0.19 (J)	0.19 (J)						
6/14/2017			0.38	0.09 (J)				
9/26/2017								
9/27/2017	0.5	0.4	0.4	<0.1				
2/13/2018								
2/14/2018	<0.1	<0.1	<0.1	<0.1				
3/6/2018					0.94	1.1		
3/15/2018							0.84 (JX)	
5/1/2018					<0.1	0.595 (D)	0.91	
6/26/2018	0.15 (J)							
6/27/2018		0.26 (J)	0.085 (J)	<0.1		0.27 (J)		
6/28/2018					0.69 (J+X)		1.1 (J+X)	
7/31/2018					<0.1			
8/1/2018						0.48	2	
8/10/2018								1.6 (O)
8/23/2018					<0.1	0.34		0.32
9/19/2018					<0.1	0.23 (J)		0.22 (J)
10/29/2018					<0.1	<0.1	0.24 (J)	0.14 (J)
11/28/2018					<0.1	0.063 (J)	0.41	0.24 (J)
12/18/2018	0.29 (J)		0.26 (J)					
12/19/2018				0.23 (J)		0.28 (J)	0.54	
12/20/2018		0.26 (J)			0.12 (J)			0.3
1/16/2019							1.1	
1/17/2019								0.23 (J)
2/13/2019								<0.1
3/19/2019		0.2 (J)				<0.1		
3/20/2019	0.17 (JD)		0.091 (J)	<0.1	0.066 (J)		0.21 (J)	0.135 (JD)
8/27/2019	0.15 (J)			<0.1				
8/28/2019		0.074 (J)	0.055 (J)		<0.1	<0.1		
8/29/2019							0.41	0.087 (J)
10/15/2019	0.16 (J)							
10/16/2019			0.11 (J)			0.076 (J)	0.39	0.22 (J)
12/3/2019					0.19 (J)			
12/4/2019		0.18 (J)		0.11 (J)				
3/3/2020								
3/4/2020	0.07 (J)	<0.1	<0.1			<0.1	0.14 (J)	0.1 (J)
3/5/2020				<0.1	<0.1			
8/18/2020								
8/19/2020	0.17	0.19	0.12	<0.1				

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

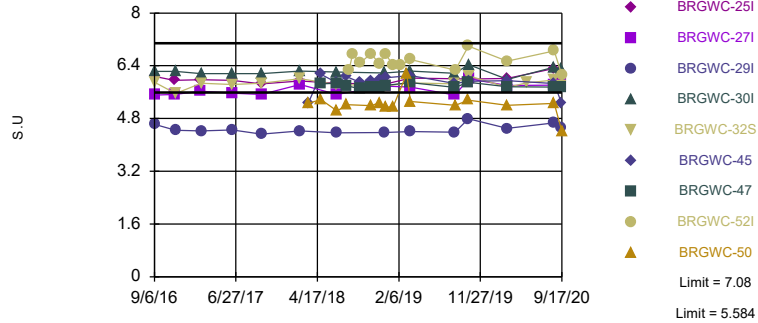
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/20/2020					<0.1	<0.1	0.39	0.23
9/15/2020	0.15		0.057 (J)					
9/16/2020		0.15		<0.1	0.052 (J)	<0.1		
9/17/2020							0.46	0.074 (J)

Exceeds Limits: BRGWC-291, BRGWC-45, BRGWC-50

Prediction Limit  
Interwell Parametric

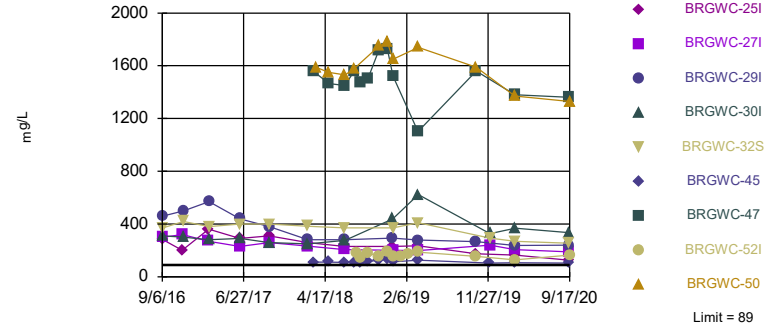


Background Data Summary: Mean=6.332, Std. Dev.=0.3867, n=114. Normality test: Chi Squared @alpha = 0.01, calculated = 3.018, critical = 14.07. Kappa = 1.934 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004179. Comparing 9 points to limit.

Constituent: pH, Field Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-251, BRGWC-271, BRGWC-291, BRGWC-301, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-52I,...

Prediction Limit  
Interwell Non-parametric

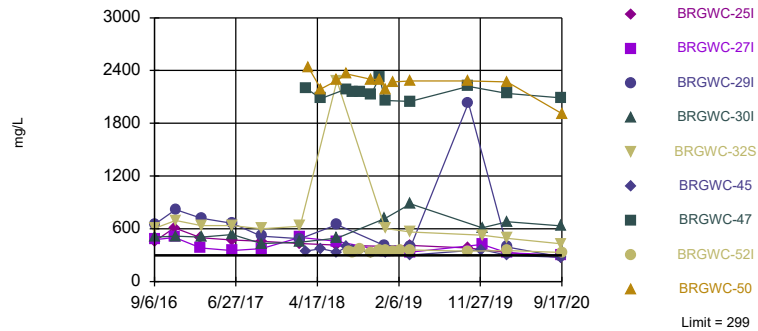


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 98 background values. 11.22% NDs. Annual per-constituent alpha = 0.003619. Individual comparison alpha = 0.0002014 (1 of 2). Comparing 9 points to limit.

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-271, BRGWC-301, BRGWC-32S, BRGWC-47, BRGWC-52I, BRGWC-50

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 98 background values. 2.041% NDs. Annual per-constituent alpha = 0.003619. Individual comparison alpha = 0.0002014 (1 of 2). Comparing 9 points to limit.

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:27 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP





# Prediction Limit

Constituent: pH, Field (S.U) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-25I	BRGWC-29I	BRGWC-27I	BRGWC-45	BRGWC-50	BRGWC-47	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	5.89	6.07	4.62	5.51				
11/15/2016								
11/16/2016		5.96						
11/17/2016								
11/18/2016				5.53				
11/21/2016	5.56		4.44					
2/20/2017								
2/21/2017		5.98		5.63				
2/22/2017	5.87		4.42					
6/12/2017								
6/13/2017		5.96		5.57				
6/14/2017	5.83		4.45					
9/26/2017								
9/27/2017	5.87	5.85	4.33	5.53				
2/13/2018								
2/14/2018	6.01	5.94	4.42	5.83				
3/15/2018					5.26	5.26		
5/1/2018					6.14	5.38	5.85	
6/26/2018		5.87						
6/27/2018	5.83		4.37	5.53			5.87	
6/28/2018					5.88	5.03		
7/31/2018					6.07			
8/1/2018						5.22	5.79	
8/10/2018								6.28
8/23/2018								6.75
9/19/2018					5.9		5.71	6.48
10/29/2018					5.93	5.19	5.76	6.77
11/28/2018					5.99	5.28	5.74	6.44
12/18/2018		5.84	4.38					
12/19/2018	5.79					5.15	5.8	
12/20/2018				5.78	6.04			6.75
1/16/2019						5.14		
1/17/2019								6.41
2/13/2019								6.42
3/6/2019						6.15		
3/19/2019				5.75			5.89	
3/20/2019	5.88	6.03	4.4		6.1	5.32		6.59
8/27/2019	5.85	6.01						
8/28/2019			4.39	5.51	5.86		5.74	
8/29/2019						5.2		6.27
10/15/2019		6						
10/16/2019			4.79			5.36	5.9	7
10/17/2019	6.09			6.01 (D)	5.93			
3/3/2020								
3/4/2020		6.02	4.5	5.8		5.2	5.76	6.54
3/5/2020	5.74				5.95			
5/12/2020	5.88							
8/18/2020								
8/19/2020	5.97	6.32	4.67	5.81				

# Prediction Limit

Constituent: pH, Field (S.U) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-32S	BRGWC-25I	BRGWC-29I	BRGWC-27I	BRGWC-45	BRGWC-50	BRGWC-47	BRGWC-52I
8/20/2020					5.86	5.26	5.75	6.85
9/15/2020		6	4.53					
9/16/2020	5.79			5.81	5.27		5.76	
9/17/2020						4.41		6.12





# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	460	370	300	280				
11/15/2016								
11/16/2016								
11/17/2016				200				
11/18/2016			320					
11/21/2016	500	420						
2/20/2017								
2/21/2017			270	360				
2/22/2017	570	380						
6/12/2017								
6/13/2017			230	290				
6/14/2017	440	400						
9/26/2017								
9/27/2017	380	400	260	310				
2/13/2018								
2/14/2018	280	383	232	260				
3/6/2018					111	1560		
3/15/2018							1590	
5/1/2018					112	1465 (D)	1550	
6/26/2018				231				
6/27/2018	281	372	205			1450		
6/28/2018					109		1530	
7/31/2018					107			
8/1/2018						1560	1580	
8/10/2018								183
8/23/2018					108	1470		145
9/19/2018					117	1500		178
10/29/2018					127	1720	1750	157
11/28/2018					133	1730	1780	189
12/18/2018	293			231				
12/19/2018		370				1520	1650	
12/20/2018			200		113			150
1/16/2019							589 (O)	
1/17/2019								157
2/13/2019								169
3/19/2019			199			1100		
3/20/2019	278	409		235 (D)	127		1740	186.5 (D)
10/15/2019				174				
10/16/2019	266					1560	1590	155
12/3/2019					105			
12/4/2019		293	241					
3/3/2020								
3/4/2020	238		205	165		1380	1370	129
3/5/2020		269			106			
9/15/2020	241			126				
9/16/2020		255	190		103	1360		
9/17/2020							1330	165



# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/1/2020 9:30 AM View: PL's B,C,D

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-32S	BRGWC-27I	BRGWC-25I	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	654	607	478	460				
11/15/2016								
11/16/2016								
11/17/2016				611				
11/18/2016			503					
11/21/2016	819	695						
2/20/2017								
2/21/2017			380	497				
2/22/2017	721	635						
6/12/2017								
6/13/2017			354	474				
6/14/2017	661	635						
9/26/2017								
9/27/2017	518	601	376	457				
2/13/2018								
2/14/2018	487	628	503 (JX)	431				
3/6/2018					346	2200		
3/15/2018							2440	
5/1/2018					374	2080 (D)	2190	
6/26/2018				414				
6/27/2018	648 (X)	2280	458 (X)			31 (OX)		
6/28/2018					333		2290	
7/31/2018					393			
8/1/2018						2190	2360	
8/10/2018								344
8/23/2018					350	2160		333
9/19/2018					353	2160		364
10/29/2018					329	2130	2300	334
11/28/2018					358	2320	2300	357
12/18/2018	407			401				
12/19/2018		605				2060	2190	
12/20/2018			344		322			355
1/16/2019							2270	
1/17/2019								347
2/13/2019								350
3/19/2019			334 (JX)			2050 (JX)		
3/20/2019	391	564		410.5 (D)	302		2280	360 (D)
10/15/2019				380				
10/16/2019	2030					2220	2280	346
12/3/2019					362			
12/4/2019		526	422					
3/3/2020								
3/4/2020	391		326	330		2140	2270	351
3/5/2020		489			297			
9/15/2020	281			272				
9/16/2020		428	301		275	2090		
9/17/2020							1910	329

FIGURE E.

# Trend Test Summary - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 9:37 AM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BRGWC-27I	-0.2108	-47	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-25I	-6.82	-52	-38	Yes	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-29I	-14.31	-46	-38	Yes	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-30I	13.05	45	38	Yes	12	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-23S (bg)	-0.08225	-56	-48	Yes	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-2I (bg)	-0.1422	-59	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-12I (bg)	-0.2968	-60	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-12S (bg)	-0.2094	-52	-43	Yes	13	15.38	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-25I	-46.07	-39	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-27I	-26.6	-45	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-29I	-70.06	-52	-38	Yes	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	-50.85	-41	-38	Yes	12	0	n/a	n/a	0.01	NP

# Trend Test Summary - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/3/2020, 8:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-12I (bg)	-0.0004579	-13	-38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-12S (bg)	0	-11	-38	No	12	83.33	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-23S (bg)	0.0004028	3	38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2I (bg)	-0.0003913	-9	-38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	0	38	No	12	100	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	5	38	No	12	83.33	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-6	-38	No	12	66.67	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	-2	-38	No	12	75	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-25I	-0.1013	-18	-38	No	12	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>BRGWC-27I</b>	<b>-0.2108</b>	<b>-47</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	BRGWC-29I	-0.1128	-25	-38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-30I	-0.005121	-10	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-32S	0.02475	13	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-47	0.001853	3	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-52I	0.186	17	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-50	0.01538	17	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12I (bg)	0.5525	19	43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12S (bg)	0.4903	32	43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-1.169	-22	-38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	1.137	29	38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	-0.05889	-17	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	-0.08584	-3	-38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.153	-4	-38	No	12	8.333	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1455	32	38	No	12	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-25I</b>	<b>-6.82</b>	<b>-52</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-27I	-4.805	-30	-38	No	12	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-29I</b>	<b>-14.31</b>	<b>-46</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>BRGWC-30I</b>	<b>13.05</b>	<b>45</b>	<b>38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-32S	-3.197	-22	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-1.319	-21	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-47	8.197	11	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-52I	5.226	11	34	No	11	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-50	-0.6983	-2	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-12I (bg)	-0.2129	-42	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-12S (bg)	0	-8	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-23S (bg)	-0.2572	-26	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2I (bg)	-0.02706	-7	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2S (bg)	0	0	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5I (bg)	-0.1482	-21	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5S (bg)	-0.01532	-6	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-6S (bg)	0.01532	12	38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-27I	-0.09698	-10	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-29I	-0.3063	-22	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-32S	-0.2863	-24	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-45	-3.833	-24	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-52I	-0.467	-29	-38	No	12	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-50	-1.541	-26	-38	No	12	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12I (bg)	-0.01658	-29	-48	No	14	35.71	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0	19	48	No	14	71.43	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-23S (bg)	0	-15	-48	No	14	64.29	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	-0.01511	-39	-48	No	14	42.86	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	7	48	No	14	57.14	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	17	48	No	14	71.43	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	-0.01067	-29	-48	No	14	35.71	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0	11	48	No	14	57.14	n/a	n/a	0.01	NP

# Trend Test Summary - All Results

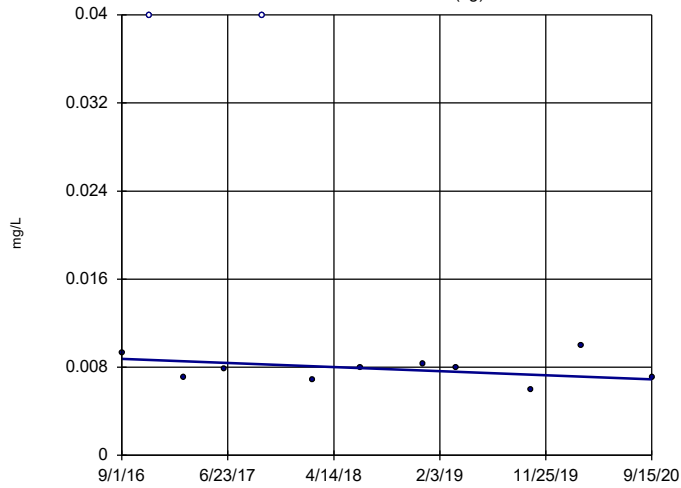
Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/3/2020, 8:27 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Fluoride (mg/L)	BRGWC-50	-0.2133	-32	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12I (bg)	-0.06443	-41	-58	No	16	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12S (bg)	-0.006874	-14	-53	No	15	0	n/a	n/a	0.01	NP
<b>pH, Field (S.U)</b>	<b>BRGWA-23S (bg)</b>	<b>-0.08225</b>	<b>-56</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (S.U)</b>	<b>BRGWA-2I (bg)</b>	<b>-0.1422</b>	<b>-59</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (S.U)	BRGWA-2S (bg)	-0.04353	-47	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5I (bg)	-0.03452	-29	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5S (bg)	-0.05503	-32	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-6S (bg)	-0.04101	-17	-43	No	13	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-29I	0.02098	14	48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-45	-0.04257	-13	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-50	-0.0137	-7	-53	No	15	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12I (bg)</b>	<b>-0.2968</b>	<b>-60</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12S (bg)</b>	<b>-0.2094</b>	<b>-52</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>15.38</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWA-23S (bg)	-1.903	-8	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2I (bg)	-0.1119	-11	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2S (bg)	0.04767	13	38	No	12	25	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-5I (bg)	-0.1873	-8	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-5S (bg)	-0.07276	-22	-38	No	12	25	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-6S (bg)	-0.01104	-8	-38	No	12	25	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-25I</b>	<b>-46.07</b>	<b>-39</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-27I</b>	<b>-26.6</b>	<b>-45</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-29I</b>	<b>-70.06</b>	<b>-52</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWC-30I	16.01	16	38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-32S	-29.47	-32	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-45	-2.111	-11	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-47	-45.1	-11	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-52I	-7.328	-9	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-50	-74.11	-8	-34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12I (bg)	-4.199	-25	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12S (bg)	-1.357	-8	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-23S (bg)	-11.33	-18	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2I (bg)	-1.984	-2	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2S (bg)	4.612	11	38	No	12	8.333	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5I (bg)	-3.347	-9	-38	No	12	8.333	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5S (bg)	-3.649	-23	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-6S (bg)	0.4269	1	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	-25.62	-37	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	44.87	24	38	No	12	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids [TDS] (mg/L)</b>	<b>BRGWC-32S</b>	<b>-50.85</b>	<b>-41</b>	<b>-38</b>	<b>Yes</b>	<b>12</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	-32.65	-15	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	-1.637	-2	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	-60.86	-28	-38	No	12	0	n/a	n/a	0.01	NP



### Sen's Slope Estimator

BRGWA-12I (bg)

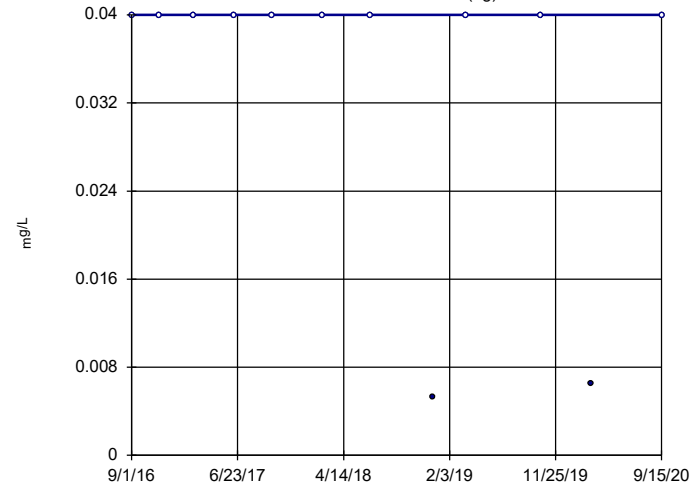


n = 12  
 Slope = -0.0004579  
 units per year.  
 Mann-Kendall  
 statistic = -13  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-12S (bg)

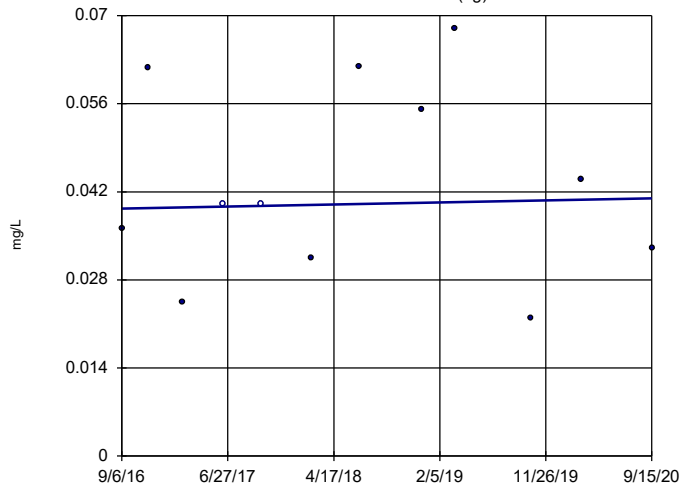


n = 12  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = -11  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-23S (bg)

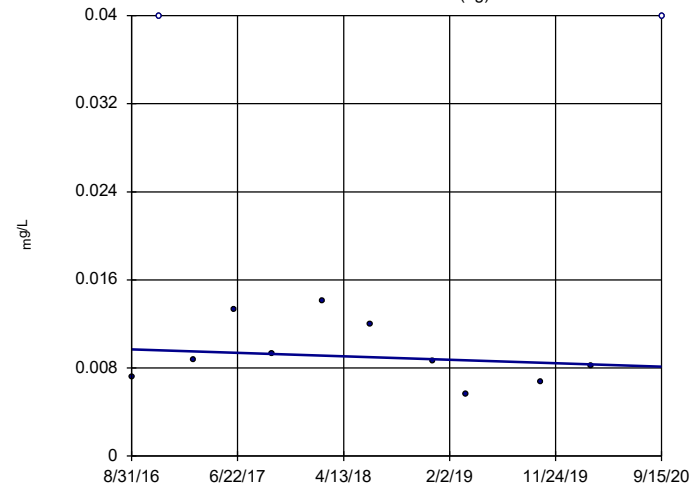


n = 12  
 Slope = 0.0004028  
 units per year.  
 Mann-Kendall  
 statistic = 3  
 critical = 38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

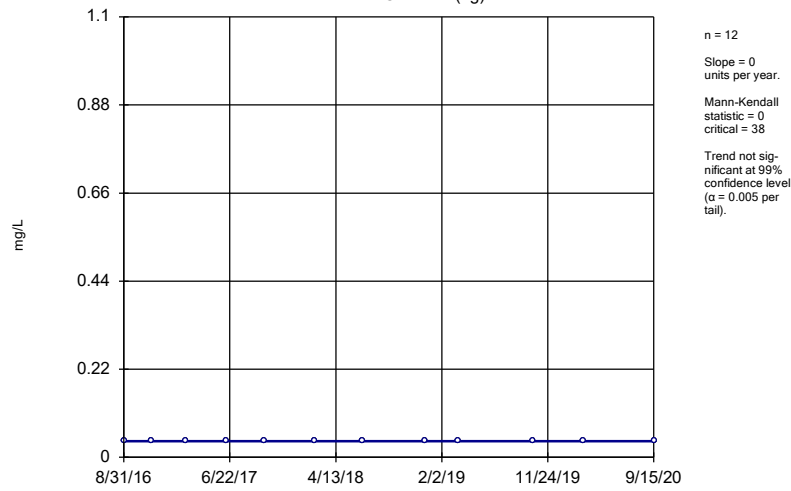
BRGWA-2I (bg)



n = 12  
 Slope = -0.0003913  
 units per year.  
 Mann-Kendall  
 statistic = -9  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

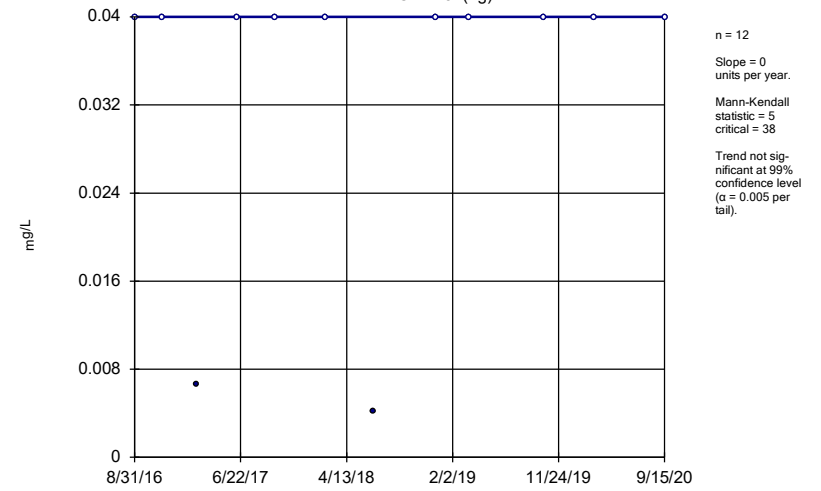
Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
 BRGWA-2S (bg)



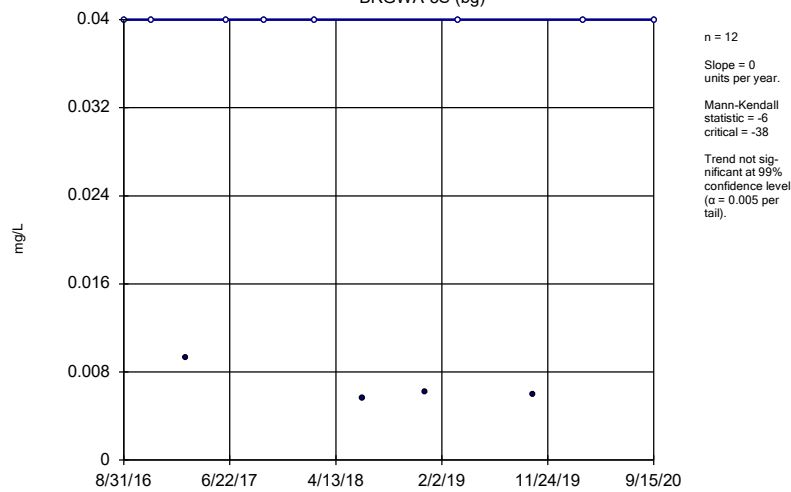
Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
 BRGWA-5I (bg)



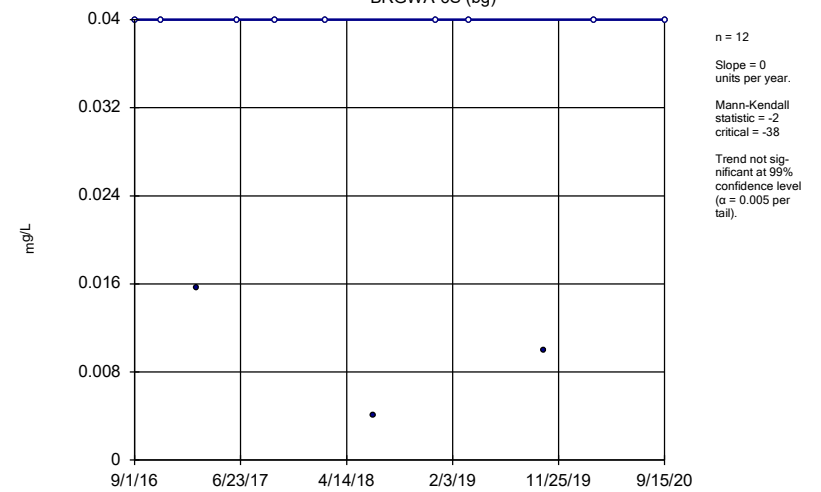
Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
 BRGWA-5S (bg)



Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

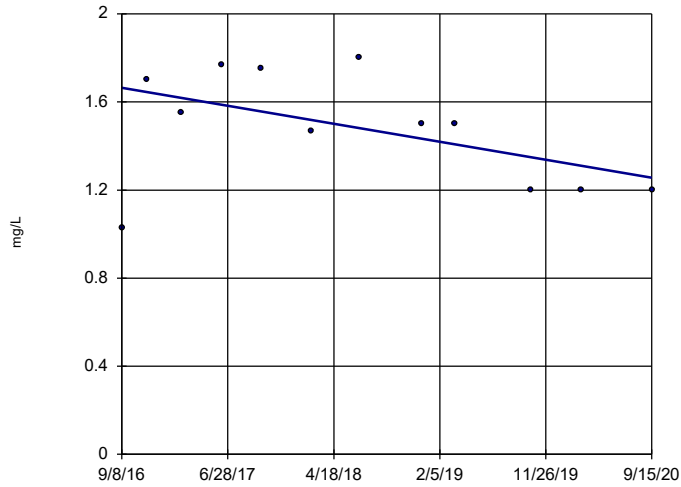
Sen's Slope Estimator  
 BRGWA-6S (bg)



Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-25I

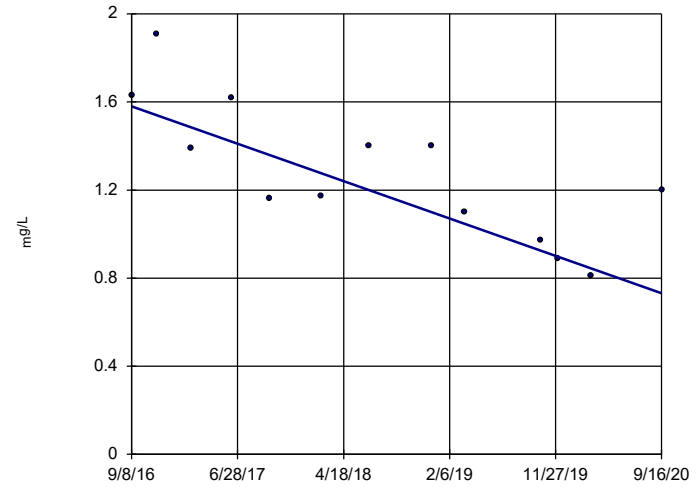


n = 12  
 Slope = -0.1013  
 units per year.  
 Mann-Kendall  
 statistic = -18  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-27I

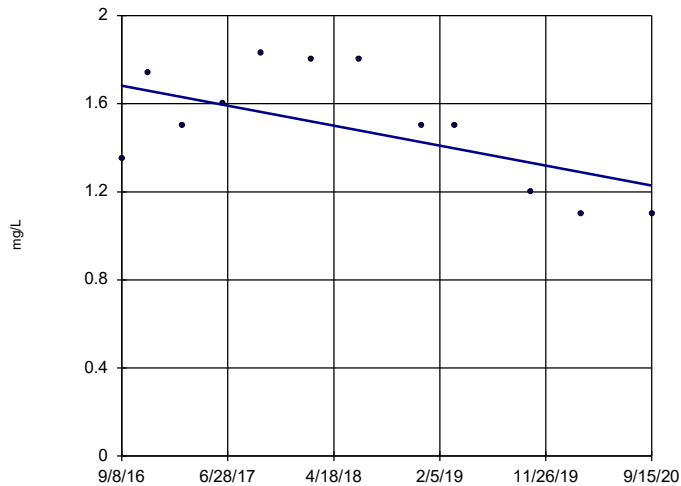


n = 13  
 Slope = -0.2108  
 units per year.  
 Mann-Kendall  
 statistic = -47  
 critical = -43  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 11/1/2020 9:33 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-29I

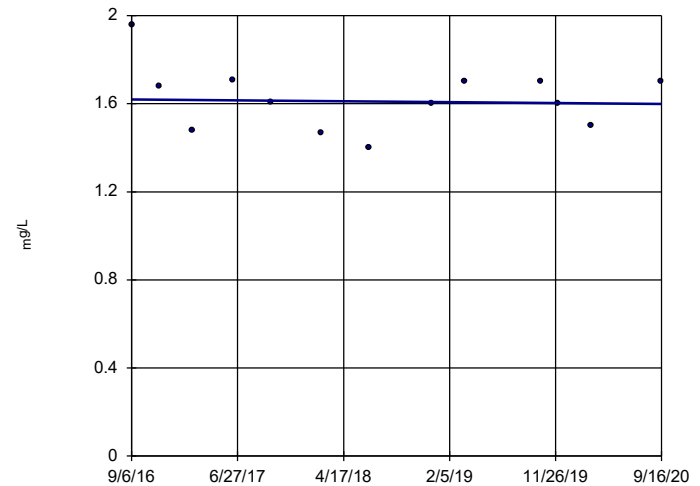


n = 12  
 Slope = -0.1128  
 units per year.  
 Mann-Kendall  
 statistic = -25  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

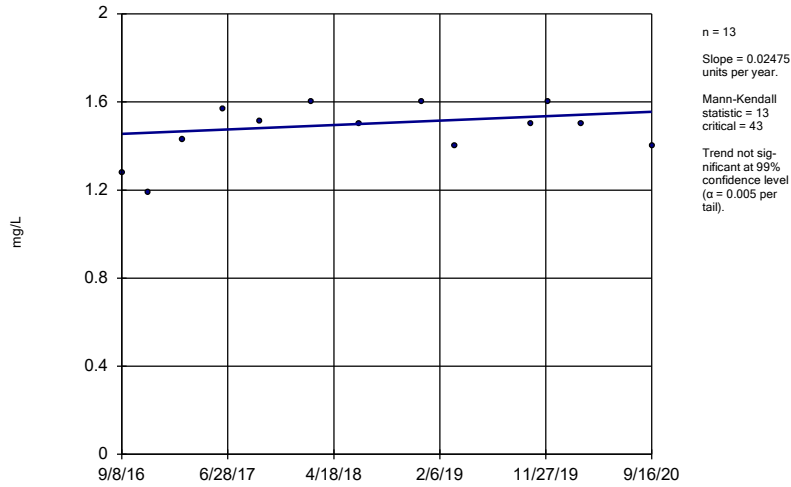
BRGWC-30I



n = 13  
 Slope = -0.005121  
 units per year.  
 Mann-Kendall  
 statistic = -10  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

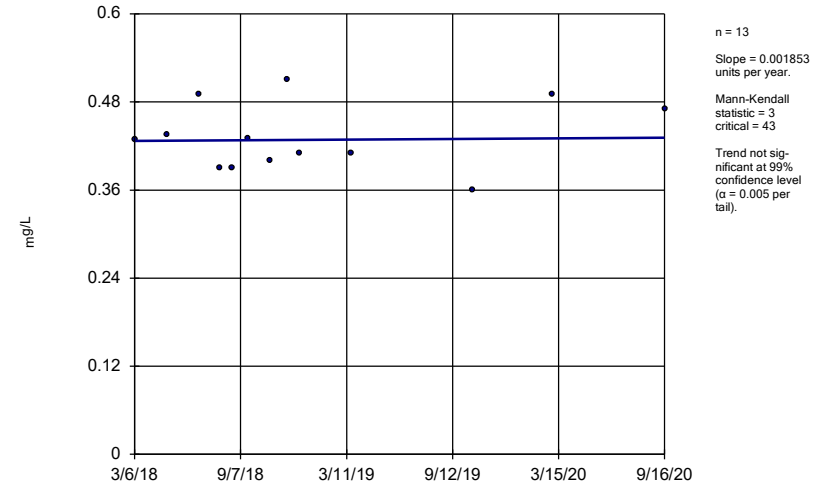
Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-32S



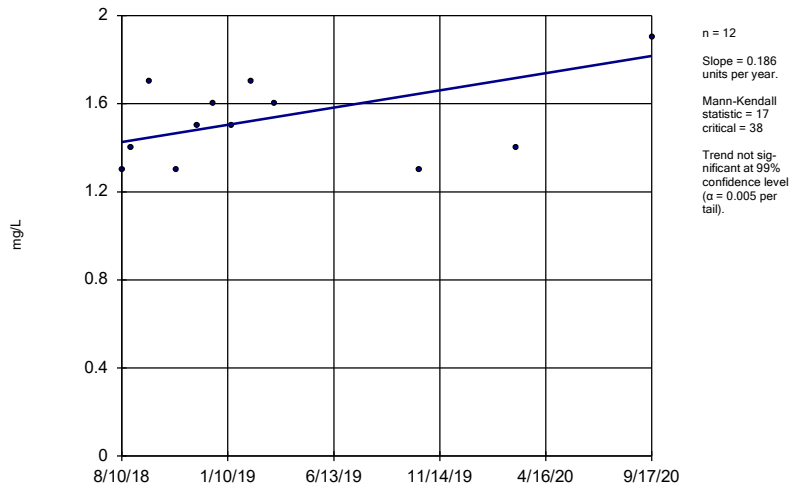
Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-47



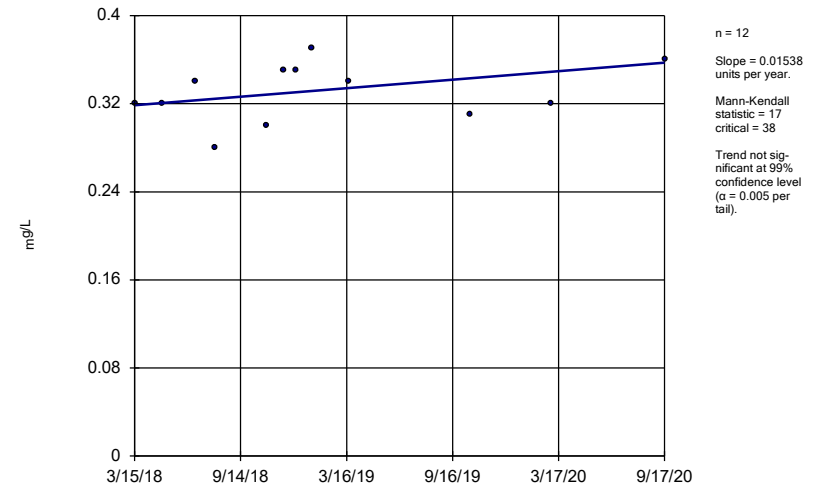
Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-52I



Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

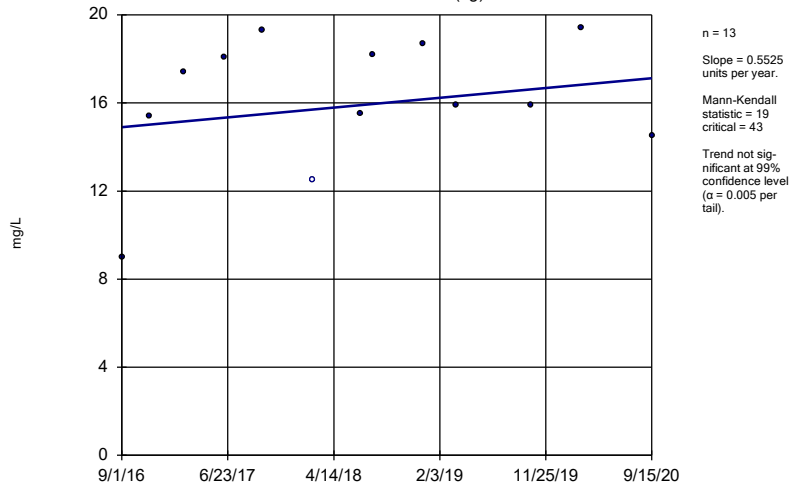
### Sen's Slope Estimator BRGWC-50



Constituent: Boron Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

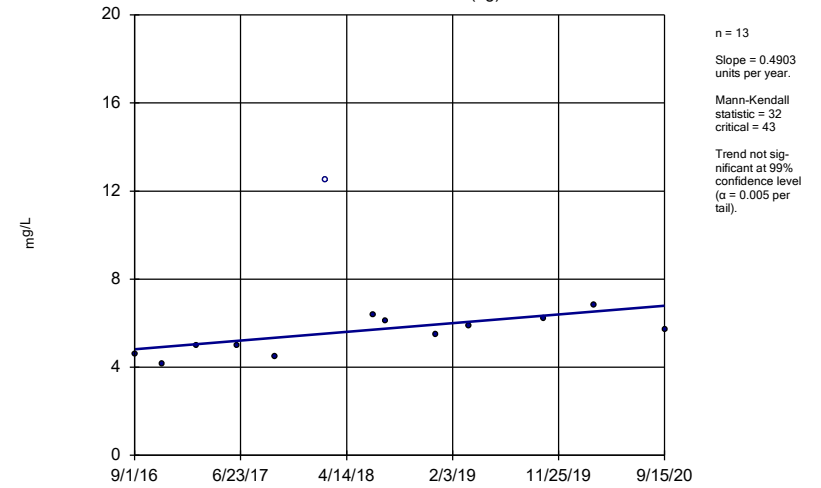
BRGWA-121 (bg)



Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

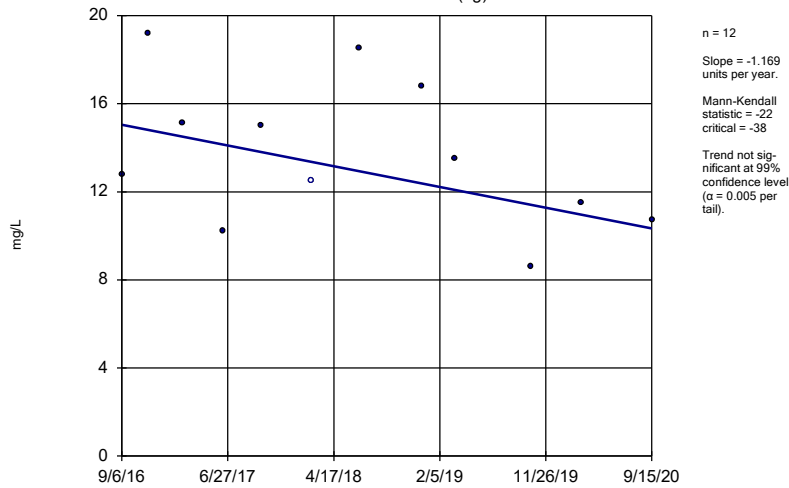
BRGWA-12S (bg)



Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

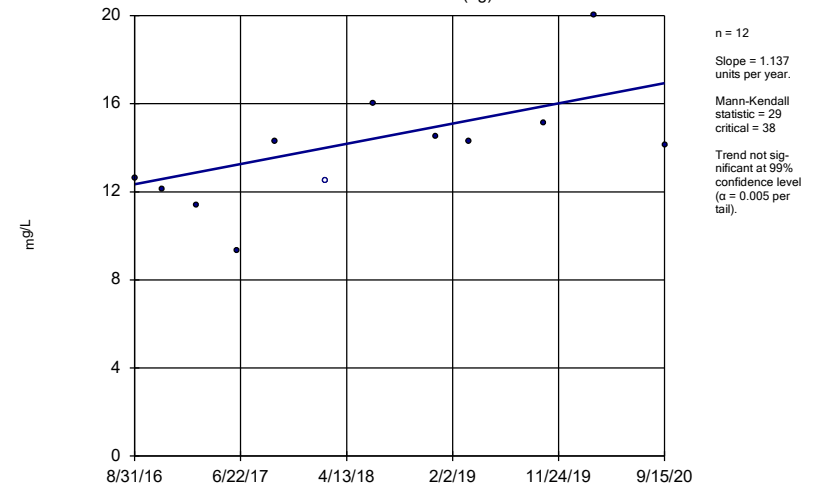
BRGWA-23S (bg)



Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

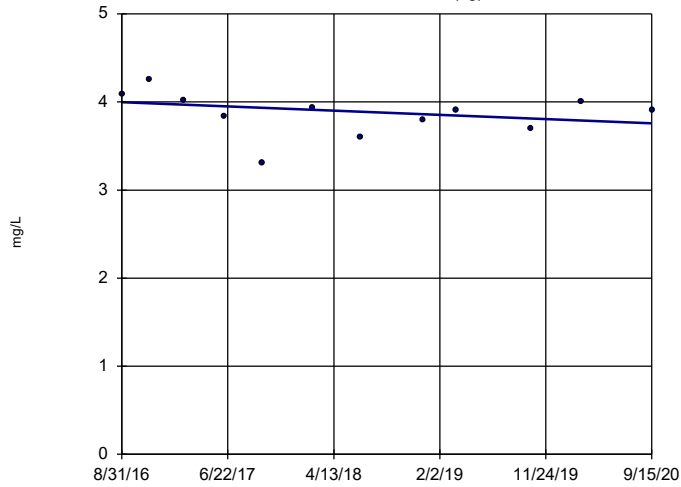
BRGWA-2I (bg)



Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2S (bg)



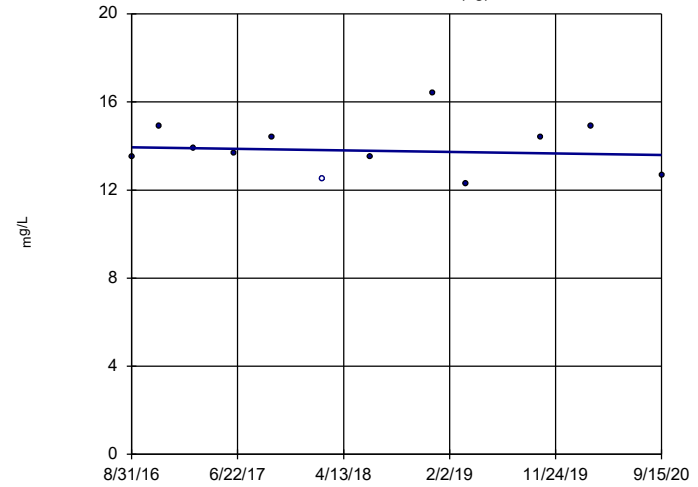
n = 12  
 Slope = -0.05889 units per year.  
 Mann-Kendall statistic = -17  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Hollow symbols indicate censored values.

### Sen's Slope Estimator

BRGWA-5I (bg)



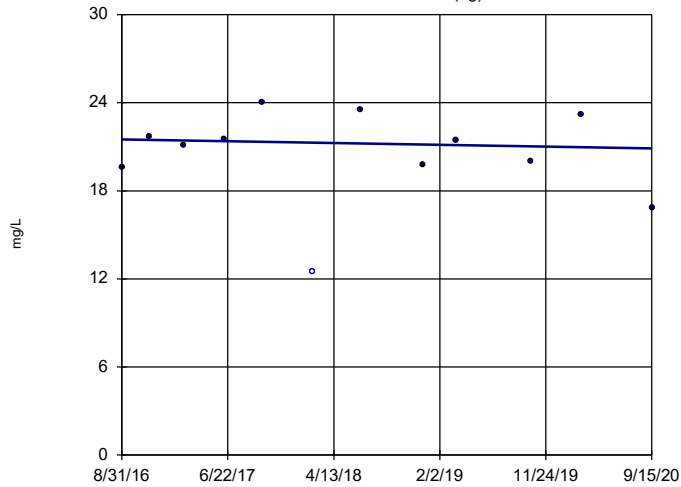
n = 12  
 Slope = -0.08584 units per year.  
 Mann-Kendall statistic = -3  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Hollow symbols indicate censored values.

### Sen's Slope Estimator

BRGWA-5S (bg)

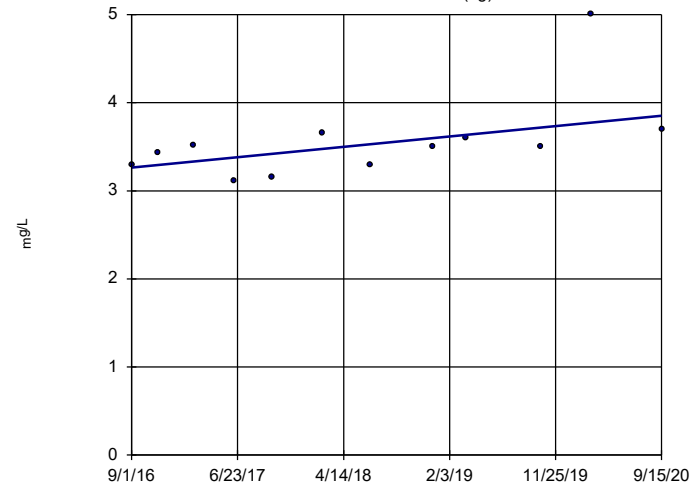


n = 12  
 Slope = -0.153 units per year.  
 Mann-Kendall statistic = -4  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

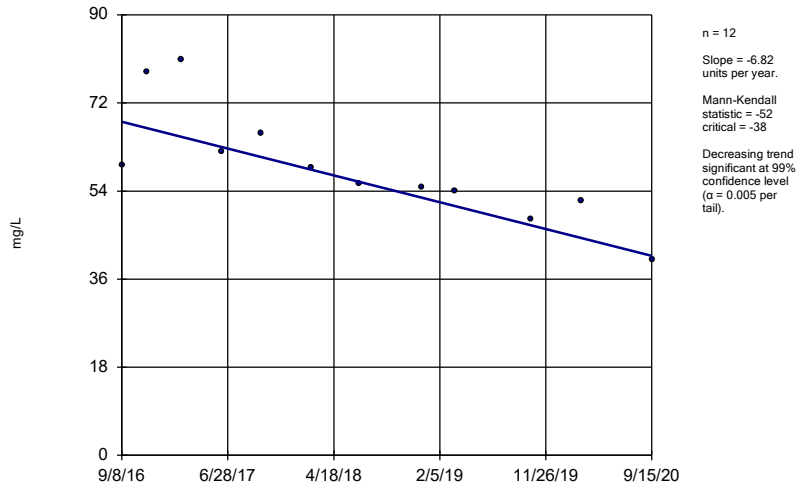
BRGWA-6S (bg)



n = 12  
 Slope = 0.1455 units per year.  
 Mann-Kendall statistic = 32  
 critical = 38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

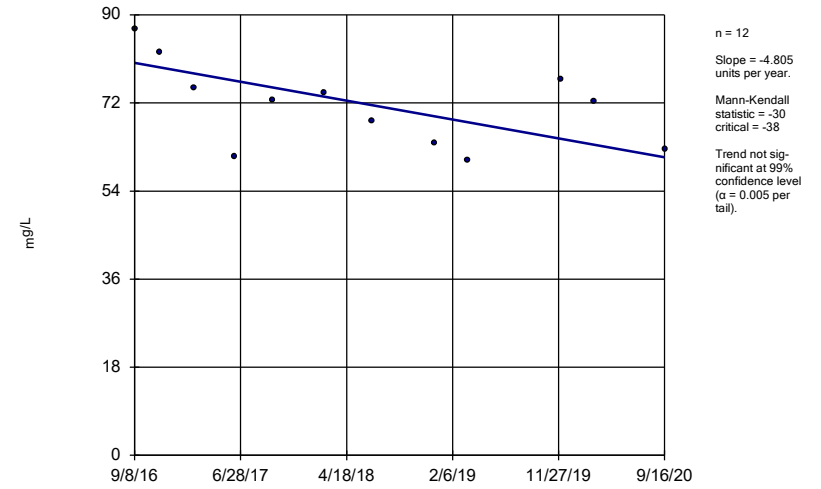
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-25I



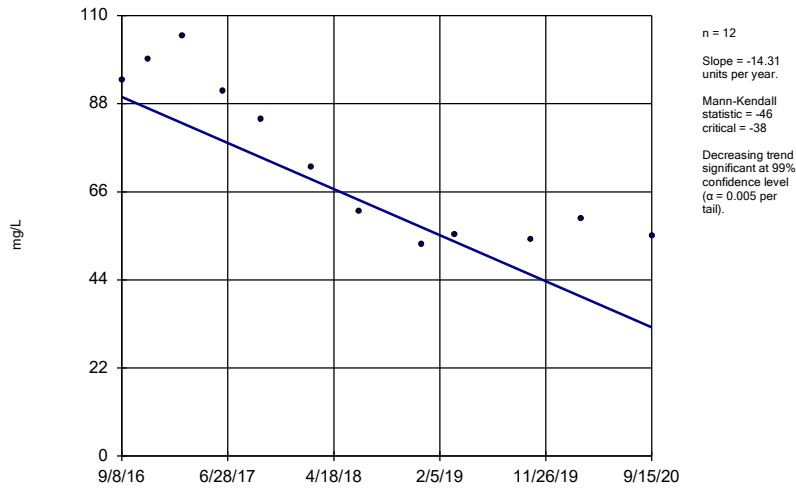
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-27I



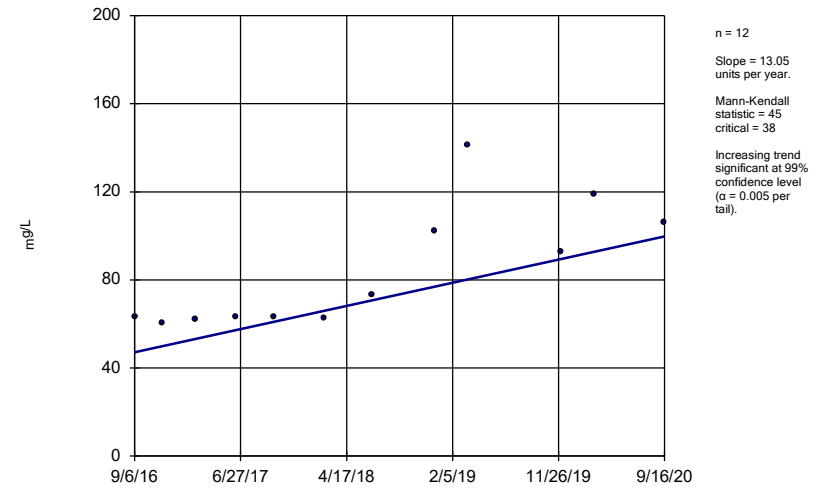
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-29I



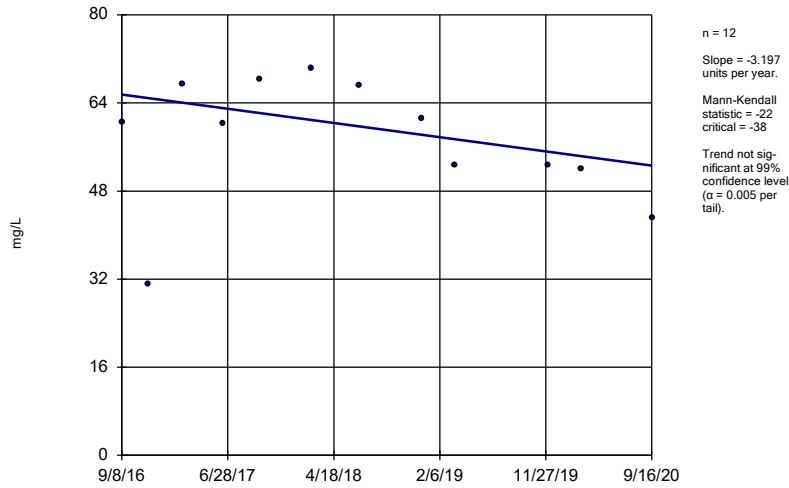
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-30I



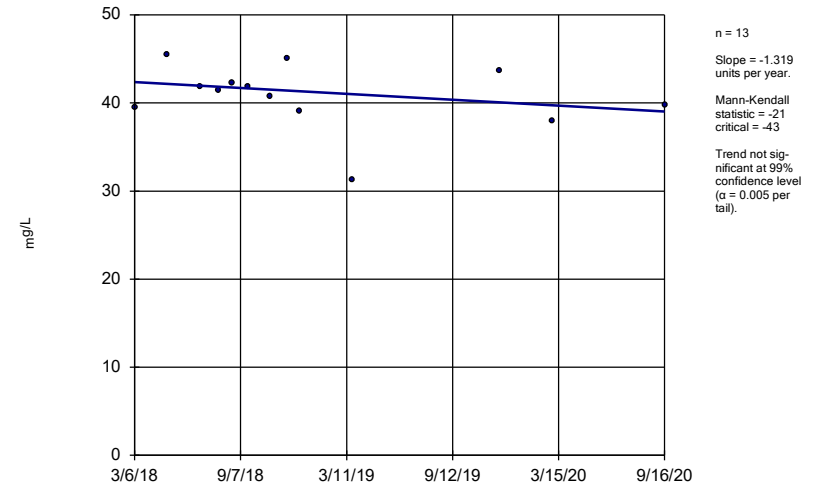
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-32S



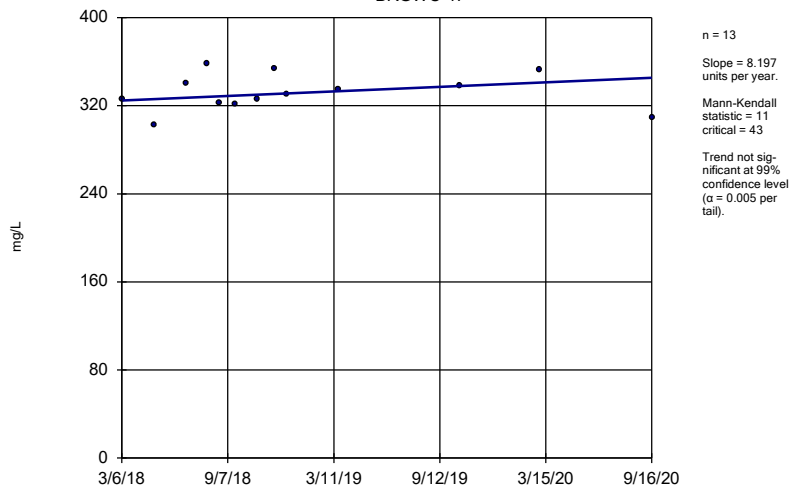
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-45



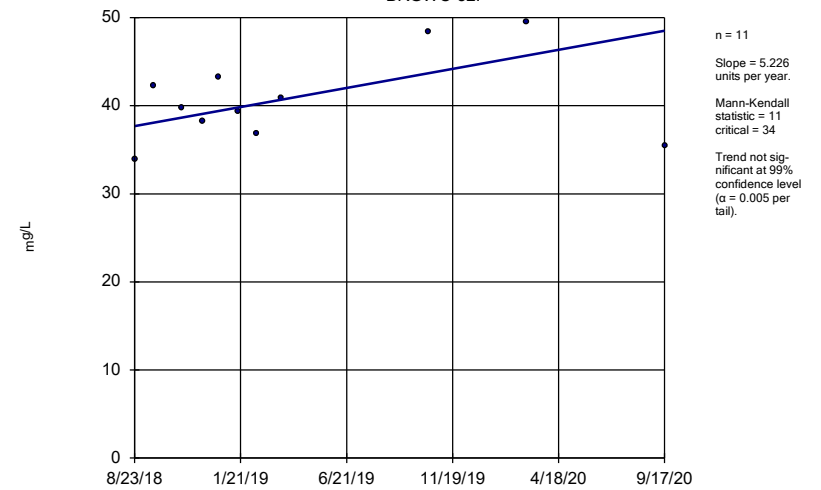
Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-47



Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-52I

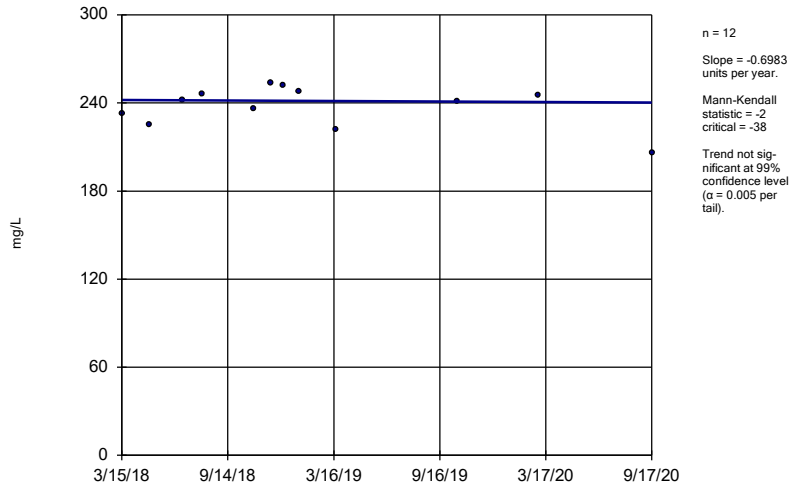


Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP



### Sen's Slope Estimator

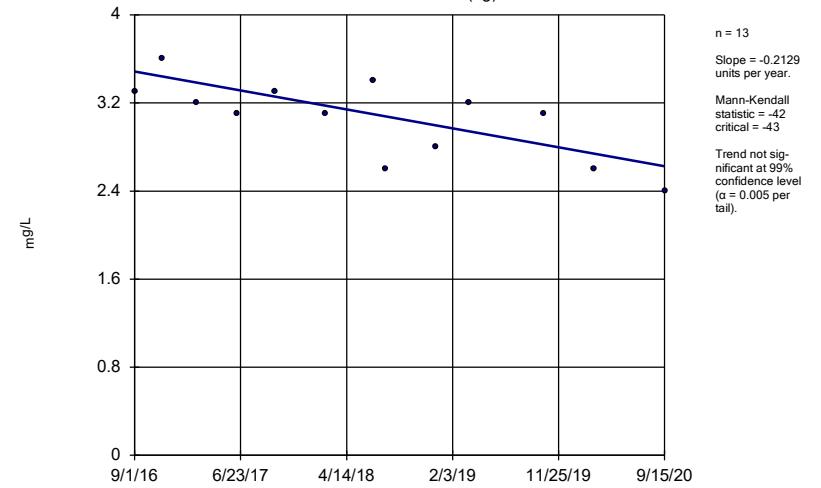
BRGWC-50



Constituent: Calcium Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

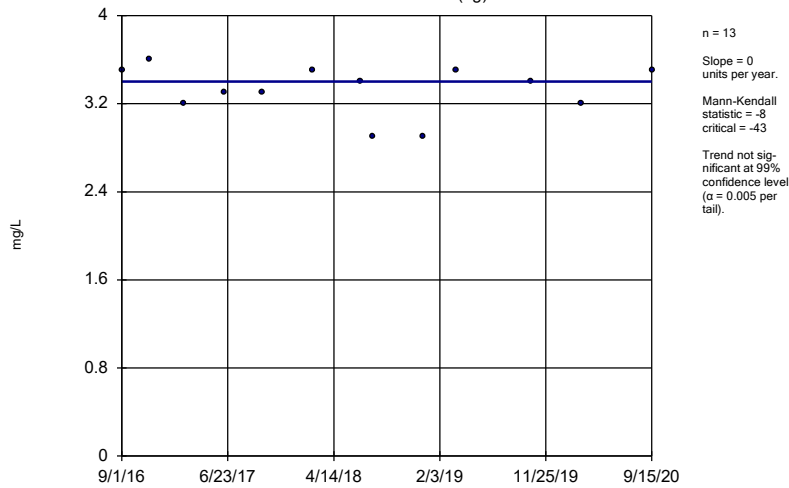
BRGWA-12I (bg)



Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

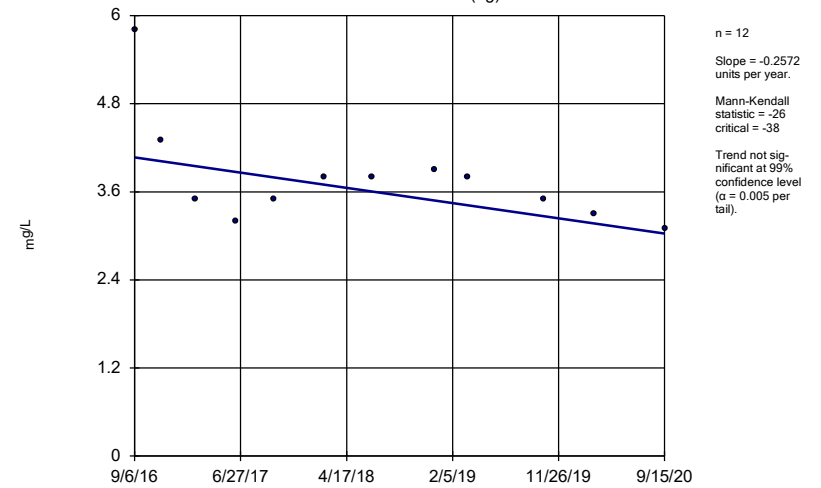
BRGWA-12S (bg)



Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

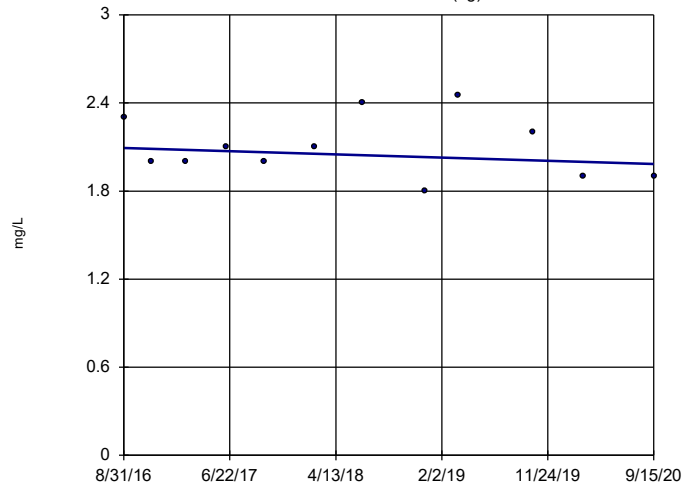
BRGWA-23S (bg)



Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2I (bg)

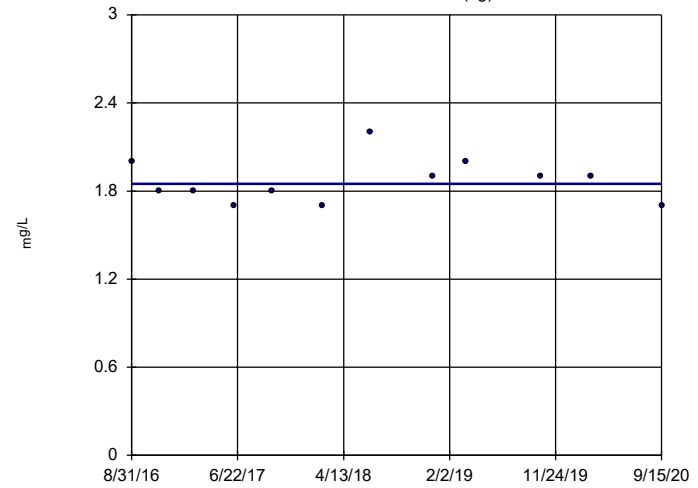


n = 12  
 Slope = -0.02706 units per year.  
 Mann-Kendall statistic = -7  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2S (bg)

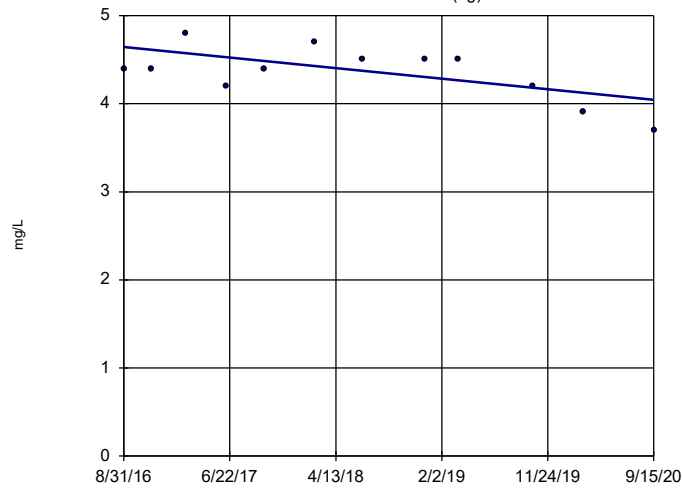


n = 12  
 Slope = 0 units per year.  
 Mann-Kendall statistic = 0  
 critical = 38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)

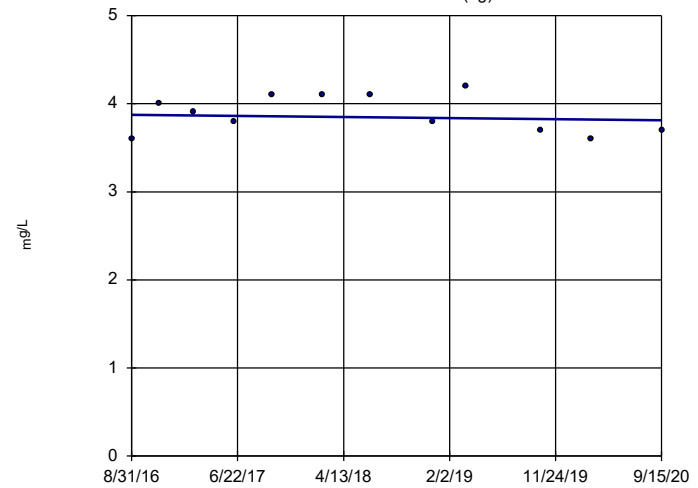


n = 12  
 Slope = -0.1482 units per year.  
 Mann-Kendall statistic = -21  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5S (bg)

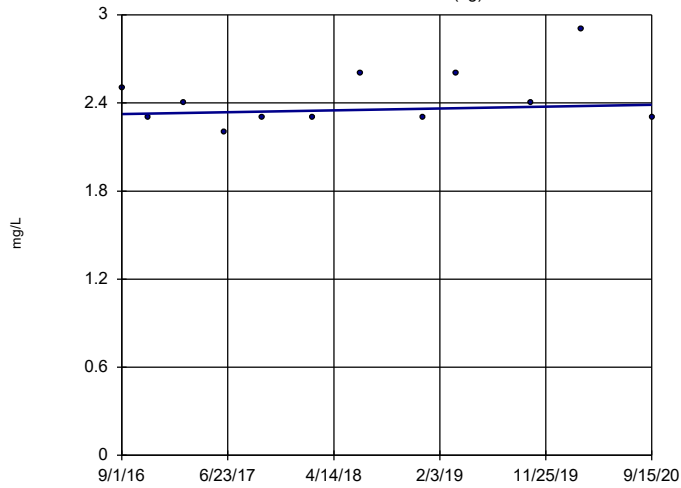


n = 12  
 Slope = -0.01532 units per year.  
 Mann-Kendall statistic = -6  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-6S (bg)

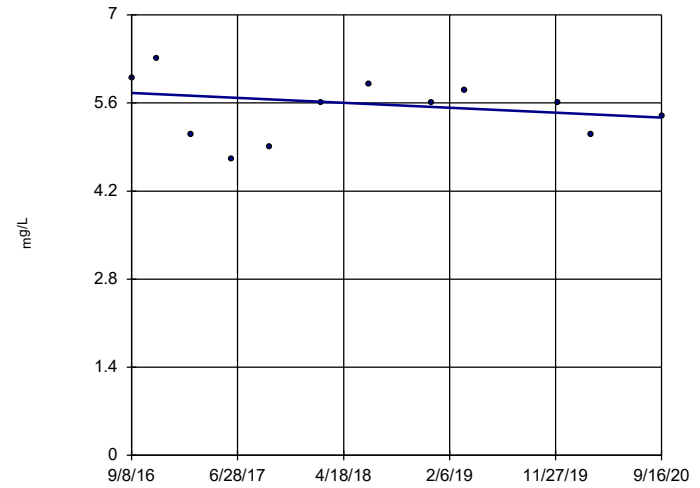


n = 12  
 Slope = 0.01532 units per year.  
 Mann-Kendall statistic = 12  
 critical = 38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-27I

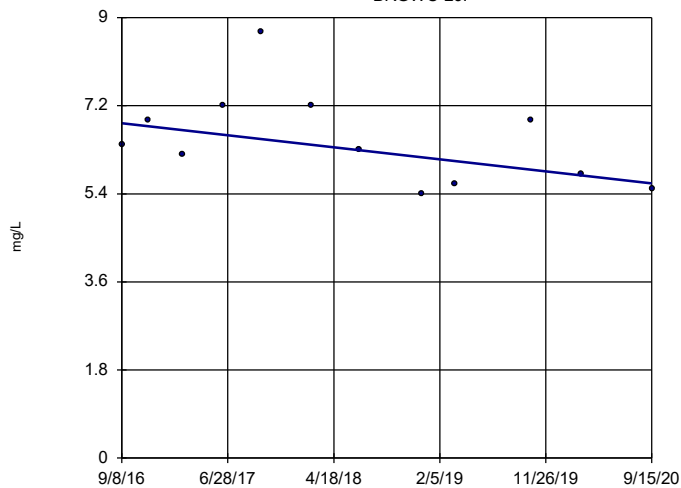


n = 12  
 Slope = -0.09698 units per year.  
 Mann-Kendall statistic = -10  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-29I

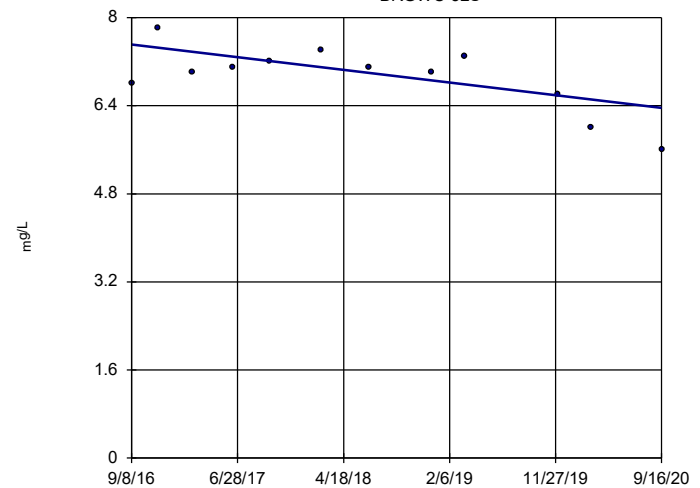


n = 12  
 Slope = -0.3063 units per year.  
 Mann-Kendall statistic = -22  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

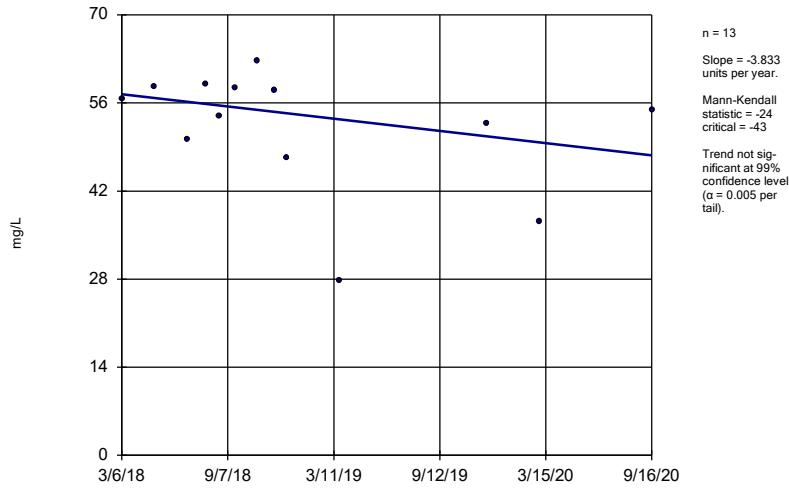
BRGWC-32S



n = 12  
 Slope = -0.2863 units per year.  
 Mann-Kendall statistic = -24  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

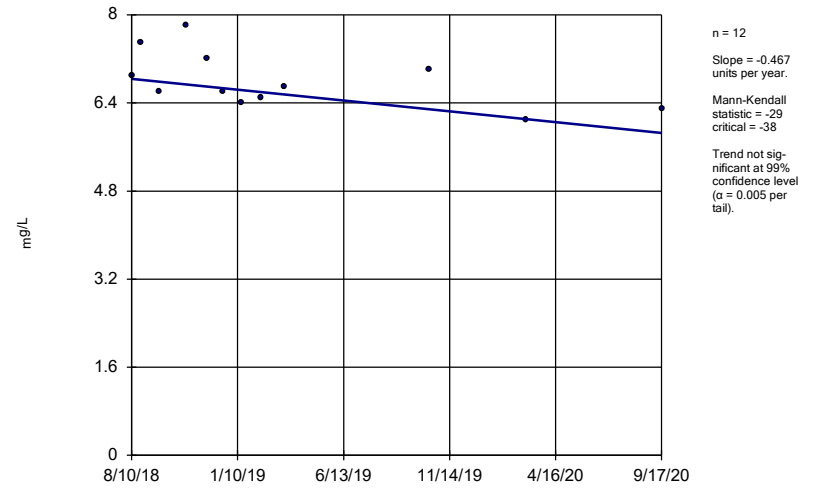
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-45



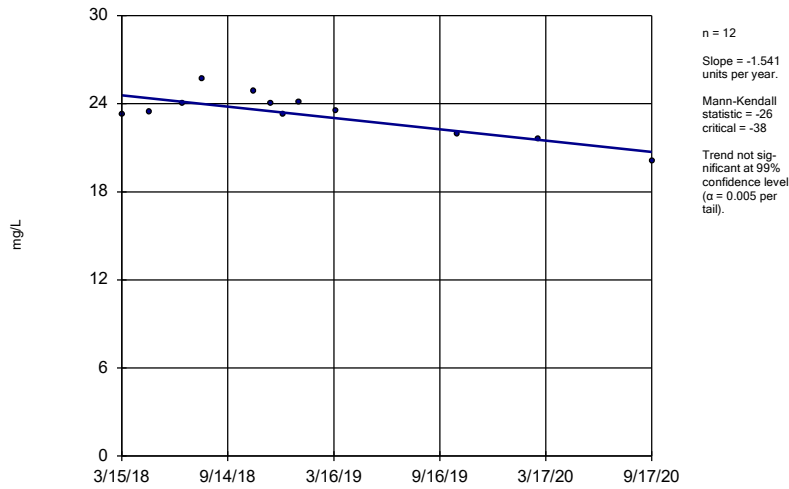
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-52I



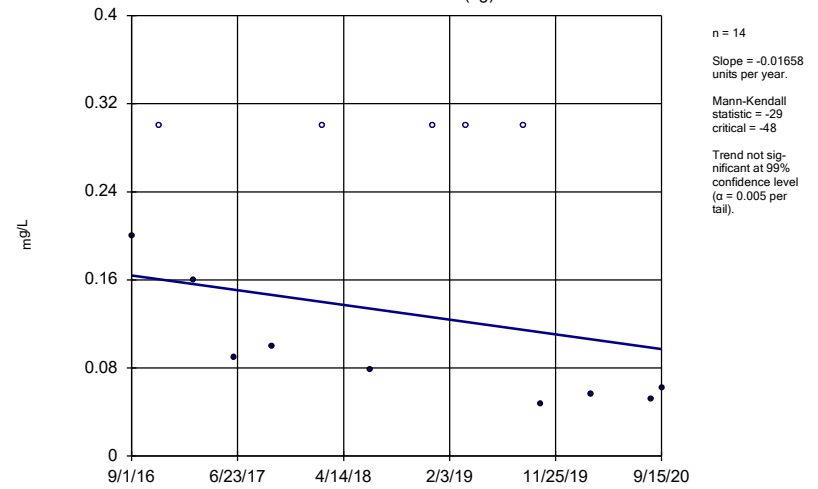
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-50



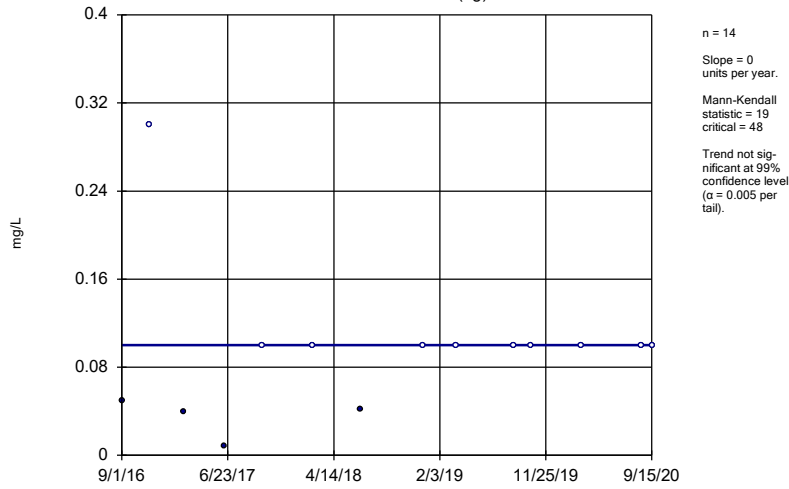
Constituent: Chloride, Total Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-12I (bg)



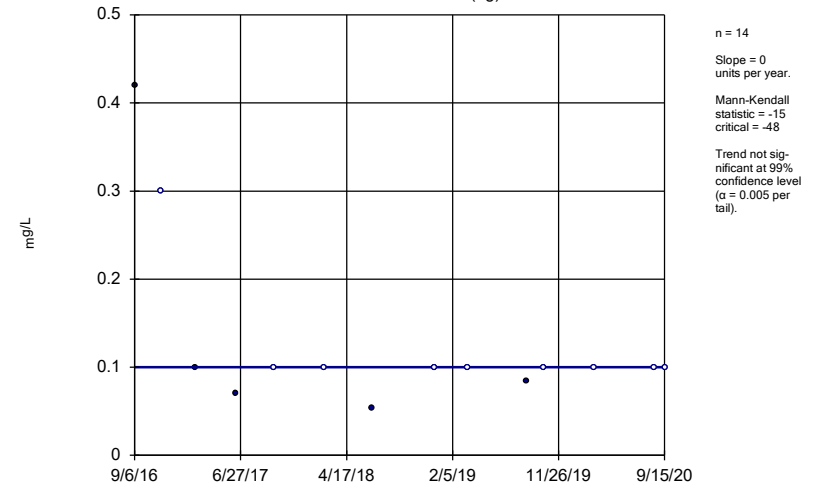
Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-12S (bg)



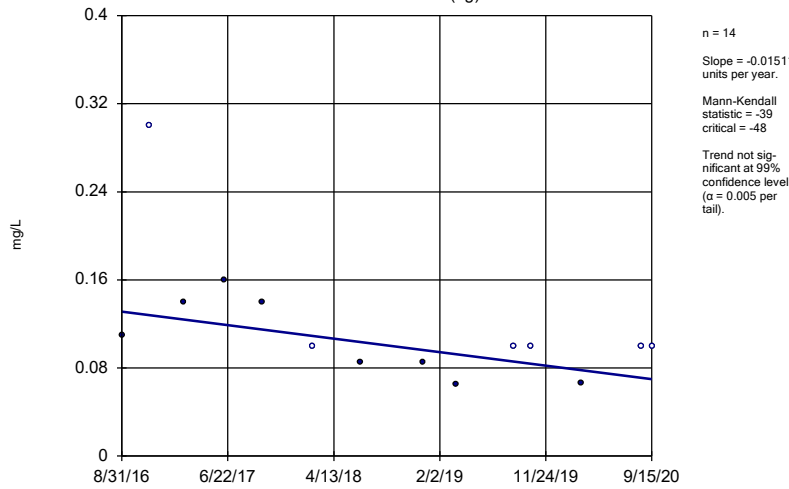
Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-23S (bg)



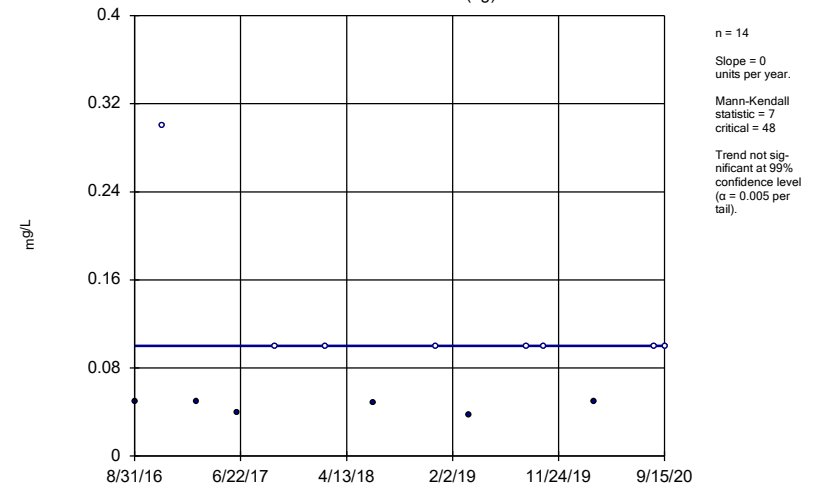
Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-2I (bg)



Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

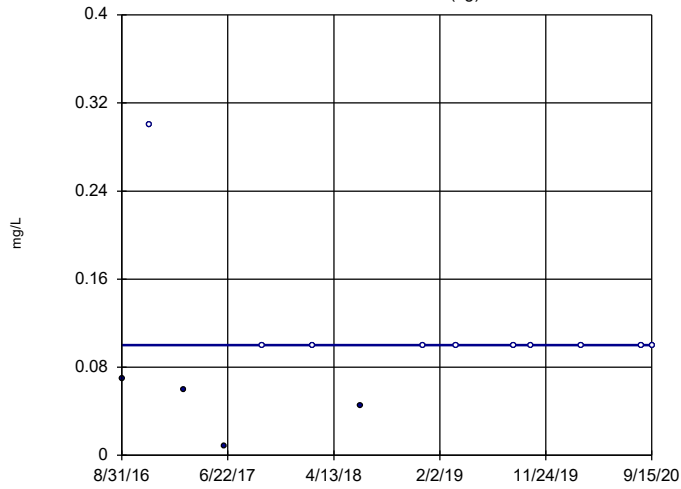
Sen's Slope Estimator  
BRGWA-2S (bg)



Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)

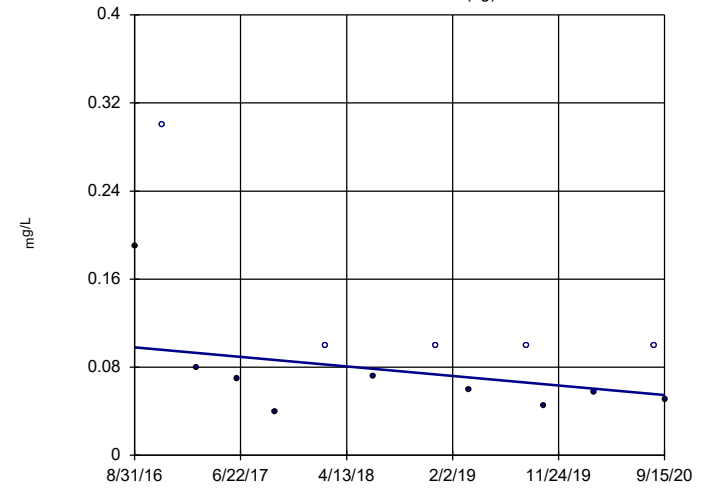


n = 14  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = 17  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5S (bg)

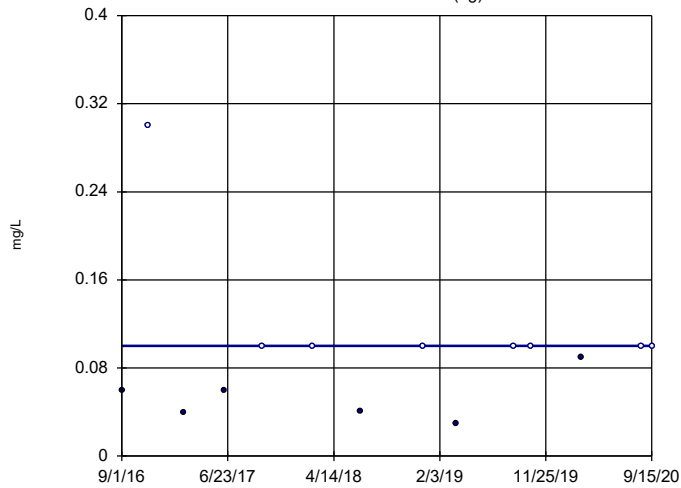


n = 14  
 Slope = -0.01067  
 units per year.  
 Mann-Kendall  
 statistic = -29  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-6S (bg)

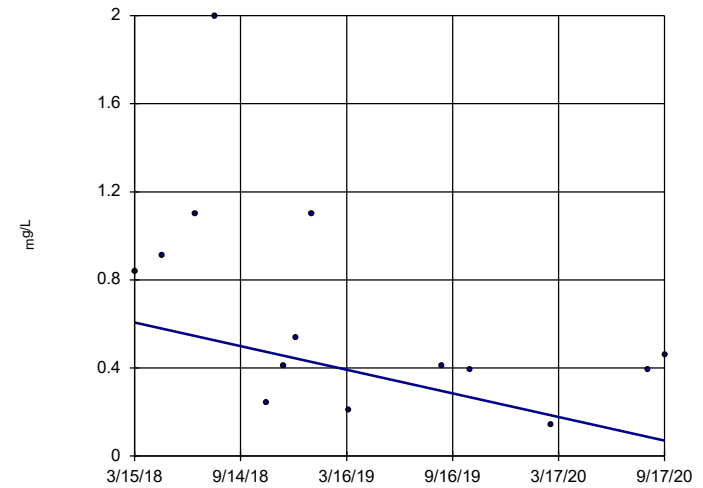


n = 14  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = 11  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-50

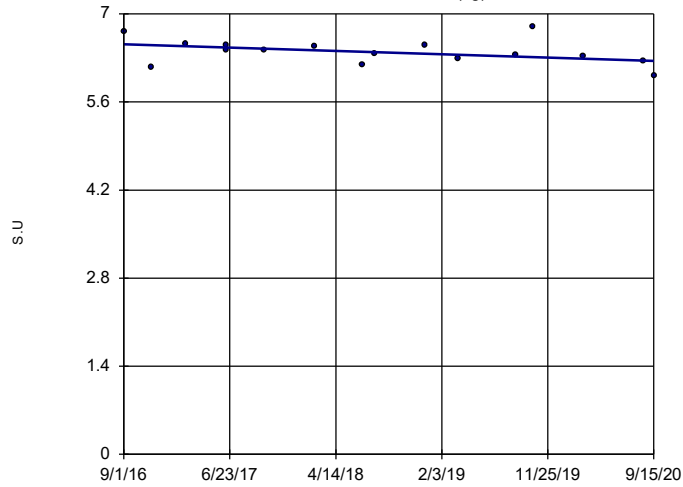


n = 14  
 Slope = -0.2133  
 units per year.  
 Mann-Kendall  
 statistic = -32  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Fluoride Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-12I (bg)

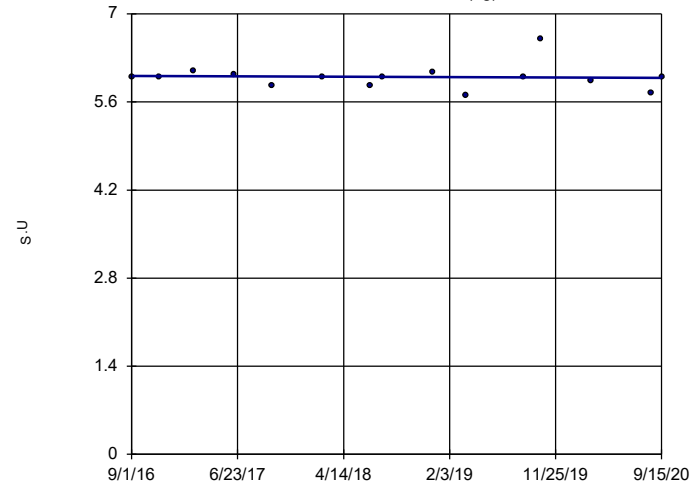


n = 16  
 Slope = -0.06443  
 units per year.  
 Mann-Kendall  
 statistic = -41  
 critical = -58  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-12S (bg)

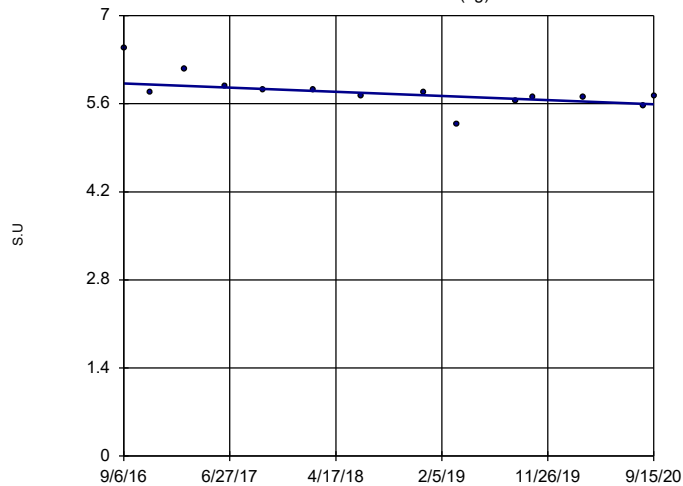


n = 15  
 Slope = -0.006874  
 units per year.  
 Mann-Kendall  
 statistic = -14  
 critical = -53  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-23S (bg)

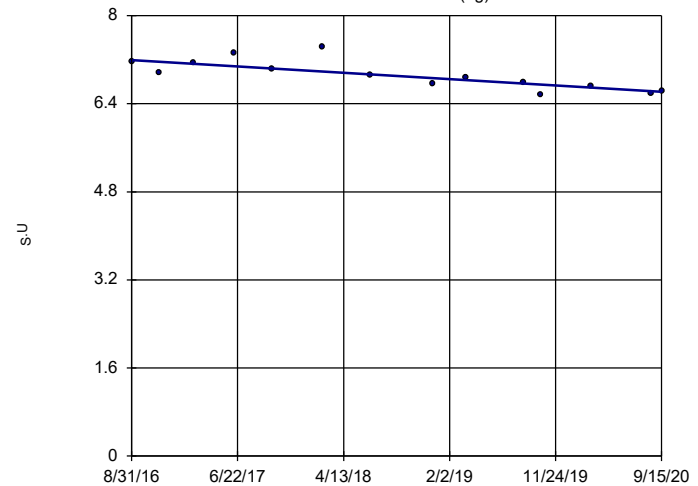


n = 14  
 Slope = -0.08225  
 units per year.  
 Mann-Kendall  
 statistic = -56  
 critical = -48  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2I (bg)

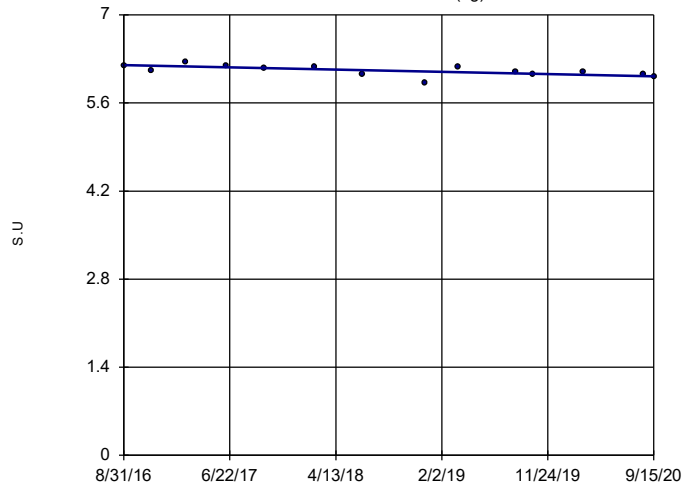


n = 14  
 Slope = -0.1422  
 units per year.  
 Mann-Kendall  
 statistic = -59  
 critical = -48  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2S (bg)

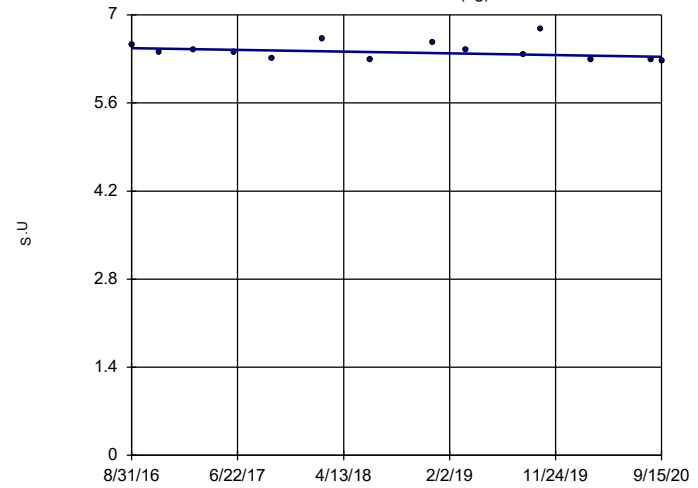


n = 14  
 Slope = -0.04353 units per year.  
 Mann-Kendall statistic = -47  
 critical = -48  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)

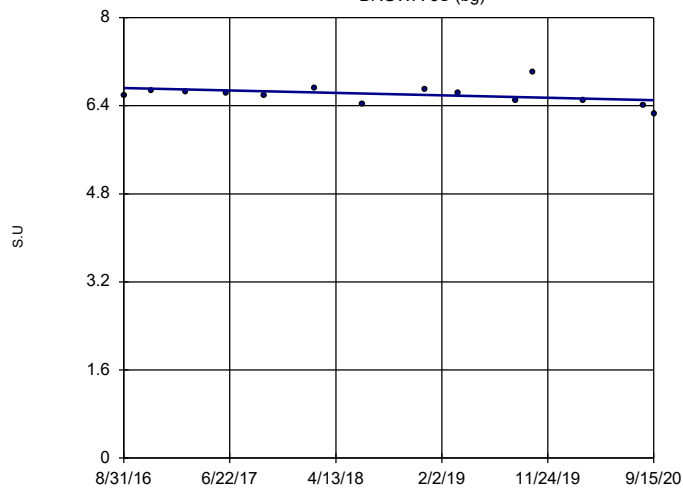


n = 14  
 Slope = -0.03452 units per year.  
 Mann-Kendall statistic = -29  
 critical = -48  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5S (bg)

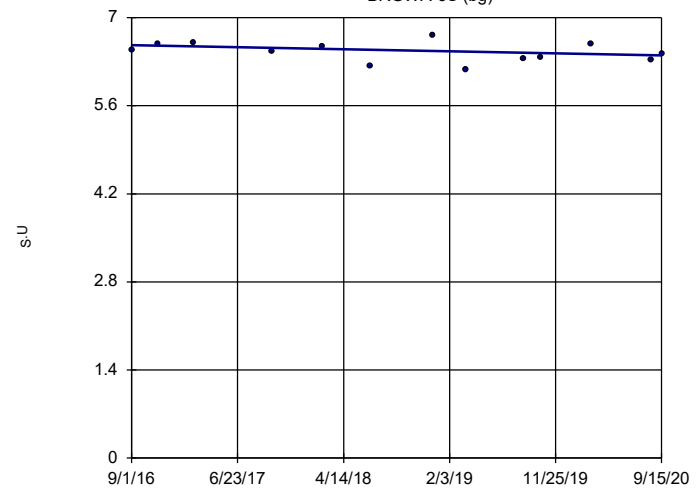


n = 14  
 Slope = -0.05503 units per year.  
 Mann-Kendall statistic = -32  
 critical = -48  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-6S (bg)

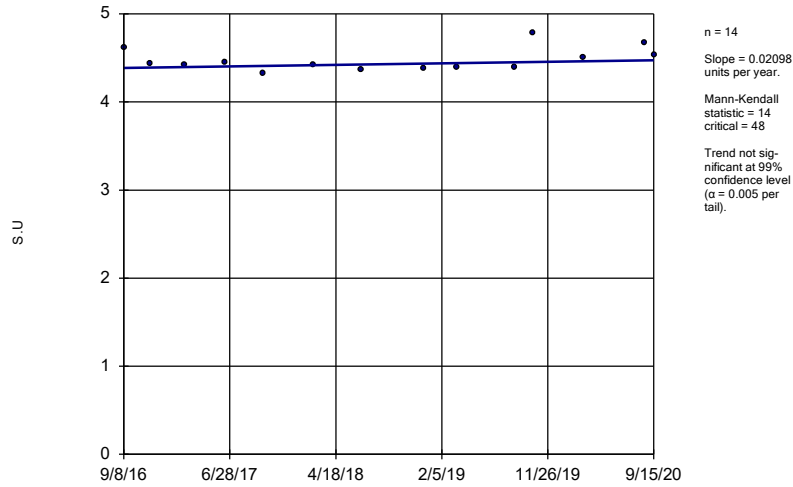


n = 13  
 Slope = -0.04101 units per year.  
 Mann-Kendall statistic = -17  
 critical = -43  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

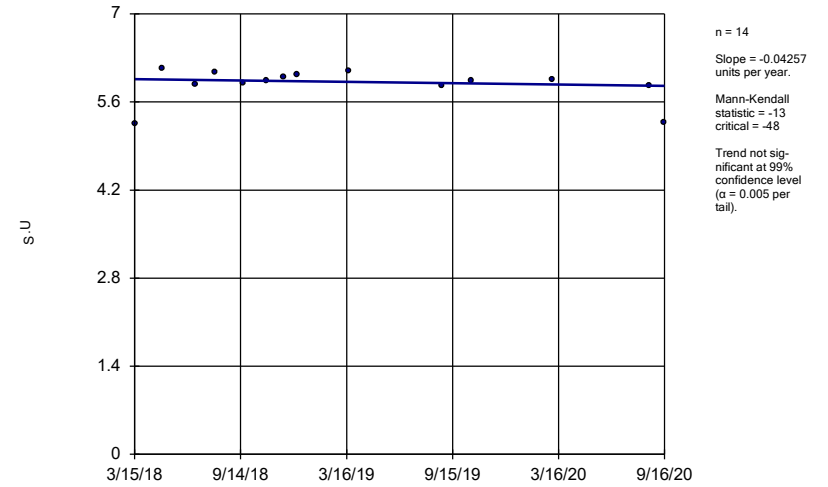


Sen's Slope Estimator  
BRGWC-29I



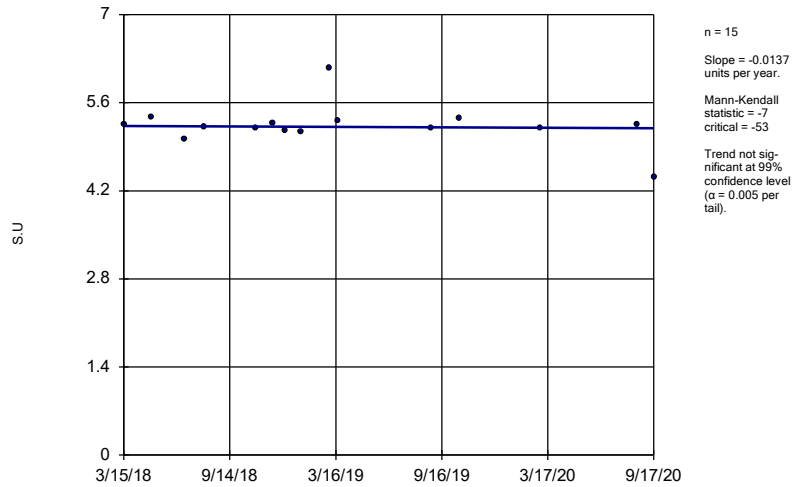
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-45



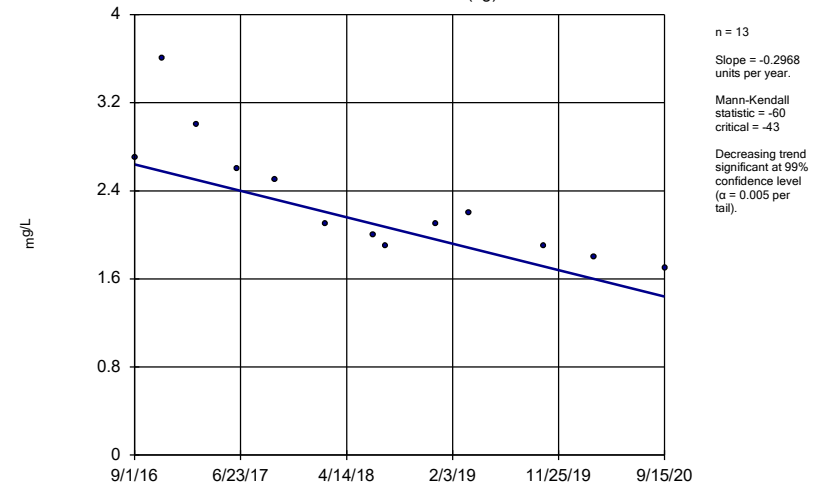
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-50



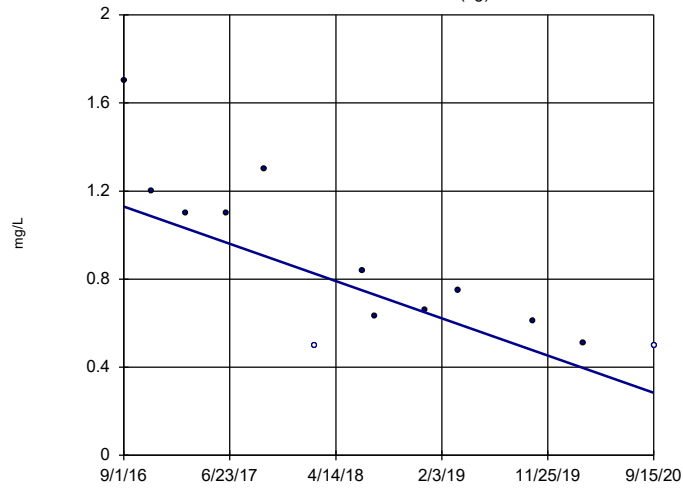
Constituent: pH, Field Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-12I (bg)



Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

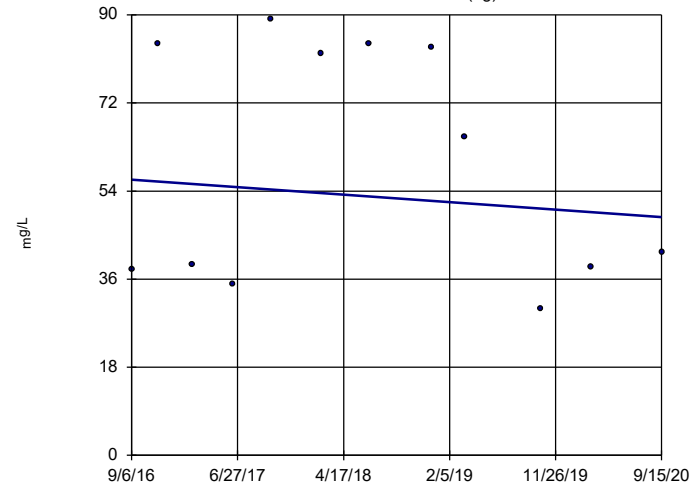
Sen's Slope Estimator  
 BRGWA-12S (bg)



n = 13  
 Slope = -0.2094  
 units per year.  
 Mann-Kendall  
 statistic = -52  
 critical = -43  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

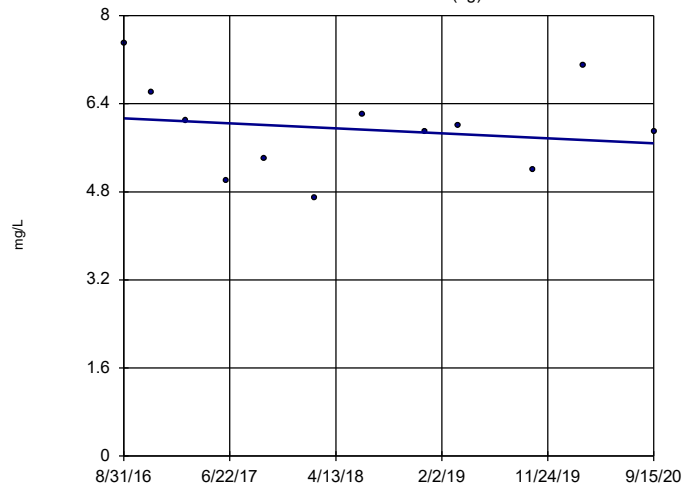
Sen's Slope Estimator  
 BRGWA-23S (bg)



n = 12  
 Slope = -1.903  
 units per year.  
 Mann-Kendall  
 statistic = -8  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

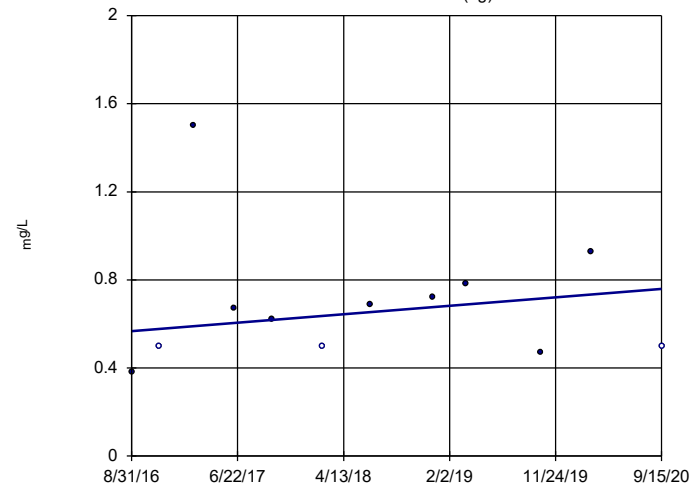
Sen's Slope Estimator  
 BRGWA-2I (bg)



n = 12  
 Slope = -0.1119  
 units per year.  
 Mann-Kendall  
 statistic = -11  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
 BRGWA-2S (bg)

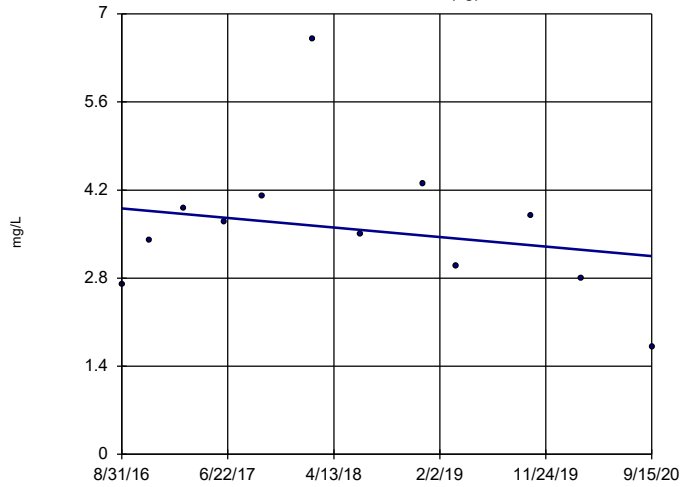


n = 12  
 Slope = 0.04767  
 units per year.  
 Mann-Kendall  
 statistic = 13  
 critical = 38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)



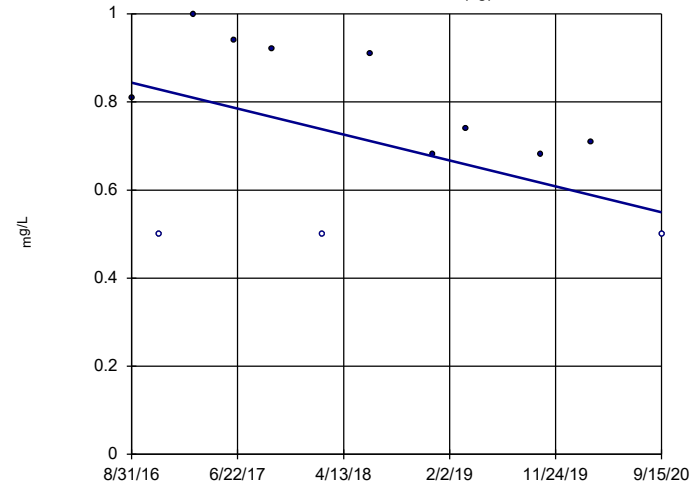
n = 12  
 Slope = -0.1873 units per year.  
 Mann-Kendall statistic = -8  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Hollow symbols indicate censored values.

### Sen's Slope Estimator

BRGWA-5S (bg)



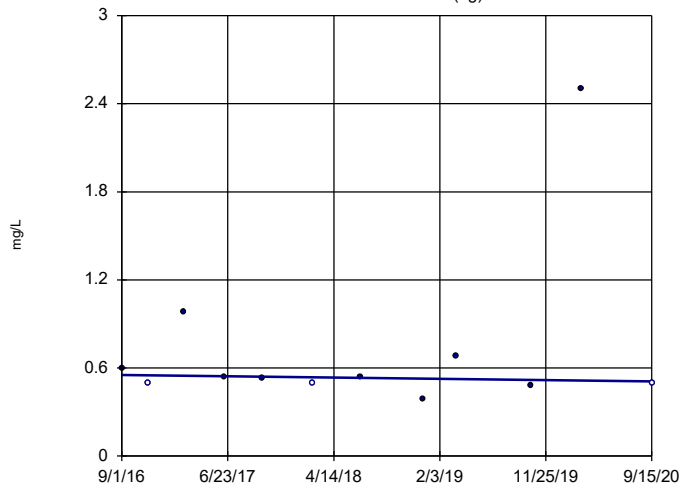
n = 12  
 Slope = -0.07276 units per year.  
 Mann-Kendall statistic = -22  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Hollow symbols indicate censored values.

### Sen's Slope Estimator

BRGWA-6S (bg)

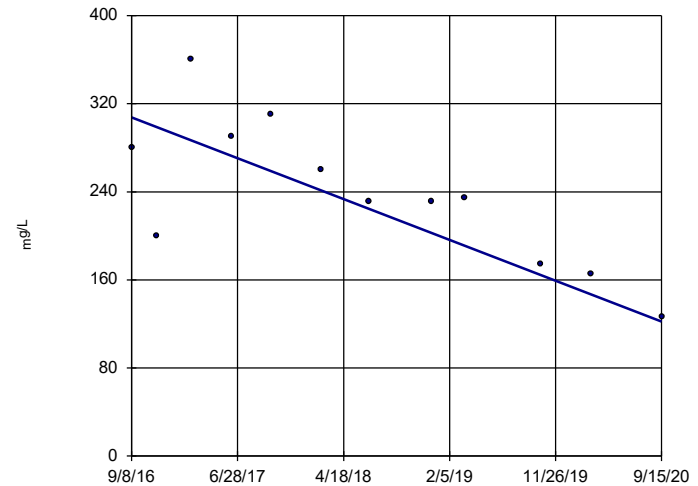


n = 12  
 Slope = -0.01104 units per year.  
 Mann-Kendall statistic = -8  
 critical = -38  
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

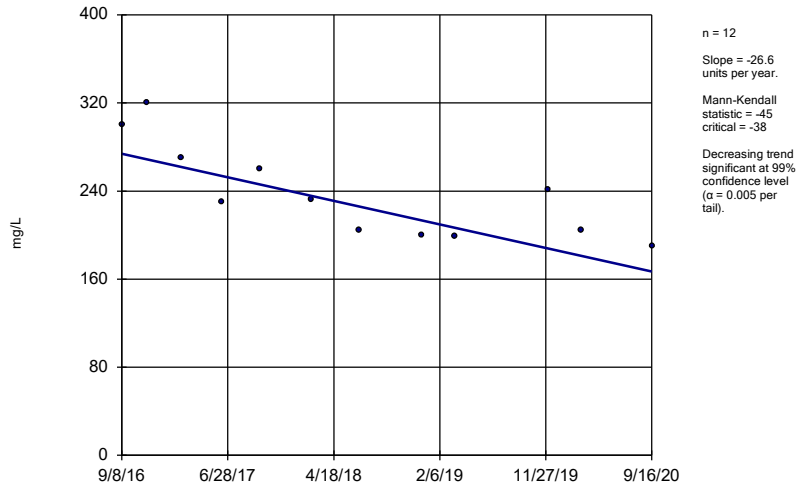
BRGWC-25I



n = 12  
 Slope = -46.07 units per year.  
 Mann-Kendall statistic = -39  
 critical = -38  
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

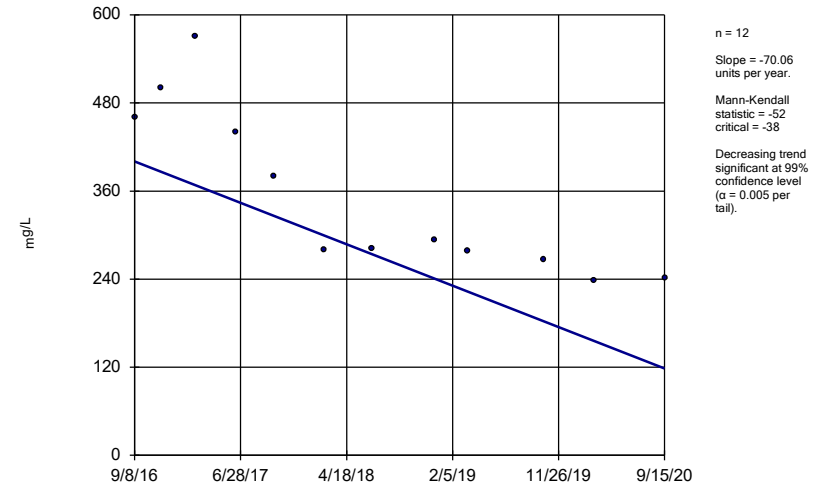
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-27I



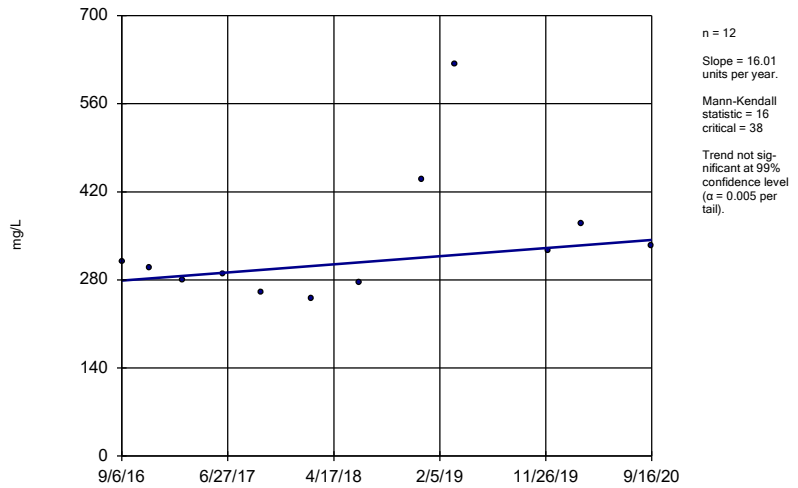
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-29I



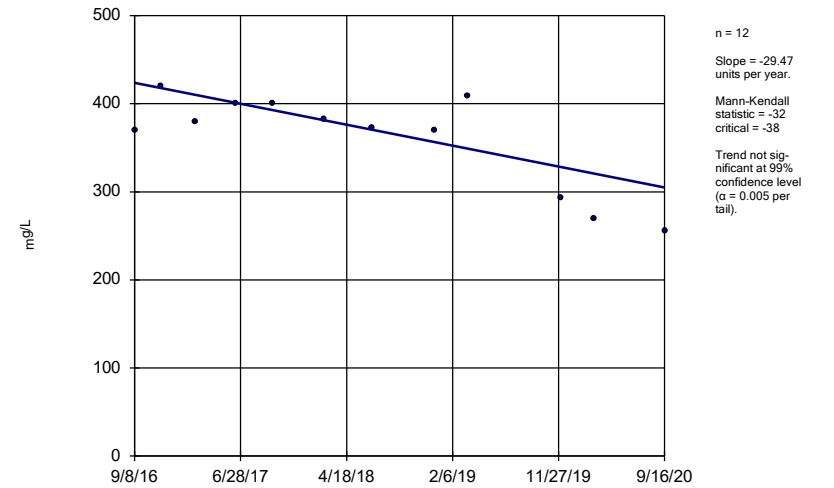
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-30I



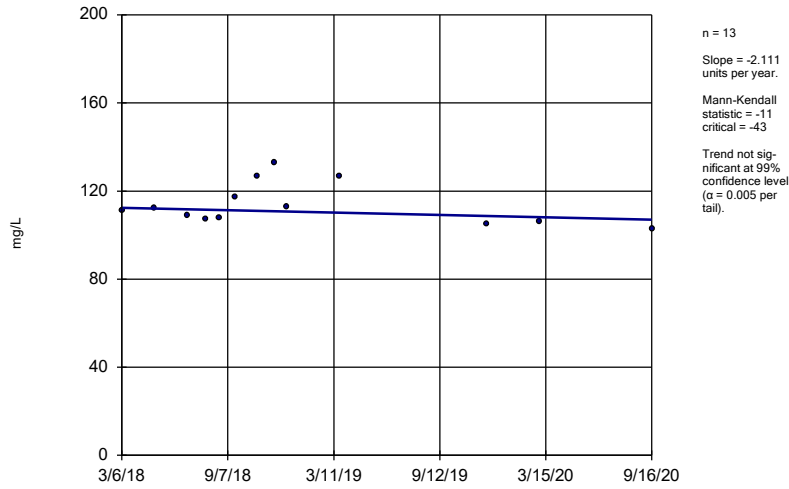
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-32S



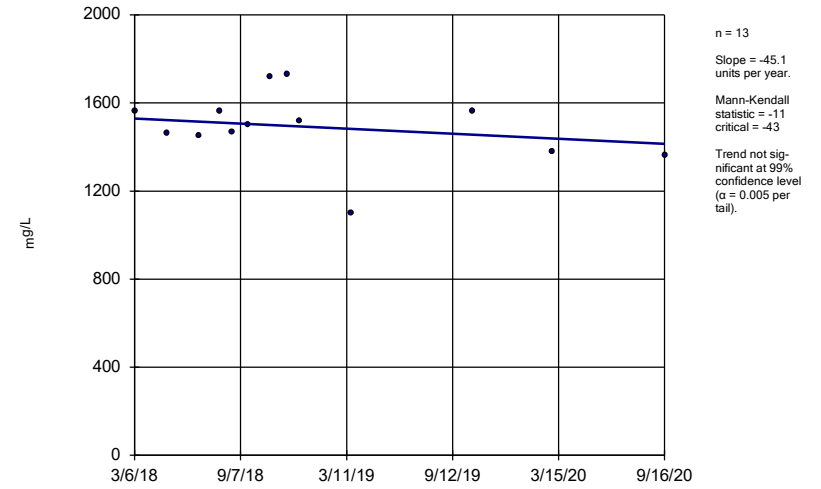
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-45



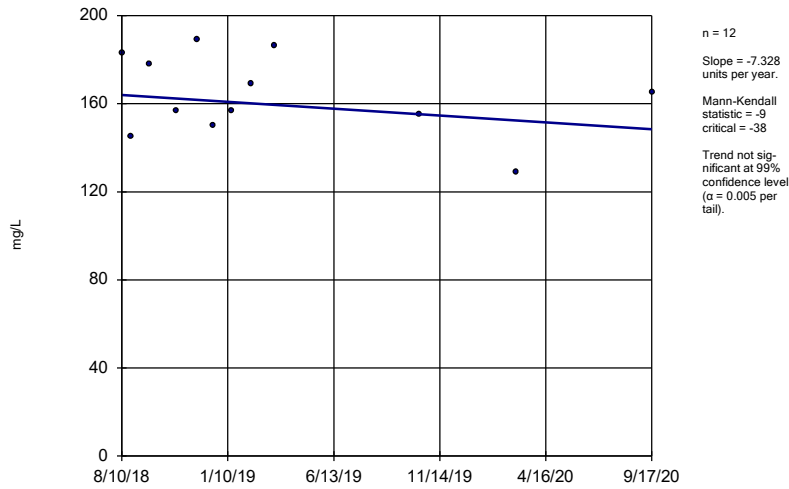
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-47



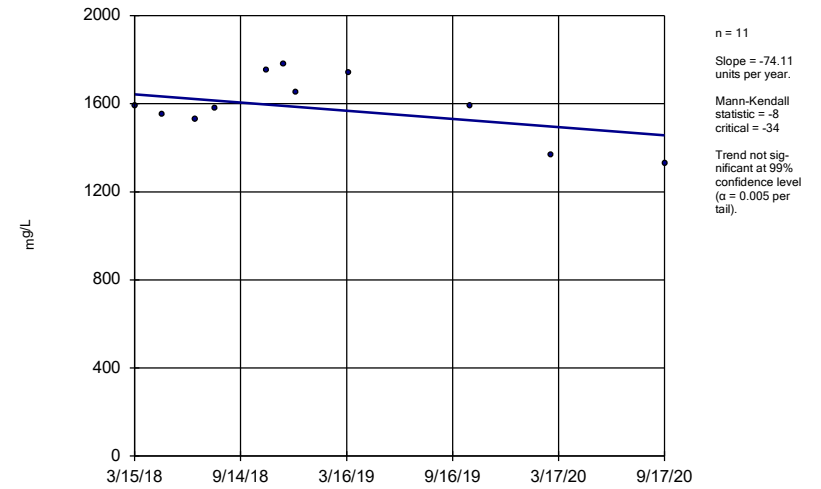
Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-52I



Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

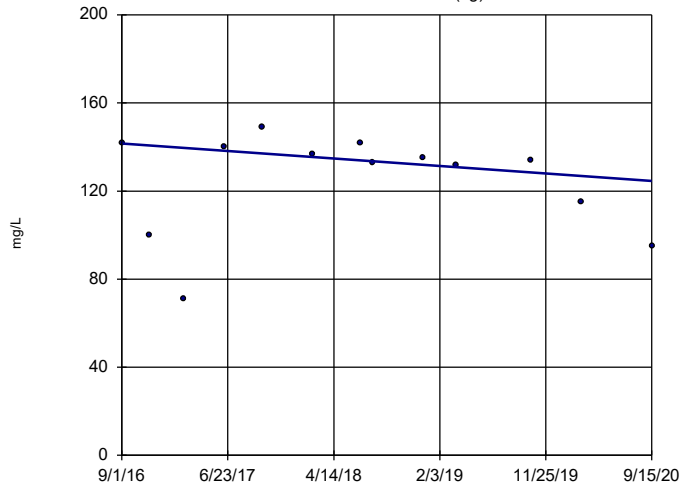
Sen's Slope Estimator  
BRGWC-50



Constituent: Sulfate as SO4 Analysis Run 11/1/2020 9:34 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-121 (bg)

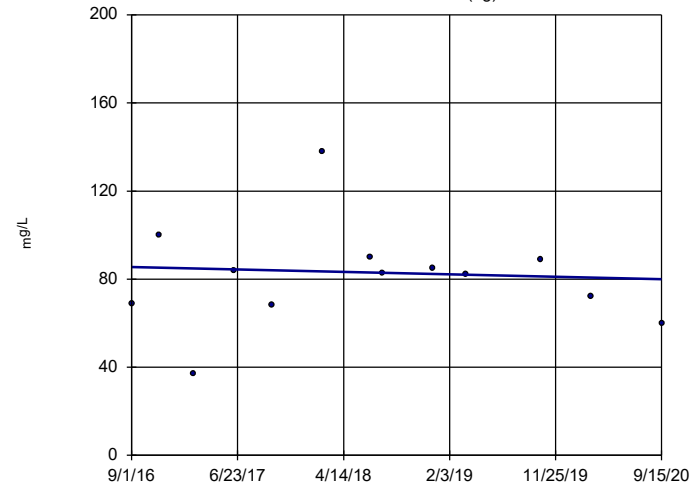


n = 13  
 Slope = -4.199  
 units per year.  
 Mann-Kendall  
 statistic = -25  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-12S (bg)

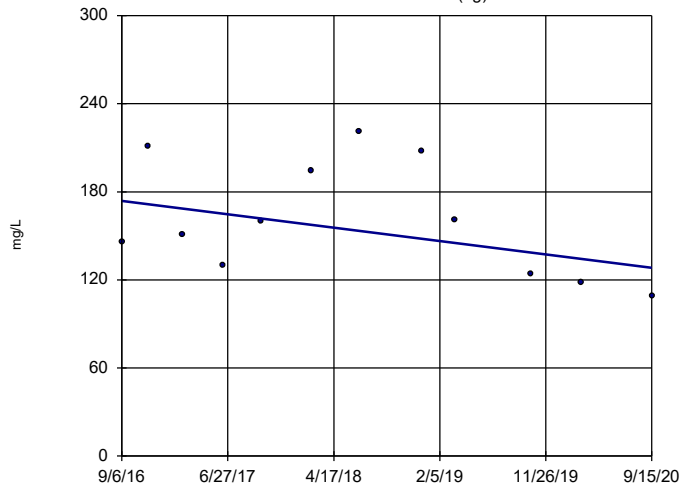


n = 13  
 Slope = -1.357  
 units per year.  
 Mann-Kendall  
 statistic = -8  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-23S (bg)

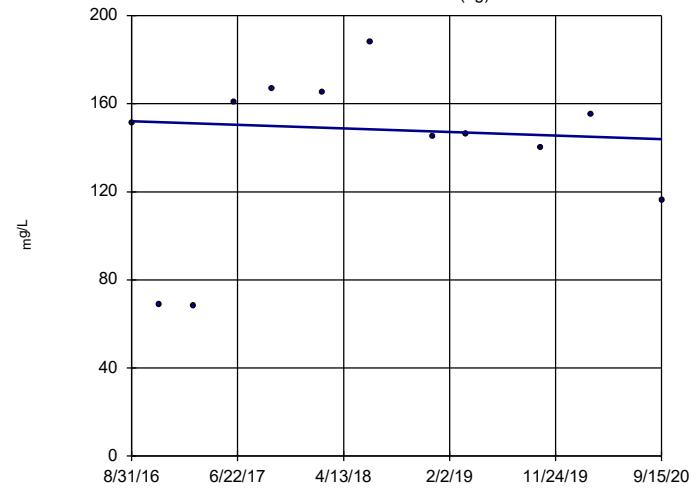


n = 12  
 Slope = -11.33  
 units per year.  
 Mann-Kendall  
 statistic = -18  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2I (bg)

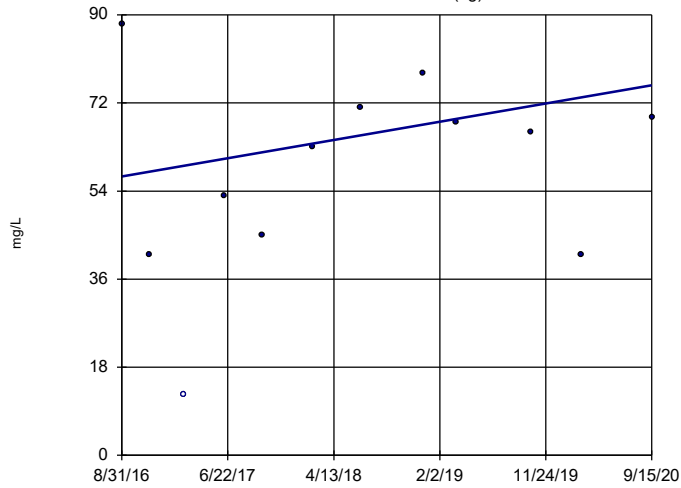


n = 12  
 Slope = -1.984  
 units per year.  
 Mann-Kendall  
 statistic = -2  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2S (bg)

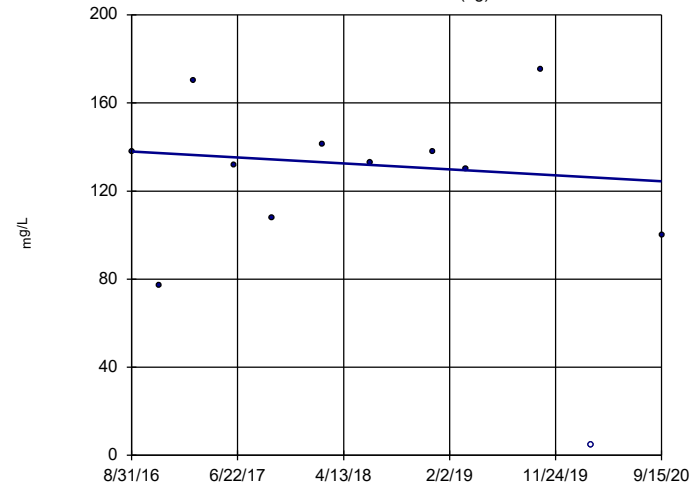


n = 12  
 Slope = 4.612  
 units per year.  
 Mann-Kendall  
 statistic = 11  
 critical = 38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)

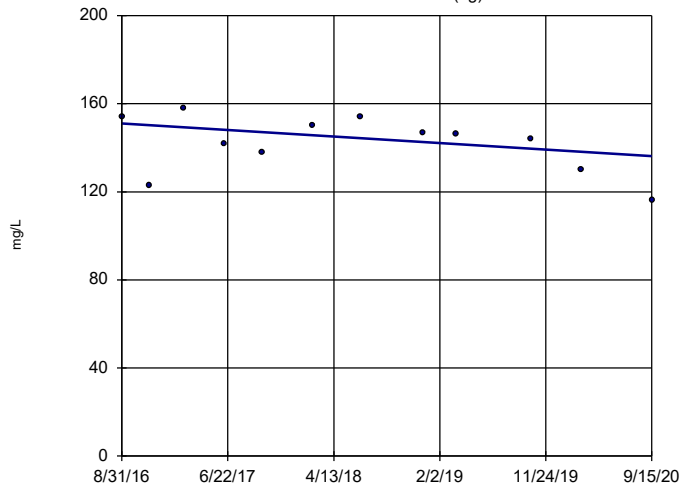


n = 12  
 Slope = -3.347  
 units per year.  
 Mann-Kendall  
 statistic = -9  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5S (bg)

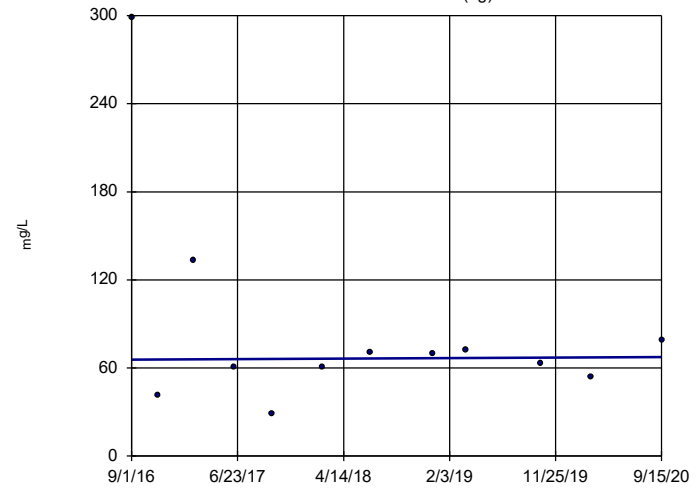


n = 12  
 Slope = -3.649  
 units per year.  
 Mann-Kendall  
 statistic = -23  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-6S (bg)

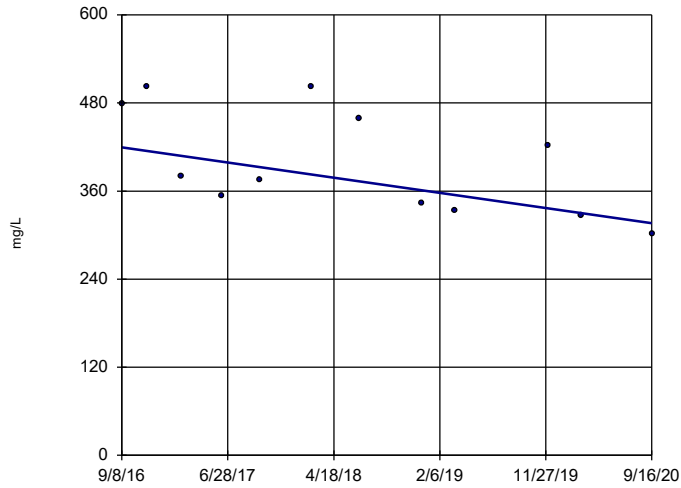


n = 12  
 Slope = 0.4269  
 units per year.  
 Mann-Kendall  
 statistic = 1  
 critical = 38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-27I

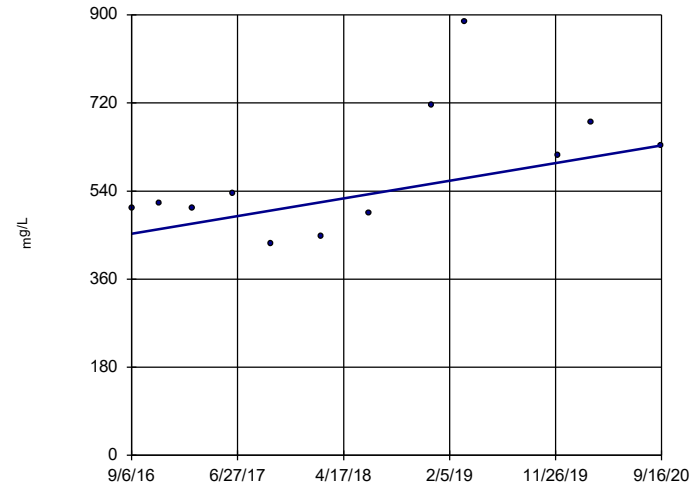


n = 12  
 Slope = -25.62  
 units per year.  
 Mann-Kendall  
 statistic = -37  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-30I

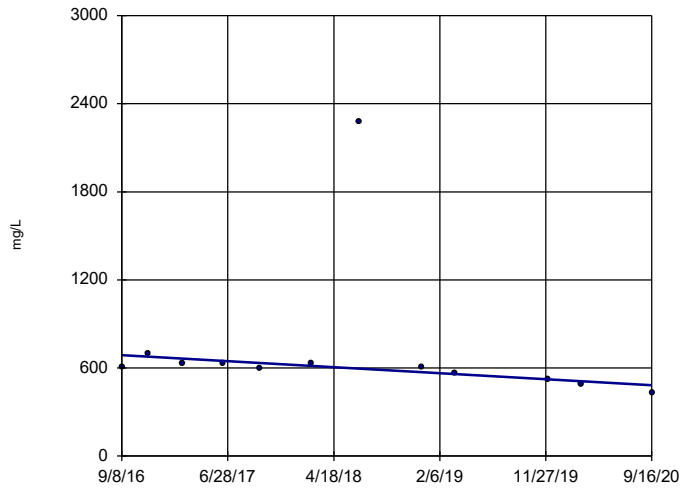


n = 12  
 Slope = 44.87  
 units per year.  
 Mann-Kendall  
 statistic = 24  
 critical = 38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-32S

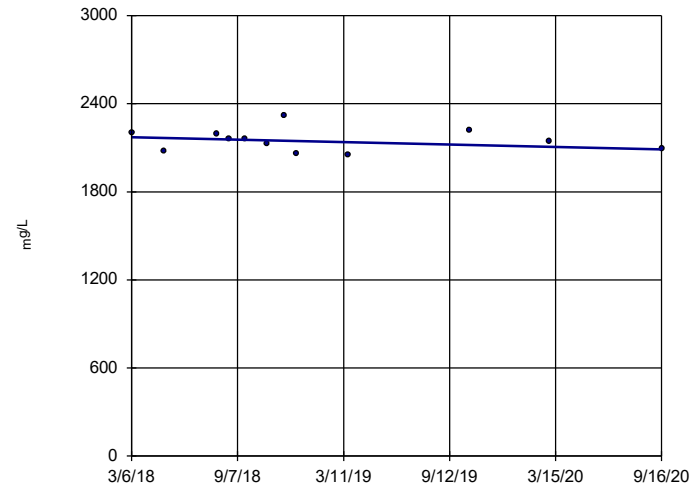


n = 12  
 Slope = -50.85  
 units per year.  
 Mann-Kendall  
 statistic = -41  
 critical = -38  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-47

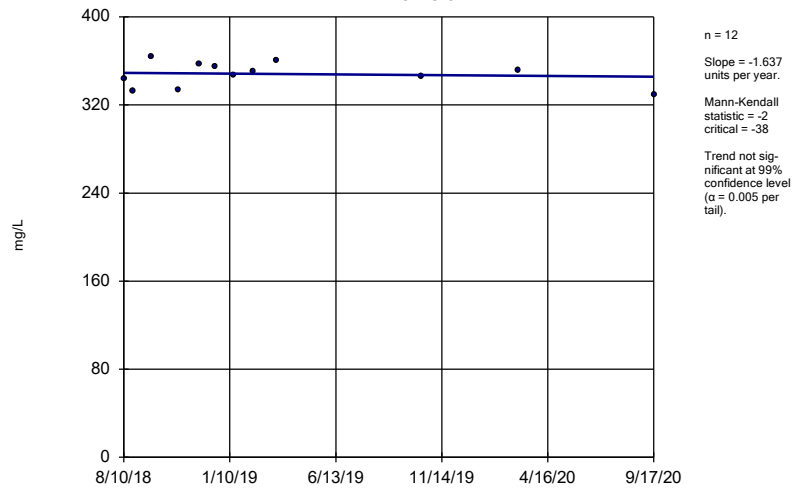


n = 12  
 Slope = -32.65  
 units per year.  
 Mann-Kendall  
 statistic = -15  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

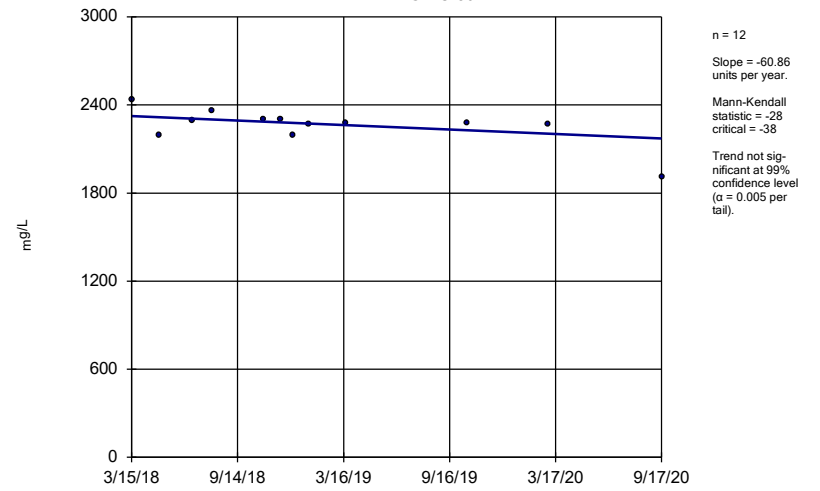


### Sen's Slope Estimator BRGWC-52I



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-50



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/1/2020 9:35 AM View: Trend Tests B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

FIGURE F.

# Tolerance Limit Summary Table

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/1/2020, 10:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.012	104	n/a	n/a	81.73	n/a	n/a	0.004822	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	104	n/a	n/a	72.12	n/a	n/a	0.004822	NP Inter(normality)
Barium (mg/L)	n/a	0.13	104	n/a	n/a	0	n/a	n/a	0.004822	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	104	n/a	n/a	100	n/a	n/a	0.004822	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	106	n/a	n/a	98.11	n/a	n/a	0.004352	NP Inter(NDs)
Chromium (mg/L)	n/a	0.016	103	n/a	n/a	24.27	n/a	n/a	0.005076	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0135	104	n/a	n/a	57.69	n/a	n/a	0.004822	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	1.672	104	0.8101	0.4489	0	None	No	0.05	Inter
Fluoride (mg/L)	n/a	0.42	112	n/a	n/a	54.46	n/a	n/a	0.003199	NP Inter(normality)
Lead (mg/L)	n/a	0.005	104	n/a	n/a	83.65	n/a	n/a	0.004822	NP Inter(NDs)
Lithium (mg/L)	n/a	0.089	104	n/a	n/a	44.23	n/a	n/a	0.004822	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	88	n/a	n/a	92.05	n/a	n/a	0.01096	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	101	n/a	n/a	79.21	n/a	n/a	0.005625	NP Inter(NDs)
Selenium (mg/L)	n/a	0.01	104	n/a	n/a	92.31	n/a	n/a	0.004822	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	104	n/a	n/a	100	n/a	n/a	0.004822	NP Inter(NDs)

FIGURE G.

<b>PLANT BRANCH PONDS B,C,D GWPS</b>			
<b>Constituent Name</b>	<b>MCL</b>	<b>Background Limit</b>	<b>GWPS</b>
Antimony, Total (mg/L)	0.006	0.012	0.012
Arsenic, Total (mg/L)	0.01	0.005	0.01
Barium, Total (mg/L)	2	0.13	2
Beryllium, Total (mg/L)	0.004	0.003	0.004
Cadmium, Total (mg/L)	0.005	0.0025	0.005
Chromium, Total (mg/L)	0.1	0.016	0.1
Cobalt, Total (mg/L)	n/a	0.014	0.014
Combined Radium, Total (pCi/L)	5	1.67	5
Fluoride, Total (mg/L)	4	0.42	4
Lead, Total (mg/L)	n/a	0.005	0.005
Lithium, Total (mg/L)	n/a	0.089	0.089
Mercury, Total (mg/L)	0.002	0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.01	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

*\*Highlighted cells indicate Background is higher than MCLs*

*\*MCL = Maximum Contaminant Level*

*\*GWPS = Groundwater Protection Standard*

FIGURE H.

# Confidence Interval Summary - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 10:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	BRGWC-50	0.0482	0.01365	0.005	Yes 13	0.03269	0.02633	0	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.5	1.3	0.014	Yes 13	1.392	0.06405	0	None	No	0.01	NP (normality)

# Confidence Interval Summary - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 11/1/2020, 10:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BRGWC-29I	0.003	0.0007	0.012	No 13	0.002823	0.0006379	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-32S	0.003	0.0014	0.012	No 13	0.002877	0.0004438	92.31	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-45	0.0031	0.0012	0.012	No 14	0.002403	0.0009415	57.14	None	No	0.01	NP (normality)
Antimony (mg/L)	BRGWC-47	0.003	0.00035	0.012	No 14	0.002811	0.0007082	92.86	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-52I	0.003	0.00085	0.012	No 13	0.002637	0.0008904	84.62	None	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-50	0.003	0.00052	0.012	No 13	0.00261	0.0009522	84.62	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-25I	0.005	0.0006	0.01	No 13	0.003673	0.002073	69.23	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-27I	0.005	0.0009	0.01	No 13	0.003777	0.001915	69.23	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-29I	0.005	0.00051	0.01	No 13	0.003477	0.002047	61.54	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-30I	0.005	0.00056	0.01	No 13	0.004658	0.001231	92.31	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-32S	0.005	0.00053	0.01	No 13	0.004656	0.00124	92.31	None	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-45	0.005	0.00075	0.01	No 14	0.003578	0.00201	64.29	None	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-47	0.001791	0.000854	0.01	No 14	0.002731	0.001842	35.71	Kaplan-Meier x^(1/3)		0.01	Param.
Arsenic (mg/L)	BRGWC-52I	0.003469	0.001603	0.01	No 13	0.003398	0.001528	30.77	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	BRGWC-50	0.005	0.00074	0.01	No 13	0.004046	0.001823	76.92	Kaplan-Meier	No	0.01	NP (NDs)
Barium (mg/L)	BRGWC-25I	0.0379	0.02755	2	No 13	0.03272	0.006963	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-27I	0.01726	0.01514	2	No 13	0.0162	0.00142	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-29I	0.01993	0.01662	2	No 13	0.01833	0.002426	7.692	None	ln(x)	0.01	Param.
Barium (mg/L)	BRGWC-30I	0.02553	0.02141	2	No 13	0.02347	0.002773	7.692	None	No	0.01	Param.
Barium (mg/L)	BRGWC-32S	0.04652	0.02982	2	No 13	0.03817	0.01123	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-45	0.09884	0.08173	2	No 14	0.09029	0.01208	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-47	0.04541	0.03458	2	No 14	0.03999	0.007644	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-52I	0.02741	0.01659	2	No 13	0.022	0.00728	0	None	No	0.01	Param.
Barium (mg/L)	BRGWC-50	0.02109	0.0186	2	No 13	0.01985	0.001676	0	None	No	0.01	Param.
Beryllium (mg/L)	BRGWC-27I	0.003	0.00011	0.004	No 14	0.0009578	0.001341	28.57	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-29I	0.0014	0.00072	0.004	No 13	0.001224	0.0008178	15.38	None	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-45	0.003	0.000079	0.004	No 15	0.002608	0.001034	86.67	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-47	0.003	0.000056	0.004	No 14	0.002368	0.001255	78.57	None	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-50	0.004442	0.002802	0.004	No 13	0.003723	0.001168	15.38	Kaplan-Meier	sqrt(x)	0.01	Param.
Cadmium (mg/L)	BRGWC-27I	0.0025	0.001	0.005	No 14	0.002219	0.0007365	92.86	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-32S	0.0025	0.001	0.005	No 14	0.002051	0.0009155	85.71	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-45	0.0025	0.00014	0.005	No 15	0.002023	0.0009871	80	None	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-47	0.0025	0.00015	0.005	No 14	0.001006	0.001156	35.71	None	No	0.01	NP (normality)
<b>Cadmium (mg/L)</b>	<b>BRGWC-50</b>	<b>0.0482</b>	<b>0.01365</b>	<b>0.005</b>	<b>Yes 13</b>	<b>0.03269</b>	<b>0.02633</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.01</b>	<b>Param.</b>
Chromium (mg/L)	BRGWC-25I	0.01	0.0016	0.1	No 13	0.00866	0.003273	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-27I	0.01	0.003	0.1	No 13	0.008769	0.003032	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-29I	0.02	0.01	0.1	No 13	0.01077	0.002774	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-30I	0.014	0.0051	0.1	No 13	0.009931	0.001825	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-32S	0.01	0.0011	0.1	No 13	0.004808	0.004293	38.46	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-45	0.01	0.0014	0.1	No 14	0.008066	0.003846	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-47	0.01	0.00092	0.1	No 14	0.007439	0.00421	71.43	None	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-52I	0.01	0.0017	0.1	No 13	0.009362	0.002302	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-50	0.01	0.00065	0.1	No 13	0.006134	0.004467	53.85	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-25I	0.007161	0.004311	0.014	No 13	0.006038	0.002166	15.38	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	BRGWC-27I	0.0131	0.008	0.014	No 14	0.01199	0.008318	7.143	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-29I	0.01039	0.006211	0.014	No 13	0.008392	0.002939	7.692	None	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-30I	0.005	0.00078	0.014	No 14	0.001899	0.001708	21.43	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-32S	0.01	0.0025	0.014	No 14	0.005179	0.001539	92.86	None	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-45	0.022	0.0071	0.014	No 15	0.01639	0.01698	6.667	None	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-47	0.004007	0.0007144	0.014	No 14	0.002832	0.003474	7.143	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	BRGWC-52I	0.005	0.00063	0.014	No 13	0.003345	0.001869	46.15	None	No	0.01	NP (normality)
<b>Cobalt (mg/L)</b>	<b>BRGWC-50</b>	<b>1.5</b>	<b>1.3</b>	<b>0.014</b>	<b>Yes 13</b>	<b>1.392</b>	<b>0.06405</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>NP (normality)</b>
Combined Radium 226 + 228 (pCi/L)	BRGWC-25I	1.207	0.6677	5	No 13	0.9372	0.3624	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-27I	1.209	0.5555	5	No 13	0.882	0.4391	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-29I	1.686	1.156	5	No 13	1.421	0.3561	0	None	No	0.01	Param.



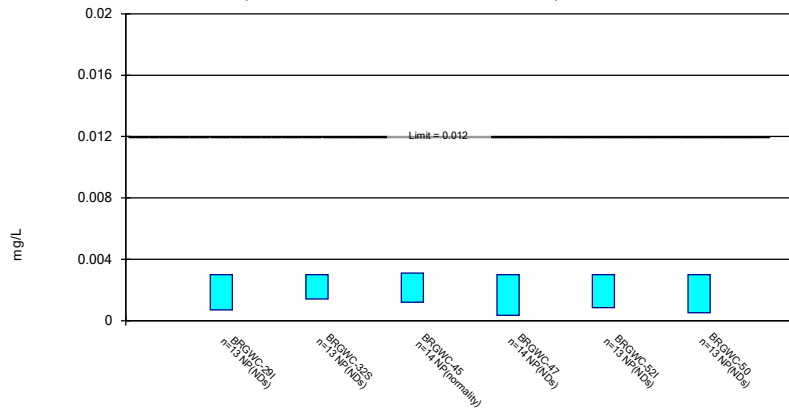
# Confidence Interval Summary - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 11/1/2020, 10:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	BRGWC-30I	1.205	0.6364	5	No	13	0.9209	0.3827	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-32S	1.163	0.4582	5	No	13	0.8107	0.474	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-45	0.8687	0.3896	5	No	14	0.6291	0.3382	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-47	1.536	0.897	5	No	14	1.217	0.4512	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-52I	2.148	1.297	5	No	13	1.722	0.5725	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-50	2.063	1.179	5	No	13	1.621	0.5942	0	None	No	0.01	Param.
Fluoride (mg/L)	BRGWC-25I	0.2994	0.1251	4	No	14	0.2243	0.1523	14.29	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	BRGWC-27I	0.273	0.1423	4	No	14	0.2189	0.09837	21.43	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	BRGWC-29I	0.2537	0.09087	4	No	14	0.1927	0.1342	14.29	None	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-30I	0.415	0.1335	4	No	14	0.2908	0.2329	14.29	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-32S	0.15	0.09	4	No	14	0.1257	0.06248	64.29	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-45	0.19	0.066	4	No	15	0.1972	0.2569	60	None	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-47	0.3418	0.09906	4	No	15	0.2689	0.2802	40	Kaplan-Meier	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-52I	0.2457	0.1229	4	No	13	0.1843	0.0826	7.692	None	No	0.01	Param.
Fluoride (mg/L)	BRGWC-50	0.9237	0.3135	4	No	14	0.6529	0.5001	0	None	sqrt(x)	0.01	Param.
Lead (mg/L)	BRGWC-25I	0.005	0.00011	0.005	No	13	0.004624	0.001356	92.31	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-27I	0.005	0.000063	0.005	No	13	0.00462	0.001369	92.31	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-29I	0.0006	0.00027	0.005	No	12	0.0007483	0.001343	8.333	None	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-30I	0.005	0.00011	0.005	No	13	0.004624	0.001356	92.31	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-45	0.005	0.00026	0.005	No	14	0.003966	0.002055	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-47	0.005	0.00012	0.005	No	14	0.003945	0.002096	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-50	0.005	0.000067	0.005	No	13	0.002407	0.002502	46.15	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-27I	0.0021	0.0014	0.089	No	13	0.005192	0.008793	15.38	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-29I	0.0043	0.0029	0.089	No	13	0.005054	0.006009	7.692	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-30I	0.01703	0.01143	0.089	No	13	0.01432	0.00404	7.692	None	sqrt(x)	0.01	Param.
Lithium (mg/L)	BRGWC-32S	0.025	0.002	0.089	No	13	0.005677	0.008577	15.38	None	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-45	0.003478	0.00306	0.089	No	13	0.003269	0.000281	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-47	0.04413	0.04021	0.089	No	14	0.04217	0.002763	0	None	No	0.01	Param.
Lithium (mg/L)	BRGWC-52I	0.008252	0.003025	0.089	No	13	0.0064	0.005987	7.692	None	ln(x)	0.01	Param.
Lithium (mg/L)	BRGWC-50	0.04393	0.03761	0.089	No	13	0.04077	0.004246	0	None	No	0.01	Param.
Mercury (mg/L)	BRGWC-25I	0.0005	0.000083	0.002	No	11	0.0004203	0.0001776	81.82	None	No	0.006	NP (NDs)
Mercury (mg/L)	BRGWC-27I	0.0005	0.00005	0.002	No	11	0.0004179	0.0001826	81.82	None	No	0.006	NP (NDs)
Mercury (mg/L)	BRGWC-29I	0.0005	0.00007	0.002	No	11	0.0003825	0.0002016	72.73	None	No	0.006	NP (normality)
Mercury (mg/L)	BRGWC-30I	0.0005	0.00007	0.002	No	11	0.0003811	0.0002039	72.73	None	No	0.006	NP (normality)
Mercury (mg/L)	BRGWC-32S	0.0005	0.00009	0.002	No	11	0.0003884	0.0001912	72.73	None	No	0.006	NP (normality)
Molybdenum (mg/L)	BRGWC-25I	0.01	0.00081	0.01	No	12	0.008467	0.003579	83.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-30I	0.01	0.0022	0.01	No	12	0.008582	0.003326	83.33	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-45	0.01	0.00076	0.01	No	13	0.009289	0.002563	92.31	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-52I	0.01	0.0012	0.01	No	12	0.006283	0.003695	41.67	None	No	0.01	NP (normality)
Molybdenum (mg/L)	BRGWC-50	0.01	0.0033	0.01	No	12	0.008792	0.002832	83.33	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-27I	0.003626	0.001989	0.05	No	13	0.005192	0.003458	30.77	Kaplan-Meier	x^(1/3)	0.01	Param.
Selenium (mg/L)	BRGWC-29I	0.01	0.0039	0.05	No	13	0.008069	0.002858	61.54	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-30I	0.01	0.0034	0.05	No	13	0.007962	0.003234	69.23	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-32S	0.1	0.0019	0.05	No	14	0.04472	0.04778	28.57	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-45	0.01	0.0029	0.05	No	14	0.009493	0.001898	92.86	None	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-47	0.01	0.0017	0.05	No	14	0.007057	0.004099	64.29	None	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-50	0.01	0.002	0.05	No	13	0.006546	0.003914	53.85	None	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-29I	0.0005	0.00016	0.002	No	12	0.0002033	0.00009471	8.333	None	No	0.01	NP (normality)

### Non-Parametric Confidence Interval

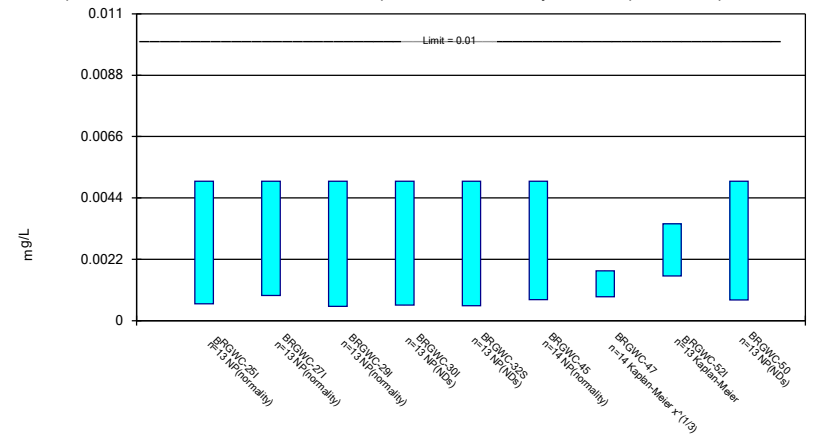
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

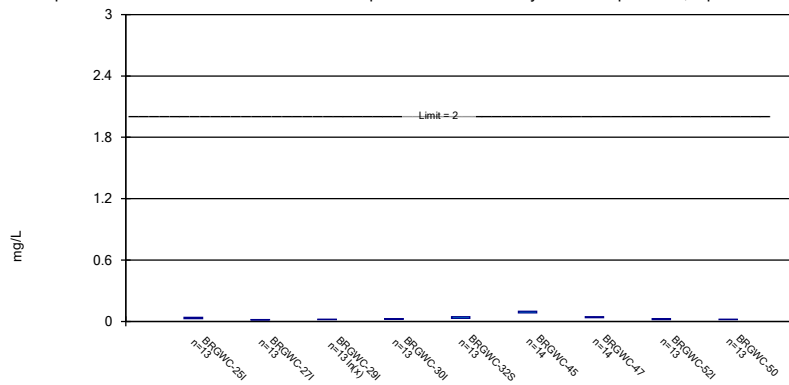
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric Confidence Interval

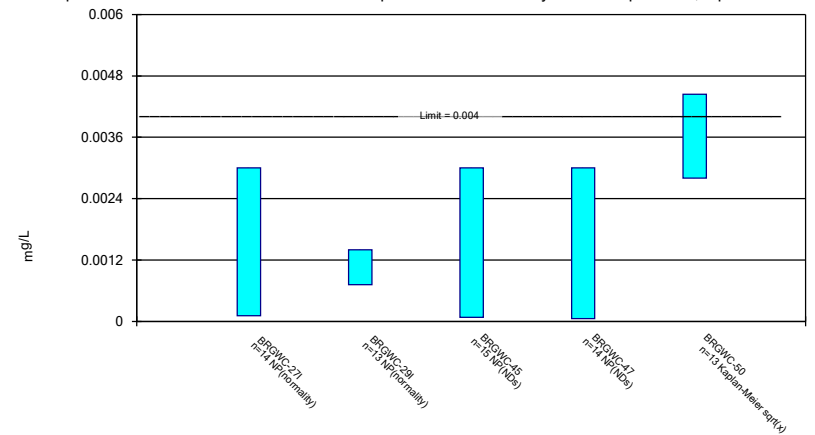
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

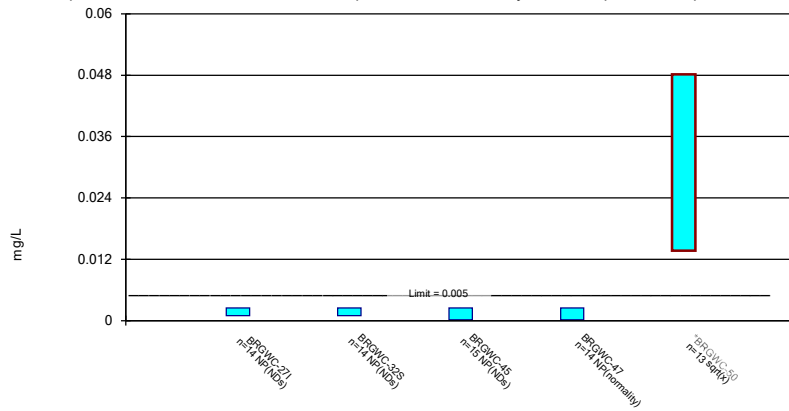
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

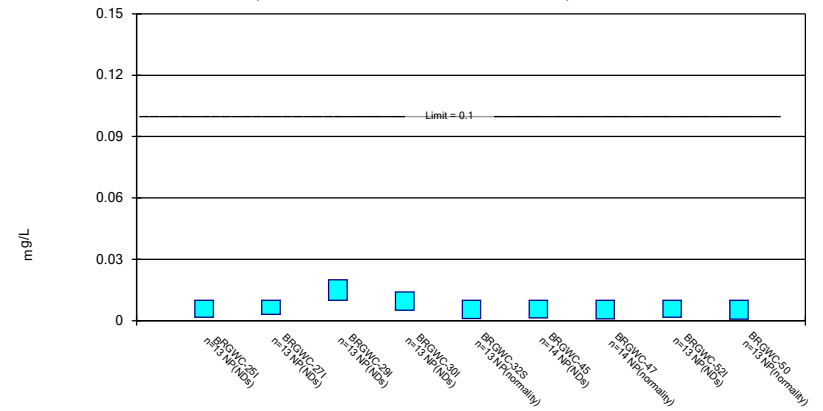
Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

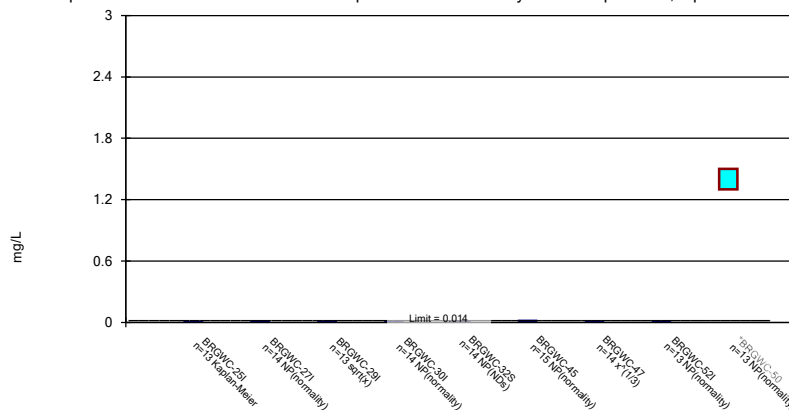
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

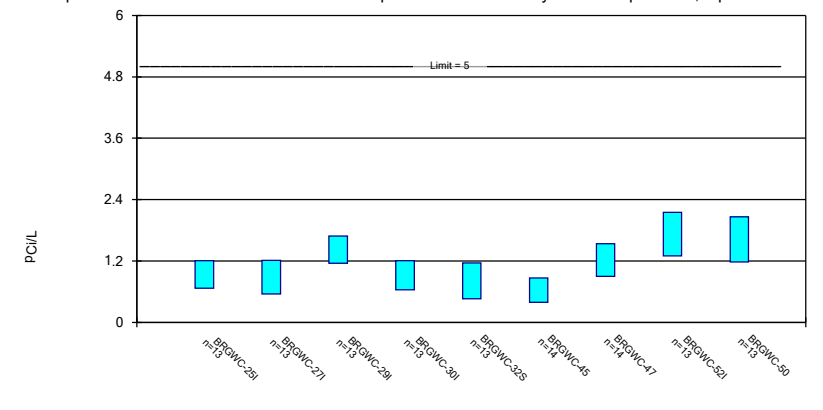
Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric Confidence Interval

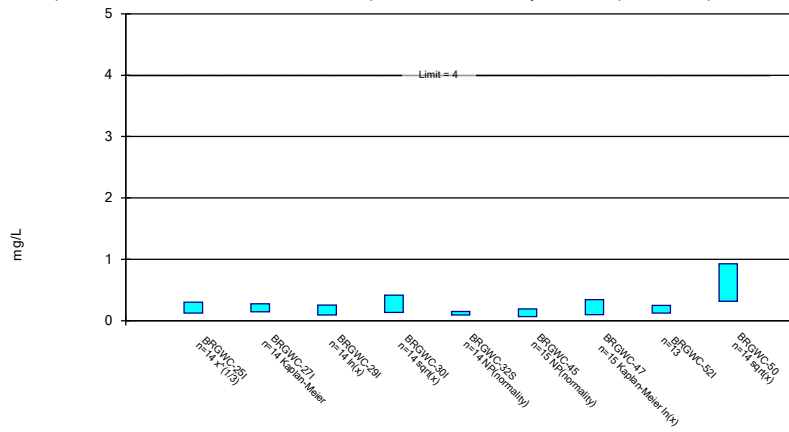
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

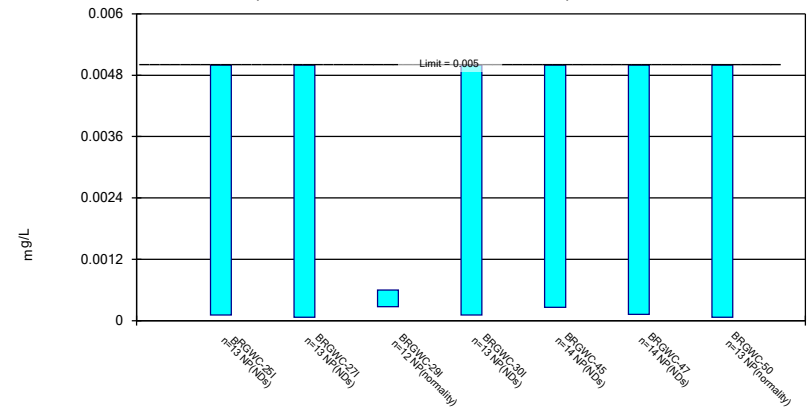
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

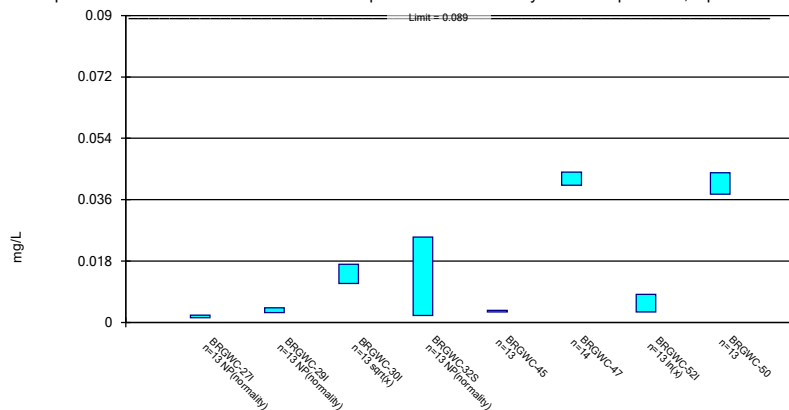
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

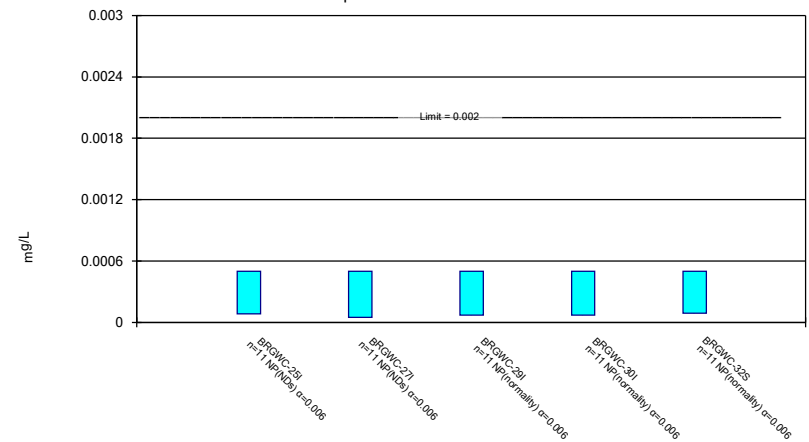
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



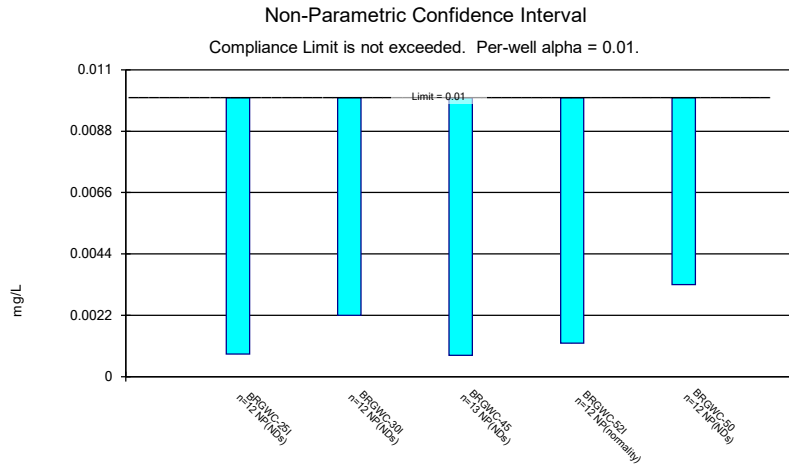
Constituent: Lithium Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

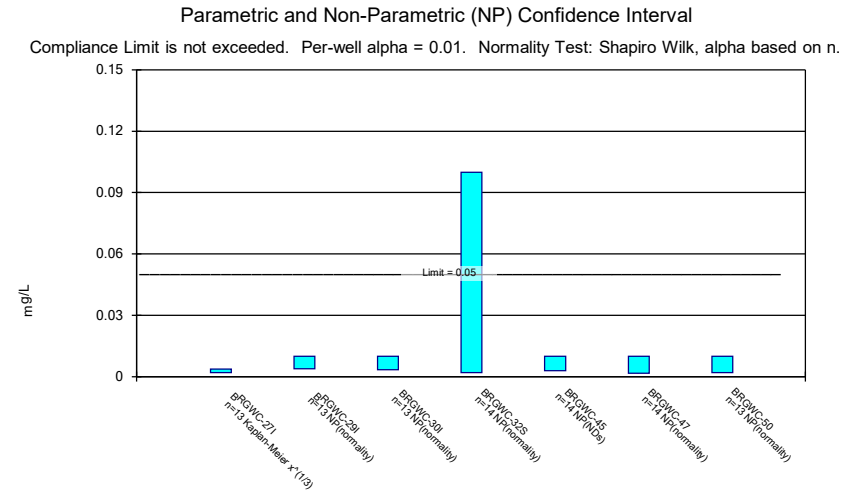
Compliance Limit is not exceeded.



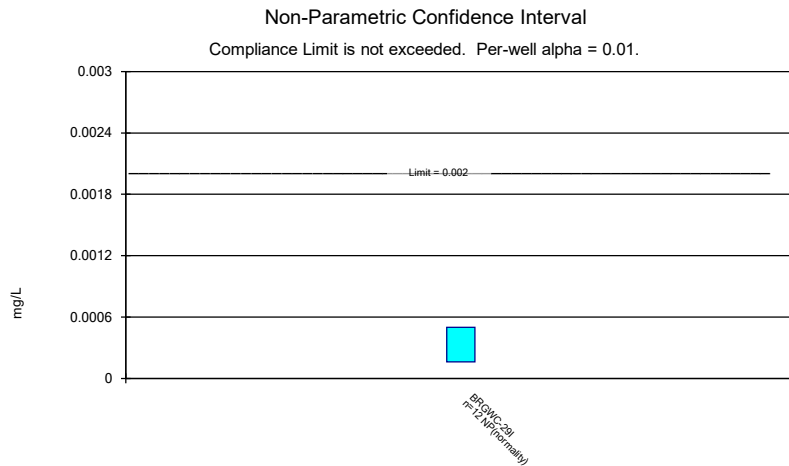
Constituent: Mercury Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Molybdenum Analysis Run 11/1/2020 10:11 AM View: Confidence Intervals B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Selenium Analysis Run 11/1/2020 10:12 AM View: Confidence Intervals B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP



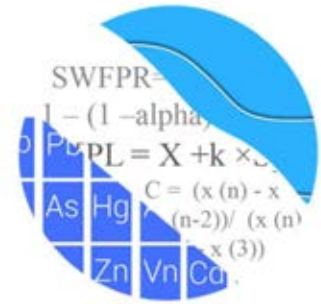
Constituent: Thallium Analysis Run 11/1/2020 10:12 AM View: Confidence Intervals B,C,D  
 Plant Branch Client: Southern Company Data: Plant Branch AP

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**APPENDIX C**

**STATISTICAL ANALYSES**  
March 2021

## GROUNDWATER STATS CONSULTING



July 27, 2021

Southern Company Services  
Attn: Mr. Joju Abraham  
241 Ralph McGill Blvd NE, Bin 10160  
Atlanta, Georgia 30308-3374

Re: Plant Branch Ponds B,C,D – March 2021 Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the March 2021 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical Analysis of groundwater data for Georgia Power Company's Plant Branch Ponds B, C, and D. The analysis complies with the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009). The site is in Assessment Monitoring.

Sampling began for Appendix III and IV parameters in 2016 for most wells. However, sampling for wells BRGWC-45, BRGWC-47, BRGWC-50 and BRGWC-52I began in 2018, and at least 8 background samples have been collected at each of the groundwater monitoring wells. Semi-annual sampling of the majority of constituents has been performed for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** BRGWA-2I, BRGWA-2S, BRGWA-5I, BRGWA-5S, BRGWA-6S, BRGWA-12I, BRGWA-12S, and BRGWA-23S
- **Downgradient wells:** BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I
- **Delineation wells:** PZ-51D and PZ-51S
- **Assessment wells:** PZ-50D and PZ-51I

Sampling began at wells PZ-50D and PZ-51D in 2020 and at wells PZ-51I and PZ-51S began in 2018, for a maximum of 2 and 6 samples, respectively, collected to date. Confidence intervals are used to analyze the data at these wells when a minimum of 4 samples are available.

The CCR program consists of the following constituents:

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. A substitution of the most recent reporting limit is used for nondetect data.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Delineation and Assessment well data are included on the time series graphs, and with the confidence intervals when a minimum of 4 samples are available as discussed above. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.



## Summary of Statistical Methods – Appendix III Parameters:

Based on the earlier evaluation described above, the following method was selected:

- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the most reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In some cases, the earlier portion of data are deselected prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even

though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

## **Summary of Background Screening – Conducted in March 2019**

### Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective, in proposed background data. Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified either visually or by Tukey's test, flagged in the computer database with "o" and deselected prior to construction of statistical limits. A list of flagged values is provided in the outlier summary. Although outliers are screened for all wells, only outliers in upgradient wells will affect the interwell prediction limits. The current list of outliers includes a few that were not included in the previous background screening list for Appendix III parameters.

When suspected outliers were evaluated using the Tukey box plot method during the previous screening, several outliers were identified. In cases where the most recent value was identified as an outlier, values were not flagged in the database as they may represent a future trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

When any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. A substitution of the most recent reporting limit was applied when varying detection limits existed in data. Note that the reporting limit for boron during the March 2019 event was 0.1 mg/L; however, the historical reporting limit of 0.04 mg/L was substituted for all nondetects which provides more conservative (lower) statistical limits.

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, earlier data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When the historical records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses, included with the background screening report, showed a handful of statistically significant decreasing trends for the Appendix III parameters. All trends noted were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to the data sets.

#### Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for fluoride, making this constituent eligible for interwell analyses. Variation was noted for boron, calcium, chloride, pH, sulfate, and TDS. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

#### **Evaluation of Appendix III Parameters – March 2021**

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through March 2021 (Figure D). Background

(upgradient) well data were re-assessed for potential outliers during this analysis and no new values were flagged. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When resamples confirm the initial exceedance, a statistically significant increase is identified, and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Prediction limit exceedances were noted for several Appendix III parameters. A summary table of the prediction limits and exceedances follows this letter.

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site which is an indication of natural variability in groundwater unrelated to practices at the site. While several statistically significant decreasing trends were noted in both upgradient and downgradient wells, only one statistically significant increasing trend was identified for calcium in downgradient well BRGWC-30I. A summary of the trend test results follows this letter.

### **Evaluation of Appendix IV Parameters – March 2021**

Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis and no new outliers were flagged. Interwell tolerance limits were used to calculate the site-specific background limits from pooled upgradient well data for Appendix IV constituents (Figure F). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution such as for combined radium 226 + 228. When data contained greater than 50% nondetects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a) (Figure G).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, CCR-rule specified level have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements, GWPS were established for statistical comparison of Appendix IV constituents for the March 2021 sample event (Figure G). To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well (Figure H). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. Those confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified.

Note that reporting limits decreased for the following constituents during this analysis:

- Beryllium from <0.003 mg/L to <0.0005 mg/L
- Cadmium from <0.0025 mg/L to <0.0005 mg/L
- Chromium from <0.01 mg/L to <0.005 mg/L
- Lead from <0.005 mg/L to <0.001 mg/L
- Mercury from <0.0005 mg/L to <0.0002 mg/L
- Selenium from <0.01 mg/L to <0.005 mg/L

As a result, background limits were lower for these constituents, with the exception of chromium. However, in all cases, except for lead which uses the background limit as the GWPS, the established MCL was higher than the background limits. Therefore, the GWPS were not affected. Additionally, some of the confidence intervals constructed on downgradient wells resulted in decreased upper and lower confidence limits since all historical nondetects within a given well are replaced with the most recent reporting limit.

A summary of the confidence intervals follows this letter. Exceedances were noted for the following well/constituent pairs:

- Cadmium: BRGWC-50
- Cobalt: BRGWC-50 and PZ-51I

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Branch Ponds B, C, D. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Kristina L. Rayner  
Groundwater Statistician



Easton Rayner  
Groundwater Analyst

# 100% Non-Detects

Analysis Run 4/22/2021 11:38 AM View: AIV

Plant Branch Client: Southern Company Data: Plant Branch AP

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Antimony (mg/L)

BRGWC-25I, BRGWC-27I, BRGWC-30I

Arsenic (mg/L)

PZ-51I, PZ-51S

Beryllium (mg/L)

BRGWC-25I, BRGWC-30I, BRGWC-32S, BRGWC-52I, PZ-51S

Cadmium (mg/L)

BRGWC-25I, BRGWC-29I, BRGWC-52I, PZ-51S

Lead (mg/L)

BRGWC-32S, PZ-51S

Lithium (mg/L)

BRGWC-25I

Mercury (mg/L)

BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I, PZ-51S

Molybdenum (mg/L)

BRGWC-27I, BRGWC-29I, BRGWC-32S, BRGWC-47, PZ-51I, PZ-51S

Selenium (mg/L)

BRGWC-52I, PZ-51I, PZ-51S

Thallium (mg/L)

BRGWC-25I, BRGWC-27I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50, BRGWC-52I, PZ-51I, PZ-51S

# Appendix III - Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:36 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	3/2/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	3/3/2021	0.91	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	3/3/2021	1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	3/3/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	3/4/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	3/2/2021	0.58	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	3/4/2021	0.31	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	3/4/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	3/2/2021	44.1	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	3/3/2021	58.2	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	3/3/2021	73.3	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	3/3/2021	122	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	3/4/2021	35.7	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	3/2/2021	33.9	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	3/2/2021	353	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	3/4/2021	214	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	3/4/2021	47.5	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.8	n/a	3/2/2021	25.8	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.8	n/a	3/4/2021	18.9	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	3/4/2021	0.6	Yes	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
pH, Field (S.U)	BRGWC-29I	7.067	5.59	3/3/2021	4.46	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.067	5.59	3/4/2021	4.34	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	3/2/2021	139	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	3/3/2021	172	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	3/3/2021	341	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	3/3/2021	371	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	3/4/2021	185	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	3/2/2021	98.3	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	3/2/2021	1360	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	3/4/2021	1250	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	3/4/2021	114	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	299	n/a	3/3/2021	515	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	3/3/2021	690	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	3/4/2021	350	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	3/2/2021	1680	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	3/4/2021	1520	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	3/4/2021	383	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2



# Appendix III - Interwell Prediction Limits - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:36 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	3/2/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	3/3/2021	0.91	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	3/3/2021	1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	3/3/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	3/4/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	3/2/2021	0.044	No	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	3/2/2021	0.58	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	3/4/2021	0.31	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	3/4/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	3/2/2021	44.1	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	3/3/2021	58.2	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	3/3/2021	73.3	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	3/3/2021	122	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	3/4/2021	35.7	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	3/2/2021	33.9	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	3/2/2021	353	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	3/4/2021	214	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	3/4/2021	47.5	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-25I	5.8	n/a	3/2/2021	4.5	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-27I	5.8	n/a	3/3/2021	4.5	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-29I	5.8	n/a	3/3/2021	5.6	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-30I	5.8	n/a	3/3/2021	4	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-32S	5.8	n/a	3/4/2021	4.6	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.8	n/a	3/2/2021	25.8	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-47	5.8	n/a	3/2/2021	4.8	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.8	n/a	3/4/2021	18.9	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-52I	5.8	n/a	3/4/2021	5.6	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	3/2/2021	0.15	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	3/3/2021	0.24	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	3/3/2021	0.13	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	3/3/2021	0.13	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	3/4/2021	0.1ND	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	3/2/2021	0.067J	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	3/2/2021	0.1ND	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	3/4/2021	0.6	Yes	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	3/4/2021	0.28	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
pH, Field (S.U)	BRGWC-25I	7.067	5.59	3/2/2021	6.1	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-27I	7.067	5.59	3/3/2021	5.9	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-29I	7.067	5.59	3/3/2021	4.46	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-30I	7.067	5.59	3/3/2021	6.29	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-32S	7.067	5.59	3/4/2021	5.98	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-45	7.067	5.59	3/2/2021	6.17	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-47	7.067	5.59	3/2/2021	5.59	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.067	5.59	3/4/2021	4.34	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-52I	7.067	5.59	3/4/2021	5.87	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	3/2/2021	139	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	3/3/2021	172	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	3/3/2021	341	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	3/3/2021	371	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	3/4/2021	185	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	3/2/2021	98.3	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	3/2/2021	1360	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	3/4/2021	1250	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	3/4/2021	114	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-25I	299	n/a	3/2/2021	280	No	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	299	n/a	3/3/2021	288	No	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	299	n/a	3/3/2021	515	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	3/3/2021	690	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	3/4/2021	350	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-45	299	n/a	3/2/2021	264	No	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	3/2/2021	1680	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	3/4/2021	1520	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	3/4/2021	383	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2

# Trend Test - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:40 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWC-271	-0.1854	-56	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-251	-6.29	-62	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-291	-11.32	-44	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-301	13.38	55	43	Yes	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-121 (bg)	-0.1998	-51	-48	Yes	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-23S (bg)	-0.06606	-56	-53	Yes	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-21 (bg)	-0.1304	-67	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-121 (bg)	-0.2763	-72	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-12S (bg)	-0.1947	-60	-48	Yes	14	14.29	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-251	-42.71	-49	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-271	-25.79	-57	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-291	-58.91	-50	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-32S	-36.1	-44	-43	Yes	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	-56.88	-53	-43	Yes	13	0	n/a	n/a	0.01	NP

# Trend Test - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/21/2021, 2:40 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-12I (bg)	-0.0005546	-24	-43	No	13	7.692	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-12S (bg)	0	-1	-43	No	13	76.92	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-23S (bg)	0.0005601	5	43	No	13	15.38	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2I (bg)	0.001014	9	43	No	13	15.38	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	10	43	No	13	92.31	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	2	43	No	13	69.23	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-5	-43	No	13	53.85	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	10	43	No	13	69.23	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-25I	-0.1184	-28	-43	No	13	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>BRGWC-27I</b>	<b>-0.1854</b>	<b>-56</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	BRGWC-29I	-0.1384	-37	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-30I	-0.02635	-22	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-32S	0	0	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-47	0.03097	16	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-50	0.00563	10	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-52I	0.0532	13	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12I (bg)	0.1717	8	48	No	14	7.143	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12S (bg)	0.3876	29	48	No	14	7.143	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-0.9809	-26	-43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.9466	37	43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	-0.02603	-12	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	-0.153	-9	-43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.4992	-13	-43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1738	42	43	No	13	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-25I</b>	<b>-6.29</b>	<b>-62</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-27I	-4.805	-42	-43	No	13	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-29I</b>	<b>-11.32</b>	<b>-44</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>BRGWC-30I</b>	<b>13.38</b>	<b>55</b>	<b>43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-32S	-5.248	-32	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-2.37	-32	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-47	9.202	19	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-50	-4.111	-12	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-52I	3.955	18	38	No	12	0	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>BRGWA-12I (bg)</b>	<b>-0.1998</b>	<b>-51</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride, Total (mg/L)	BRGWA-12S (bg)	0	5	48	No	14	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-23S (bg)	-0.1839	-29	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2I (bg)	-0.03735	-18	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2S (bg)	0	-9	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5I (bg)	-0.1525	-31	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5S (bg)	-0.03667	-12	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-6S (bg)	0	0	43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-45	-5.582	-37	-48	No	14	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-50	-1.792	-38	-43	No	13	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12I (bg)	-0.01658	-33	-53	No	15	26.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0	44	53	No	15	66.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-23S (bg)	0	-14	-53	No	15	60	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	-0.002473	-20	-53	No	15	40	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	28	53	No	15	53.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	39	53	No	15	66.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	-0.007584	-25	-53	No	15	33.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0.008561	34	53	No	15	53.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-50	-0.1819	-28	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12I (bg)	-0.07835	-55	-63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12S (bg)	-0.01536	-21	-58	No	16	0	n/a	n/a	0.01	NP
<b>pH, Field (S.U)</b>	<b>BRGWA-23S (bg)</b>	<b>-0.06606</b>	<b>-56</b>	<b>-53</b>	<b>Yes</b>	<b>15</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (S.U)</b>	<b>BRGWA-2I (bg)</b>	<b>-0.1304</b>	<b>-67</b>	<b>-53</b>	<b>Yes</b>	<b>15</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (S.U)	BRGWA-2S (bg)	-0.03108	-36	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5I (bg)	-0.02929	-23	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5S (bg)	-0.05707	-42	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-6S (bg)	-0.01346	-6	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-29I	0.01827	18	53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-50	-0.08271	-22	-58	No	16	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12I (bg)</b>	<b>-0.2763</b>	<b>-72</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12S (bg)</b>	<b>-0.1947</b>	<b>-60</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>14.29</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWA-23S (bg)	-1.903	-8	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2I (bg)	-0.2264	-22	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2S (bg)	0.02052	8	43	No	13	30.77	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-5I (bg)	-0.2884	-18	-43	No	13	0	n/a	n/a	0.01	NP

# Trend Test - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/21/2021, 2:40 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Sulfate as SO4 (mg/L)	BRGWA-5S (bg)	-0.08299	-31	-43	No	13	30.77	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-6S (bg)	-0.01212	-7	-43	No	13	15.38	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-25I</b>	<b>-42.71</b>	<b>-49</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-27I</b>	<b>-25.79</b>	<b>-57</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-29I</b>	<b>-58.91</b>	<b>-50</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWC-30I	16.89	24	43	No	13	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-32S</b>	<b>-36.1</b>	<b>-44</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWC-45	-3.157	-24	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-47	-46.1	-21	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-50	-103.9	-19	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-52I	-14.67	-21	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12I (bg)	-4.706	-36	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12S (bg)	-5.776	-19	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-23S (bg)	-13.37	-30	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2I (bg)	-4.318	-10	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2S (bg)	1.233	5	43	No	13	7.692	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5I (bg)	-8.777	-17	-43	No	13	7.692	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5S (bg)	-6.157	-35	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-6S (bg)	-4.662	-9	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	-83.41	-39	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	43.95	32	43	No	13	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids [TDS] (mg/L)</b>	<b>BRGWC-32S</b>	<b>-56.88</b>	<b>-53</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	-60.54	-27	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	-132.5	-40	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	6.146	10	43	No	13	0	n/a	n/a	0.01	NP

# Upper Tolerance Limits

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:47 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.012	112	n/a	81.25	n/a	0.003199	NP Inter(NDs)
Arsenic (mg/L)	0.005	112	n/a	74.11	n/a	0.003199	NP Inter(normality)
Barium (mg/L)	0.13	112	n/a	0	n/a	0.003199	NP Inter(normality)
Beryllium (mg/L)	0.0005	112	n/a	100	n/a	0.003199	NP Inter(NDs)
Cadmium (mg/L)	0.0005	114	n/a	98.25	n/a	0.002887	NP Inter(NDs)
Chromium (mg/L)	0.016	112	n/a	19.64	n/a	0.003199	NP Inter(normality)
Cobalt (mg/L)	0.0135	112	n/a	56.25	n/a	0.003199	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	1.646	112	0.4476	0	No	0.05	Inter
Fluoride (mg/L)	0.42	120	n/a	50	n/a	0.002122	NP Inter(normality)
Lead (mg/L)	0.0013	112	n/a	83.93	n/a	0.003199	NP Inter(NDs)
Lithium (mg/L)	0.089	112	n/a	39.29	n/a	0.003199	NP Inter(normality)
Mercury (mg/L)	0.00021	96	n/a	92.71	n/a	0.007269	NP Inter(NDs)
Molybdenum (mg/L)	0.01	109	n/a	78.9	n/a	0.003731	NP Inter(NDs)
Selenium (mg/L)	0.006	112	n/a	91.07	n/a	0.003199	NP Inter(NDs)
Thallium (mg/L)	0.001	112	n/a	100	n/a	0.003199	NP Inter(NDs)

<b>PLANT BRANCH PONDS B,C,D GWPS</b>			
<b>Constituent Name</b>	<b>MCL</b>	<b>Background Limit</b>	<b>GWPS</b>
Antimony, Total (mg/L)	0.006	0.012	0.012
Arsenic, Total (mg/L)	0.01	0.005	0.01
Barium, Total (mg/L)	2	0.13	2
Beryllium, Total (mg/L)	0.004	0.0005	0.004
Cadmium, Total (mg/L)	0.005	0.0005	0.005
Chromium, Total (mg/L)	0.1	0.016	0.1
Cobalt, Total (mg/L)	n/a	0.014	0.014
Combined Radium, Total (pCi/L)	5	1.65	5
Fluoride, Total (mg/L)	4	0.42	4
Lead, Total (mg/L)	n/a	0.0013	0.0013
Lithium, Total (mg/L)	n/a	0.089	0.089
Mercury, Total (mg/L)	0.002	0.00021	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.006	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

*\*Highlighted cells indicate Background is higher than MCLs*

*\*MCL = Maximum Contaminant Level*

*\*GWPS = Groundwater Protection Standard*

# Confidence Interval Summary Table - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/22/2021, 11:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cadmium (mg/L)	BRGWC-50	0.04553	0.01408	0.005	Yes	14	0	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.5	1.3	0.014	Yes	14	0	No	0.01	NP (normality)
Cobalt (mg/L)	PZ-51I	0.041	0.017	0.014	Yes	7	0	No	0.008	NP (normality)

# Confidence Interval Summary Table - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/22/2021, 11:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	BRGWC-29I	0.003	0.0007	0.012	No	14	92.86	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-32S	0.003	0.0014	0.012	No	14	92.86	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-45	0.0031	0.0012	0.012	No	15	53.33	No	0.01	NP (normality)
Antimony (mg/L)	BRGWC-47	0.003	0.00035	0.012	No	15	93.33	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-50	0.003	0.00092	0.012	No	14	78.57	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-52I	0.003	0.00091	0.012	No	14	78.57	No	0.01	NP (NDs)
Antimony (mg/L)	PZ-51I	0.003	0.00079	0.012	No	5	60	No	0.031	NP (normality)
Antimony (mg/L)	PZ-51S	0.003	0.00043	0.012	No	5	60	No	0.031	NP (normality)
Arsenic (mg/L)	BRGWC-25I	0.005	0.00072	0.01	No	14	71.43	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-27I	0.005	0.0011	0.01	No	14	71.43	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-29I	0.005	0.00065	0.01	No	14	50	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-30I	0.005	0.00056	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-32S	0.005	0.00053	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-45	0.005	0.00075	0.01	No	15	66.67	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-47	0.005	0.00089	0.01	No	15	40	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-50	0.005	0.0014	0.01	No	14	78.57	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-52I	0.003445	0.001758	0.01	No	14	28.57	No	0.01	Param.
Barium (mg/L)	BRGWC-25I	0.03715	0.02734	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-27I	0.01715	0.01522	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-29I	0.01967	0.01696	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-30I	0.02576	0.02164	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-32S	0.04526	0.02906	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-45	0.09774	0.07893	2	No	15	0	No	0.01	Param.
Barium (mg/L)	BRGWC-47	0.04477	0.03469	2	No	15	0	No	0.01	Param.
Barium (mg/L)	BRGWC-50	0.02172	0.01871	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-52I	0.02677	0.0168	2	No	14	0	No	0.01	Param.
Barium (mg/L)	PZ-51I	0.01765	0.01235	2	No	5	0	No	0.01	Param.
Barium (mg/L)	PZ-51S	0.03713	0.02807	2	No	5	0	No	0.01	Param.
Beryllium (mg/L)	BRGWC-27I	0.0005	0.0001	0.004	No	15	20	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-29I	0.001074	0.0007185	0.004	No	14	7.143	No	0.01	Param.
Beryllium (mg/L)	BRGWC-45	0.0005	0.000079	0.004	No	16	87.5	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-47	0.0005	0.000056	0.004	No	15	80	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-50	0.004768	0.002275	0.004	No	14	14.29	No	0.01	Param.
Beryllium (mg/L)	PZ-51I	0.0005	0.000064	0.004	No	5	20	No	0.031	NP (normality)
Cadmium (mg/L)	BRGWC-27I	0.0005	0.00009	0.005	No	15	86.67	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-30I	0.0005	0.00008	0.005	No	15	93.33	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-32S	0.0005	0.00011	0.005	No	15	80	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-45	0.0005	0.00014	0.005	No	16	75	No	0.01	NP (normality)
Cadmium (mg/L)	BRGWC-47	0.0005	0.00015	0.005	No	15	40	No	0.01	NP (normality)
<b>Cadmium (mg/L)</b>	<b>BRGWC-50</b>	<b>0.04553</b>	<b>0.01408</b>	<b>0.005</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>sqrt(x)</b>	<b>0.01</b>	<b>Param.</b>
Cadmium (mg/L)	PZ-51I	0.02039	0.0003353	0.005	No	7	0	x^(1/3)	0.01	Param.
Chromium (mg/L)	BRGWC-25I	0.005	0.0016	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-27I	0.005	0.003	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-29I	0.02	0.005	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-30I	0.0051	0.005	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-32S	0.005	0.0012	0.1	No	14	35.71	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-45	0.005	0.0014	0.1	No	15	80	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-47	0.005	0.00092	0.1	No	15	73.33	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-50	0.005	0.00071	0.1	No	14	50	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-52I	0.005	0.0017	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	PZ-51I	0.005	0.0008	0.1	No	5	60	No	0.031	NP (normality)
Chromium (mg/L)	PZ-51S	0.005	0.00042	0.1	No	5	60	No	0.031	NP (normality)
Cobalt (mg/L)	BRGWC-25I	0.007178	0.004264	0.014	No	14	7.143	No	0.01	Param.
Cobalt (mg/L)	BRGWC-27I	0.01116	0.008169	0.014	No	15	0	No	0.01	Param.
Cobalt (mg/L)	BRGWC-29I	0.01048	0.00646	0.014	No	14	7.143	No	0.01	Param.
Cobalt (mg/L)	BRGWC-30I	0.005	0.00078	0.014	No	15	20	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-32S	0.005	0.0025	0.014	No	15	86.67	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-45	0.0162	0.0064	0.014	No	16	0	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-47	0.003658	0.0006857	0.014	No	15	6.667	x^(1/3)	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>BRGWC-50</b>	<b>1.5</b>	<b>1.3</b>	<b>0.014</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>NP (normality)</b>
Cobalt (mg/L)	BRGWC-52I	0.005	0.0012	0.014	No	14	50	No	0.01	NP (normality)
<b>Cobalt (mg/L)</b>	<b>PZ-51I</b>	<b>0.041</b>	<b>0.017</b>	<b>0.014</b>	<b>Yes</b>	<b>7</b>	<b>0</b>	<b>No</b>	<b>0.008</b>	<b>NP (normality)</b>
Cobalt (mg/L)	PZ-51S	0.008517	0.003983	0.014	No	6	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-25I	1.169	0.5947	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-27I	1.177	0.5792	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-29I	1.656	1.17	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-30I	1.162	0.6073	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-32S	1.111	0.4399	5	No	14	0	No	0.01	Param.



# Confidence Interval Summary Table - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/22/2021, 11:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	BRGWC-45	0.8333	0.3554	5	No	15	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-47	1.489	0.858	5	No	15	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-50	2.004	1.181	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-52I	2.139	1.351	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-51I	11.7	0.937	5	No	5	0	No	0.031	NP (normality)
Combined Radium 226 + 228 (pCi/L)	PZ-51S	17.1	0.599	5	No	5	0	No	0.031	NP (normality)
Fluoride (mg/L)	BRGWC-25I	0.2698	0.127	4	No	15	6.667	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-27I	0.2757	0.1502	4	No	15	13.33	No	0.01	Param.
Fluoride (mg/L)	BRGWC-29I	0.2414	0.09354	4	No	15	13.33	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-30I	0.3868	0.1302	4	No	15	6.667	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-32S	0.11	0.09	4	No	15	60	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-45	0.19	0.067	4	No	16	56.25	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-47	0.48	0.076	4	No	16	43.75	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-50	0.8957	0.3324	4	No	15	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-52I	0.2502	0.1321	4	No	14	7.143	No	0.01	Param.
Fluoride (mg/L)	PZ-51I	0.1	0.061	4	No	6	83.33	No	0.0155	NP (NDs)
Fluoride (mg/L)	PZ-51S	0.1332	0.0352	4	No	5	0	No	0.01	Param.
Lead (mg/L)	BRGWC-25I	0.001	0.00011	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-27I	0.001	0.00063	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-29I	0.0004591	0.0002898	0.0013	No	13	0	sqrt(x)	0.01	Param.
Lead (mg/L)	BRGWC-30I	0.001	0.00011	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-45	0.001	0.00026	0.0013	No	15	80	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-47	0.001	0.00012	0.0013	No	15	80	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-50	0.001	0.00085	0.0013	No	14	42.86	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-52I	0.001	0.000042	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	PZ-51I	0.001	0.00017	0.0013	No	5	60	No	0.031	NP (normality)
Lithium (mg/L)	BRGWC-27I	0.0021	0.0014	0.089	No	14	14.29	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-29I	0.003732	0.003096	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-30I	0.01504	0.01154	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-32S	0.015	0.002	0.089	No	14	14.29	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-45	0.003616	0.00307	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-47	0.04413	0.04046	0.089	No	15	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-50	0.04481	0.03805	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-52I	0.007388	0.003111	0.089	No	14	7.143	sqrt(x)	0.01	Param.
Lithium (mg/L)	PZ-51I	0.026	0.019	0.089	No	5	0	No	0.031	NP (normality)
Lithium (mg/L)	PZ-51S	0.015	0.0012	0.089	No	5	80	No	0.031	NP (NDs)
Mercury (mg/L)	BRGWC-25I	0.0002	0.000083	0.002	No	12	83.33	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-27I	0.0002	0.00005	0.002	No	12	83.33	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-29I	0.0002	0.00007	0.002	No	12	75	No	0.01	NP (normality)
Mercury (mg/L)	BRGWC-30I	0.0002	0.00007	0.002	No	12	75	No	0.01	NP (normality)
Mercury (mg/L)	BRGWC-32S	0.0002	0.00009	0.002	No	12	75	No	0.01	NP (normality)
Mercury (mg/L)	PZ-51I	0.0002	0.000099	0.002	No	5	80	No	0.031	NP (NDs)
Molybdenum (mg/L)	BRGWC-25I	0.01	0.00081	0.01	No	13	76.92	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-30I	0.01	0.0022	0.01	No	13	84.62	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-45	0.01	0.00076	0.01	No	14	92.86	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-50	0.01	0.0033	0.01	No	13	84.62	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-52I	0.01	0.001	0.01	No	13	38.46	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-25I	0.005	0.0021	0.05	No	14	92.86	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-27I	0.003864	0.002296	0.05	No	14	21.43	No	0.01	Param.
Selenium (mg/L)	BRGWC-29I	0.0058	0.0042	0.05	No	14	50	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-30I	0.005	0.0038	0.05	No	14	71.43	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-32S	0.1	0.0019	0.05	No	15	26.67	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-45	0.005	0.0029	0.05	No	15	93.33	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-47	0.005	0.0017	0.05	No	15	60	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-50	0.005	0.002	0.05	No	14	50	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-29I	0.0002	0.00016	0.002	No	13	0	No	0.01	NP (normality)

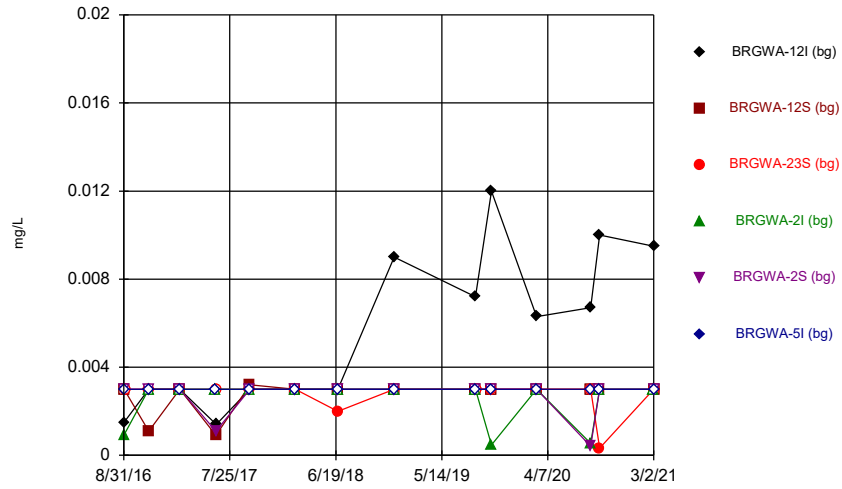
# Outlier Summary

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:18 PM

Date	BRGWC-521 Calcium (mg/L)	BRGWA-51 Cobalt (mg/L)	BRGWC-521 Fluoride (mg/L)	BRGWC-291 Lead (mg/L)	BRGWC-45 Lithium (mg/L)	BRGWC-50 Sulfate as SO4 (mg/L)	BRGWC-291 Thallium (mg/L)	BRGWC-47 Total Dissolved Solids [TDS] (mg/L)
9/8/2016						<0.001 (o)		
11/16/2016	<0.01 (o)							
2/13/2018	<0.01 (o)							
2/14/2018			<0.005 (o)					
6/27/2018							31 (OX)	
7/31/2018				<0.25 (o)				
8/10/2018	410 (O)		1.6 (O)					
1/16/2019					589 (O)			

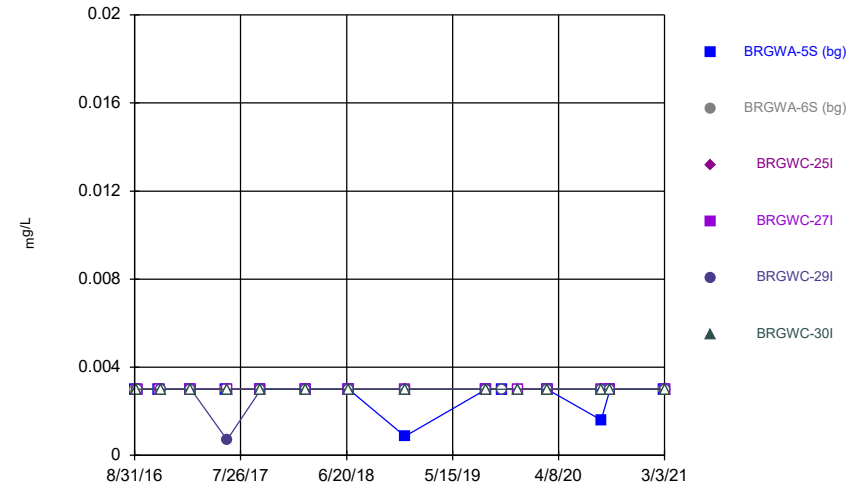
FIGURE A.

Time Series



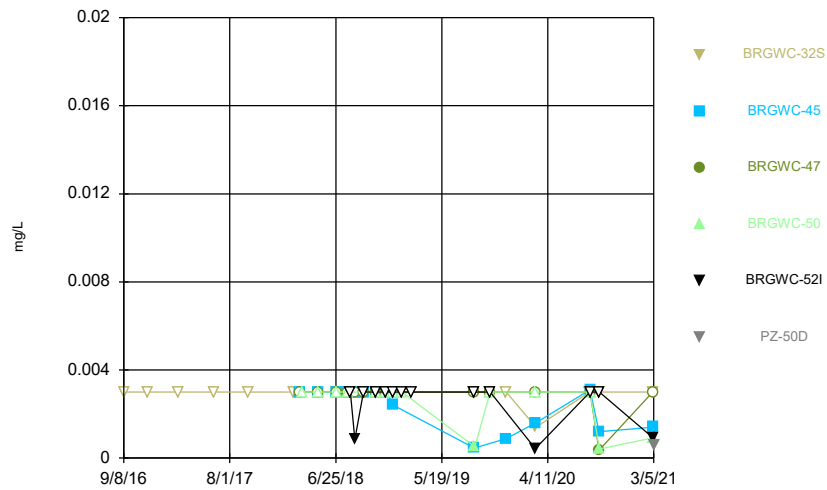
Constituent: Antimony Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



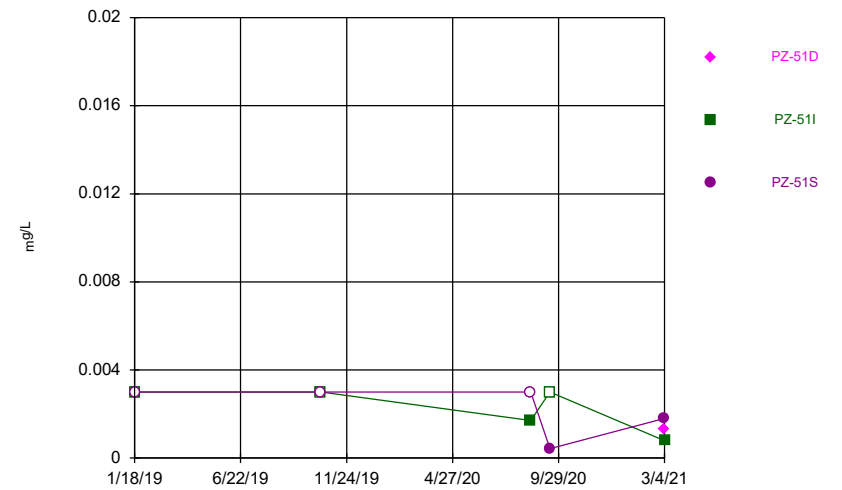
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series

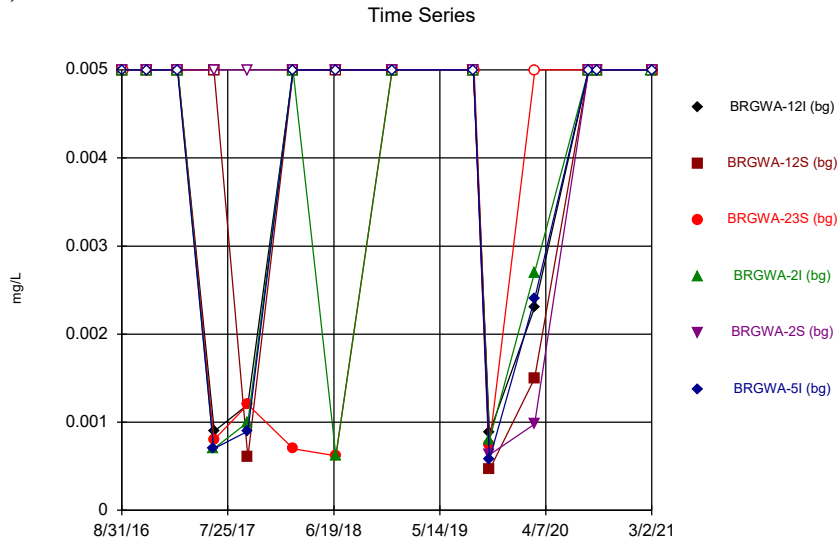


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Plant Branch Client: Southern Company Data: Plant Branch AP

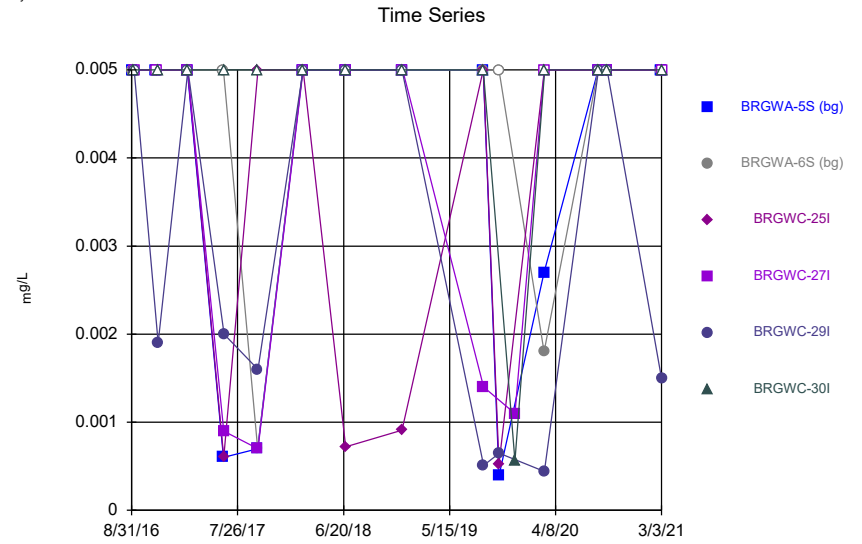
Time Series



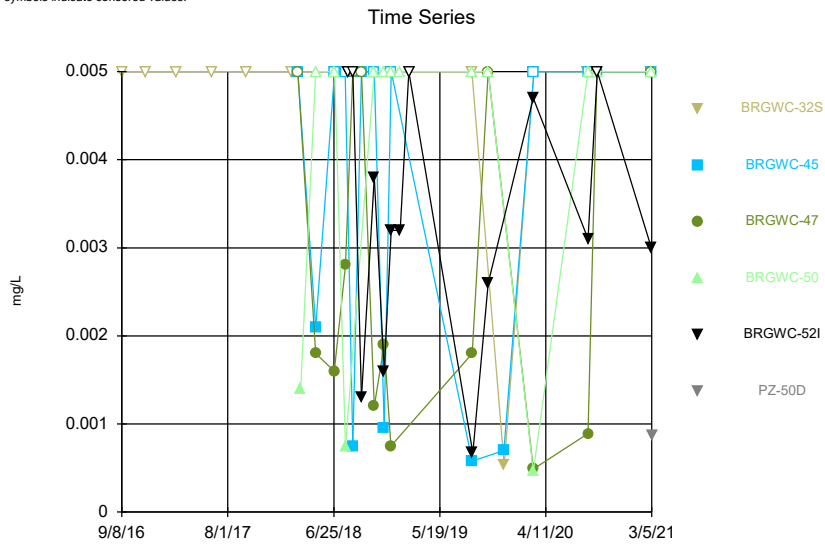
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Plant Branch Client: Southern Company Data: Plant Branch AP



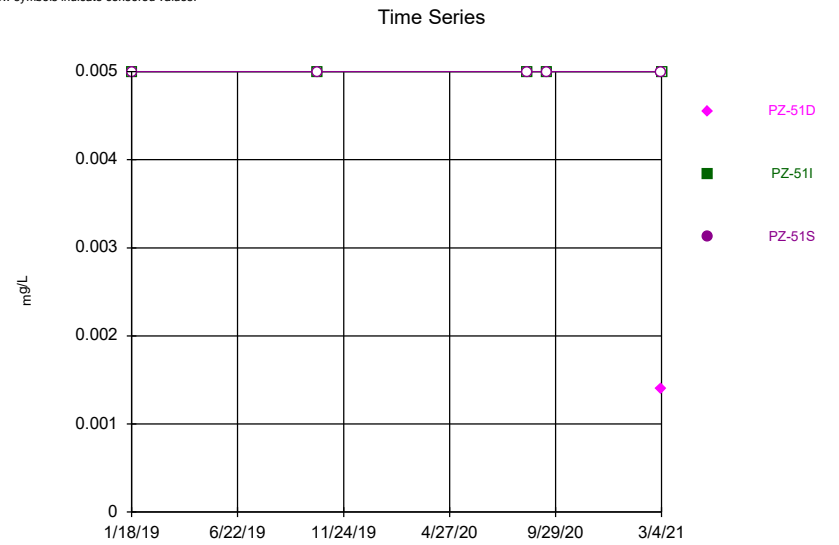
Constituent: Arsenic Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Arsenic Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

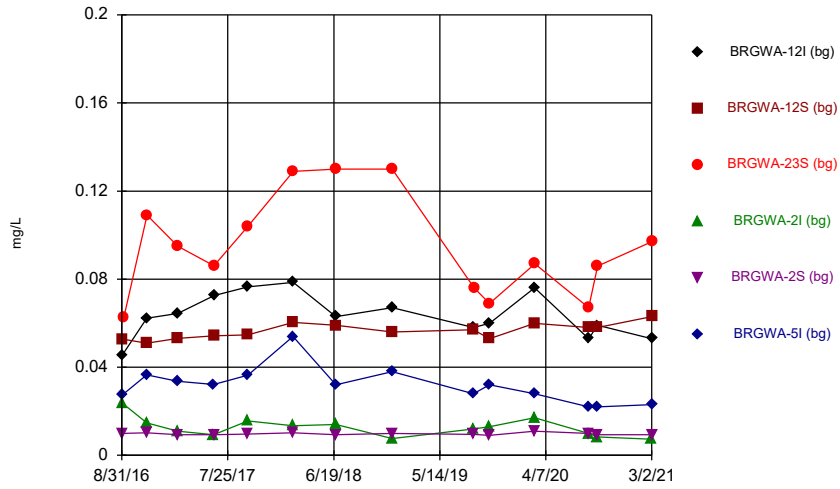


Constituent: Arsenic Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP



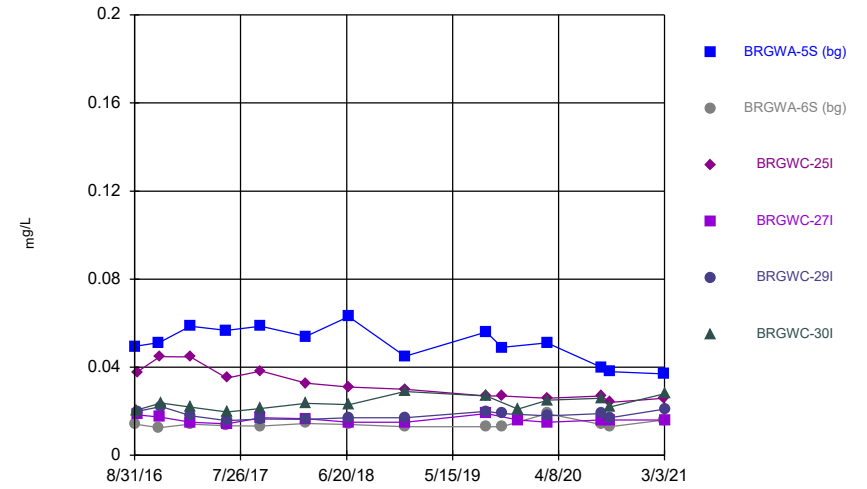
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



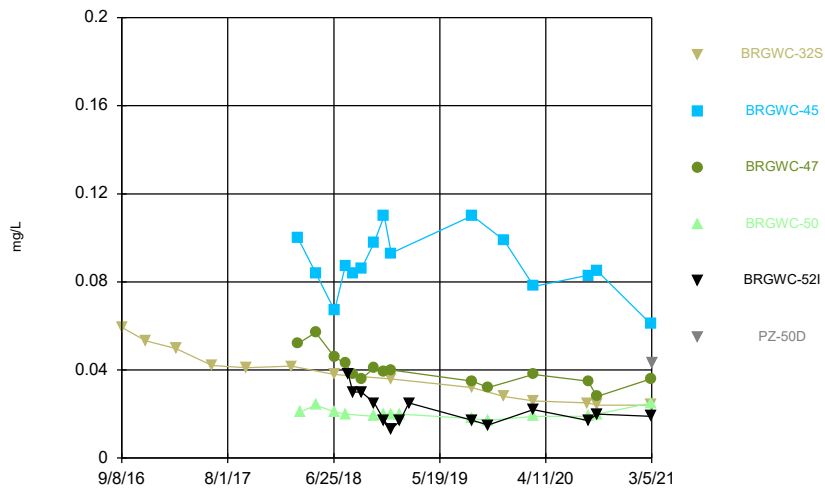
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



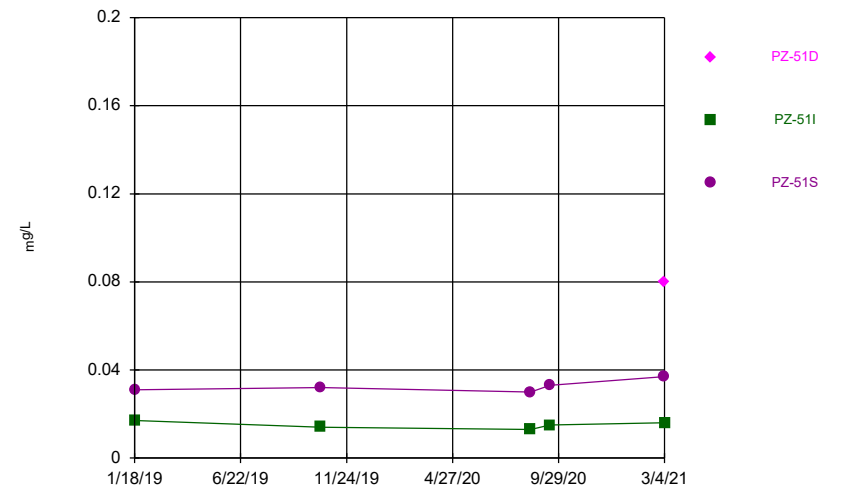
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



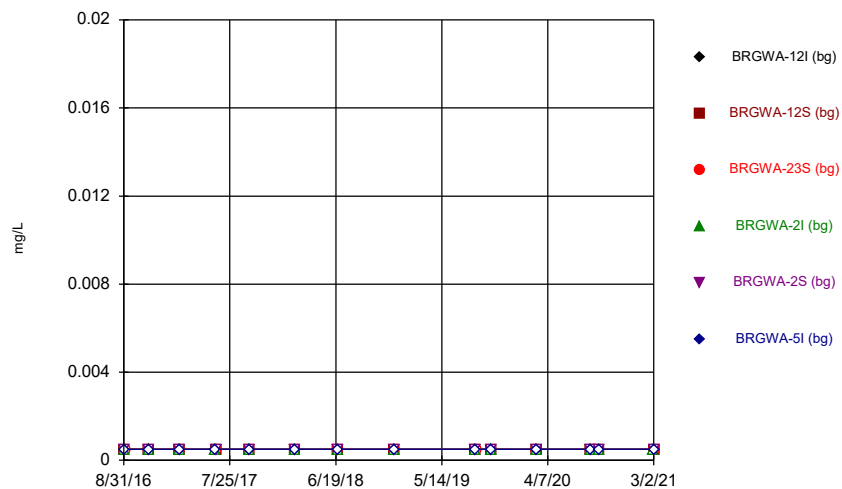
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



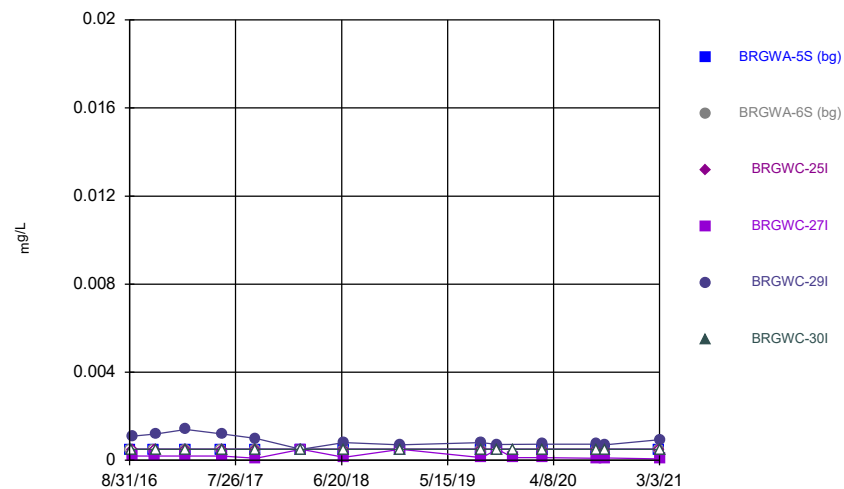
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



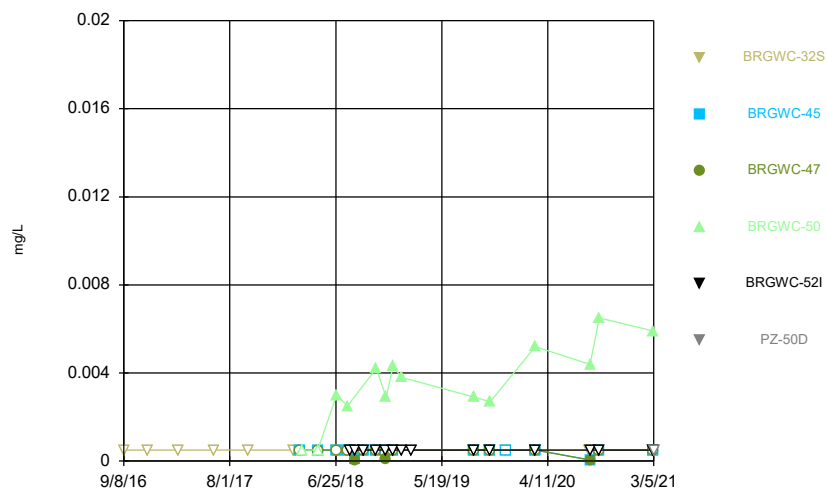
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



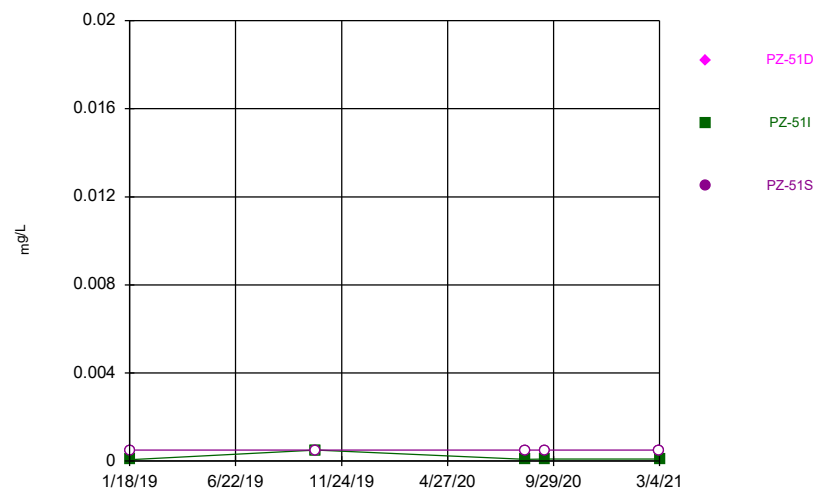
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



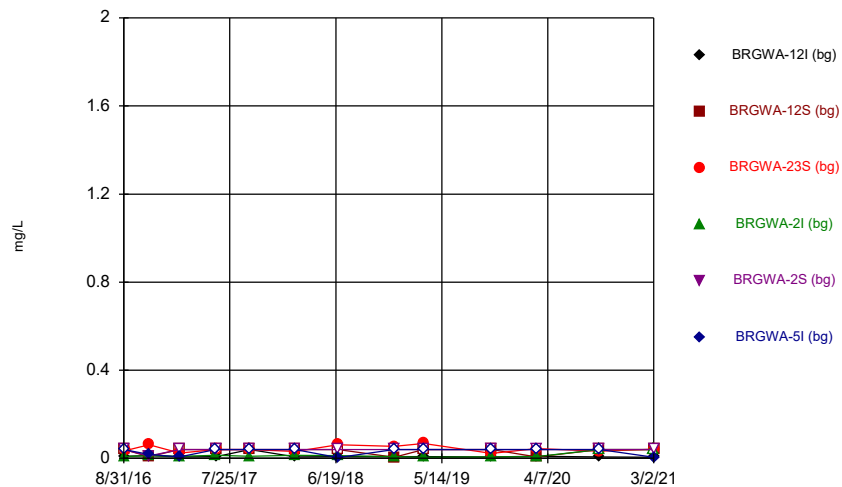
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



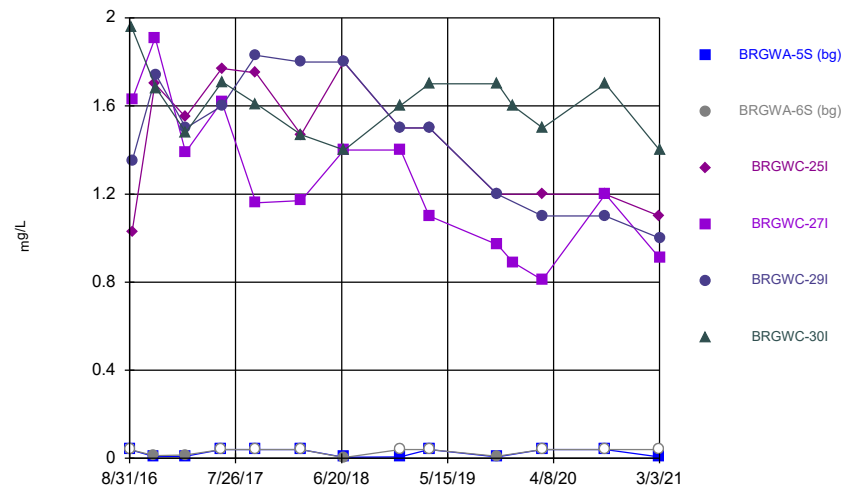
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



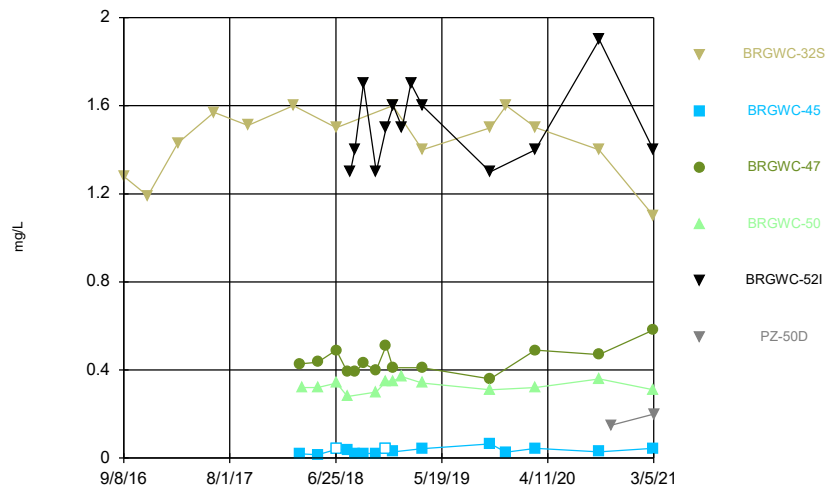
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



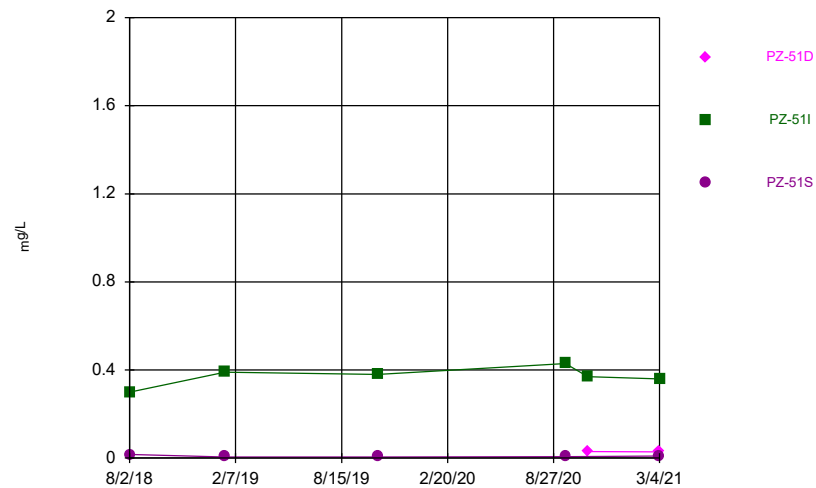
Constituent: Boron Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Boron Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

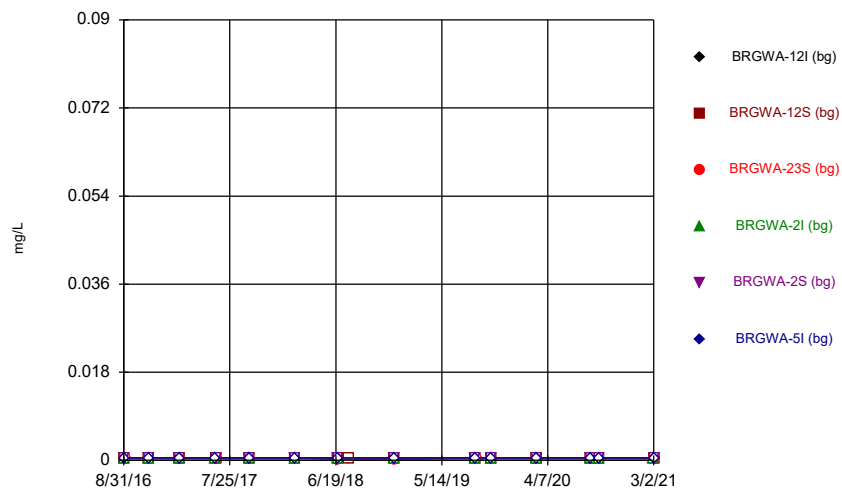
Time Series



Constituent: Boron Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

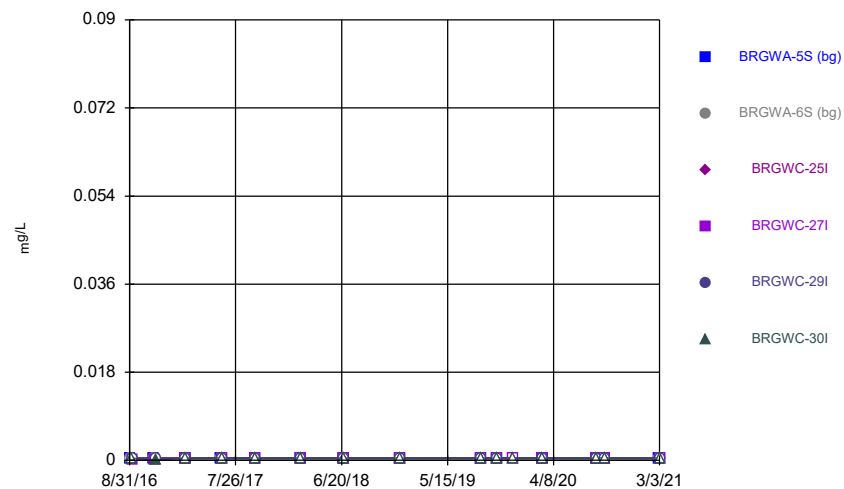


### Time Series



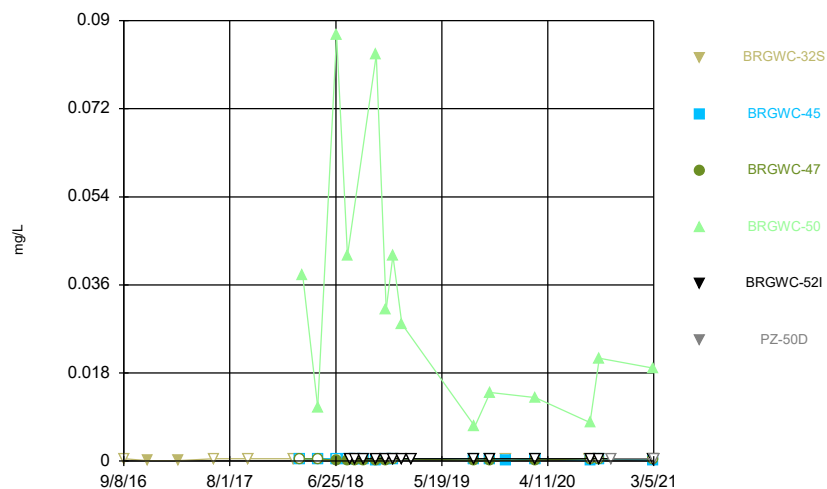
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



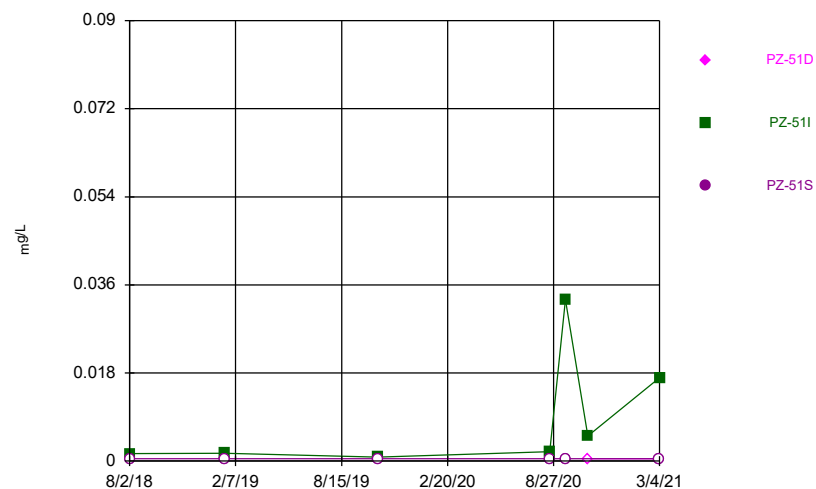
Constituent: Cadmium Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



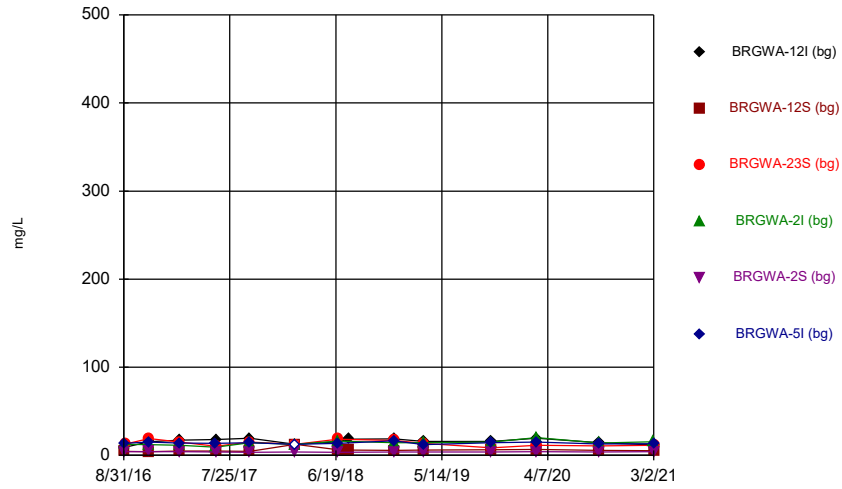
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



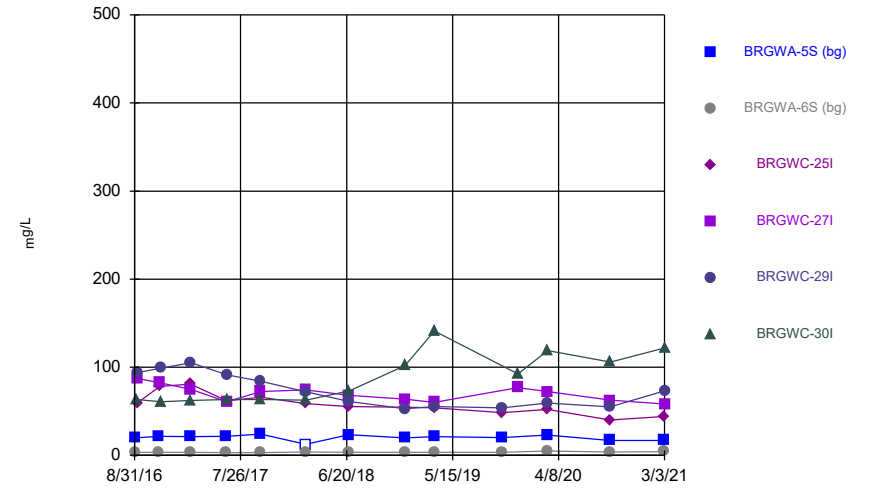
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



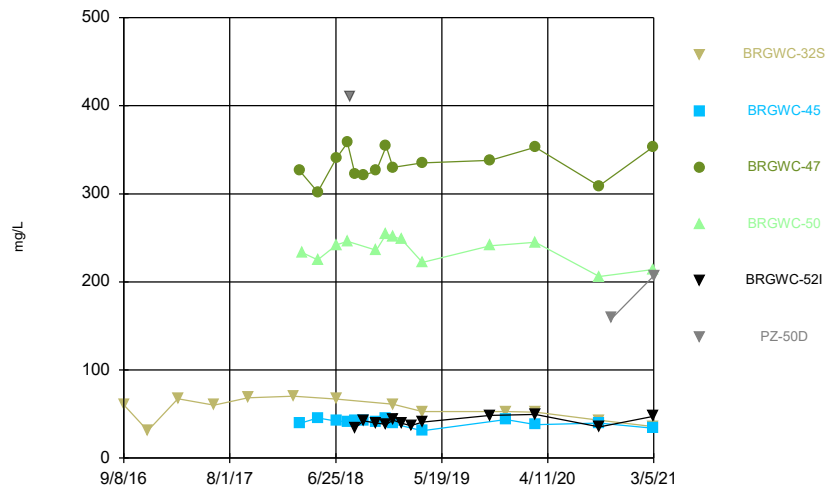
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



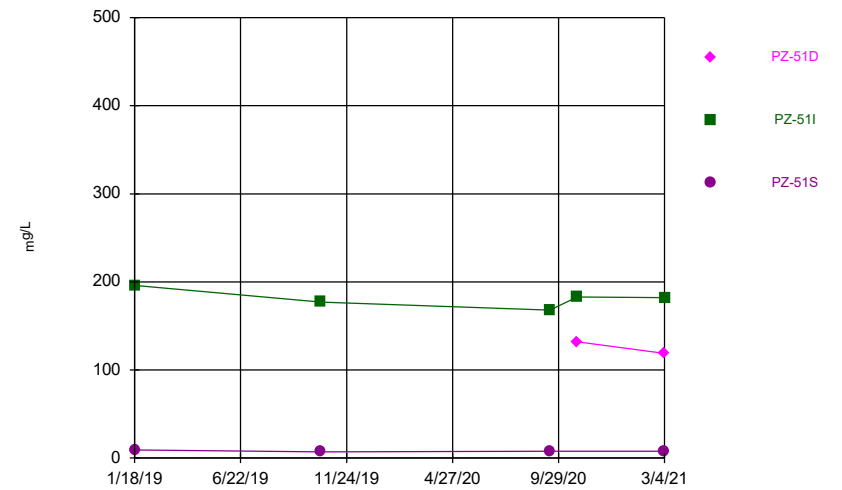
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



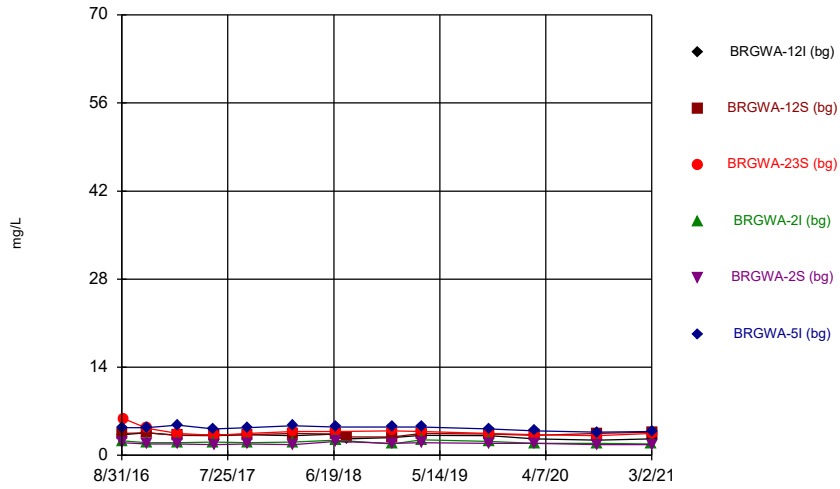
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



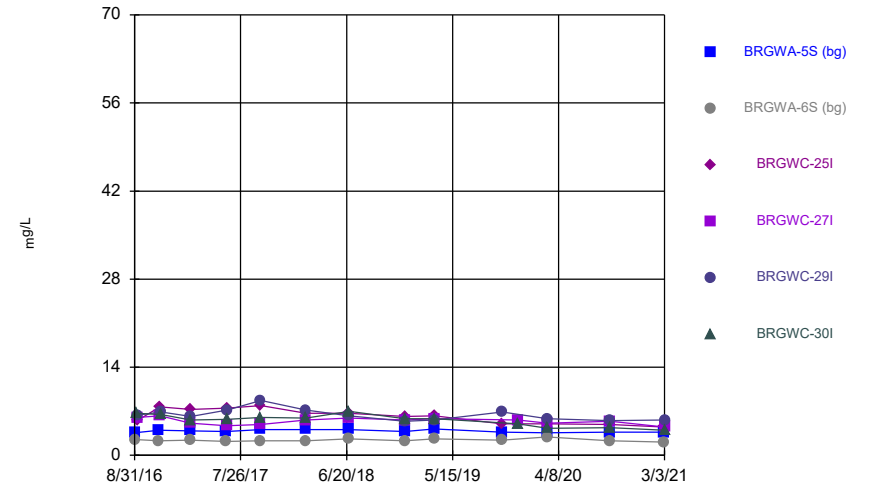
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



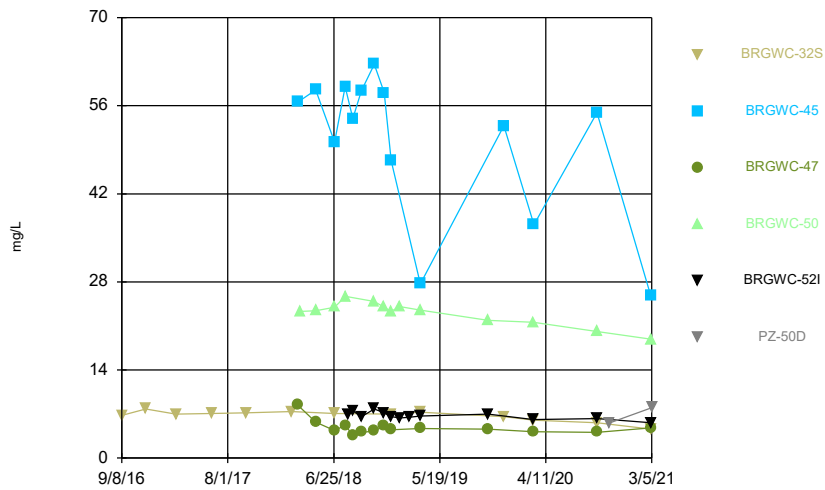
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



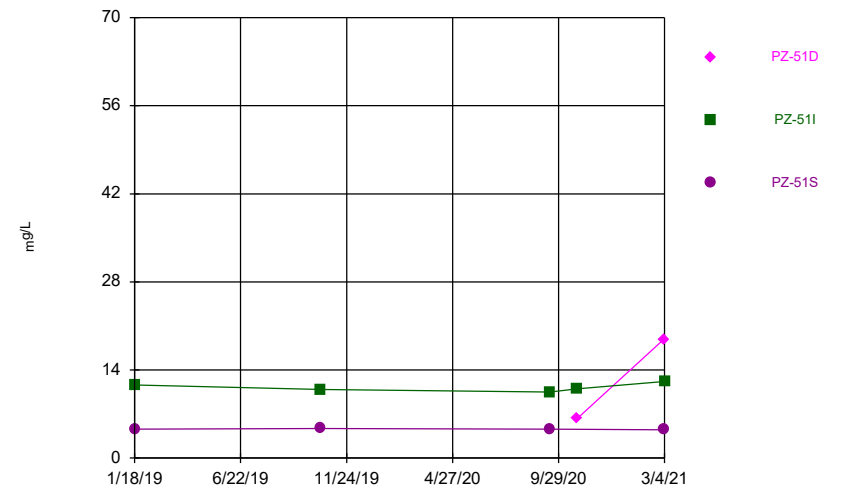
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



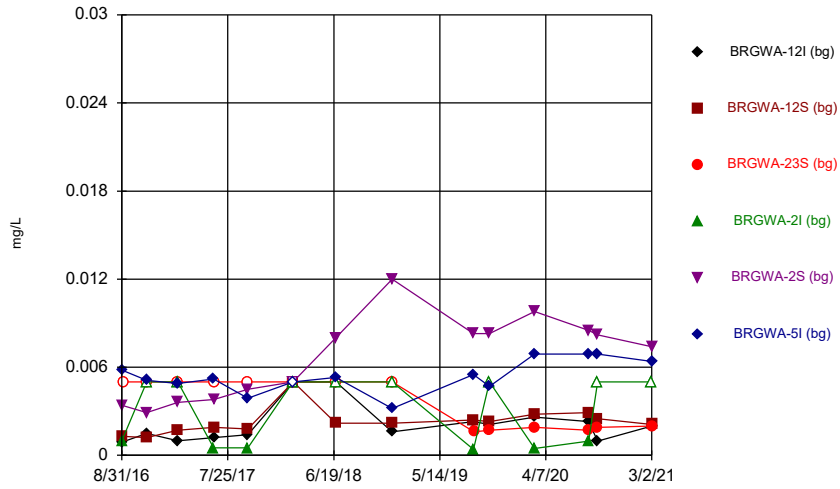
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



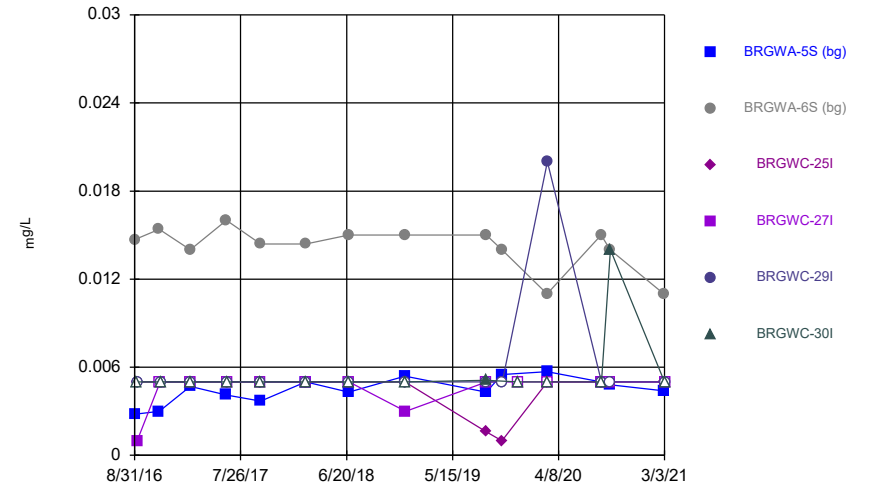
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### Time Series



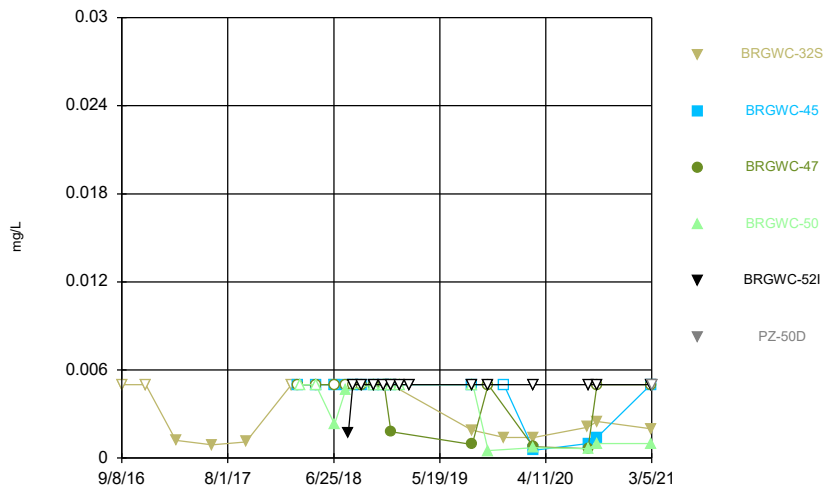
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



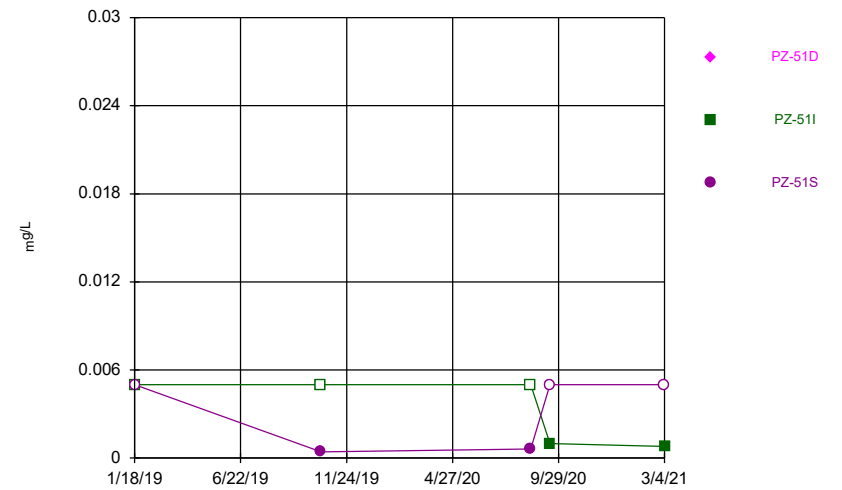
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



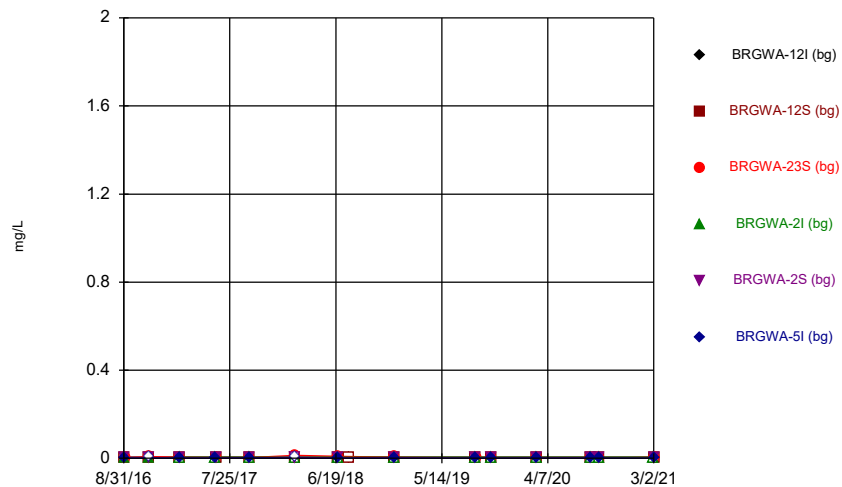
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



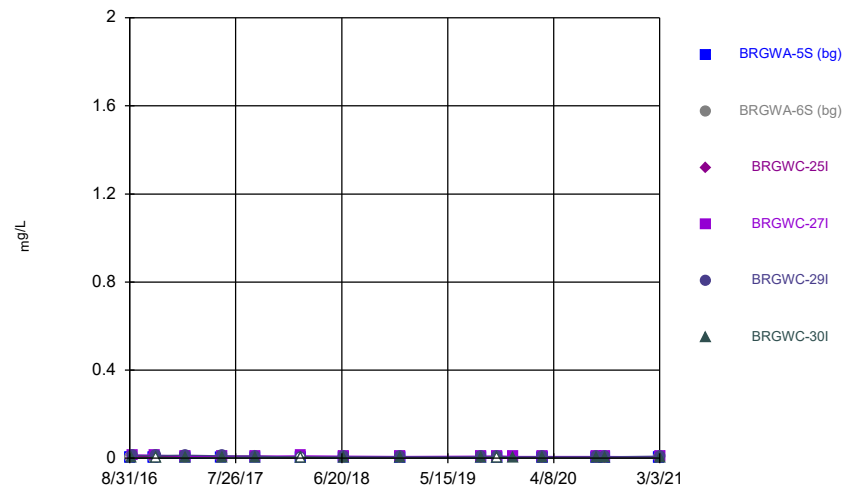
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



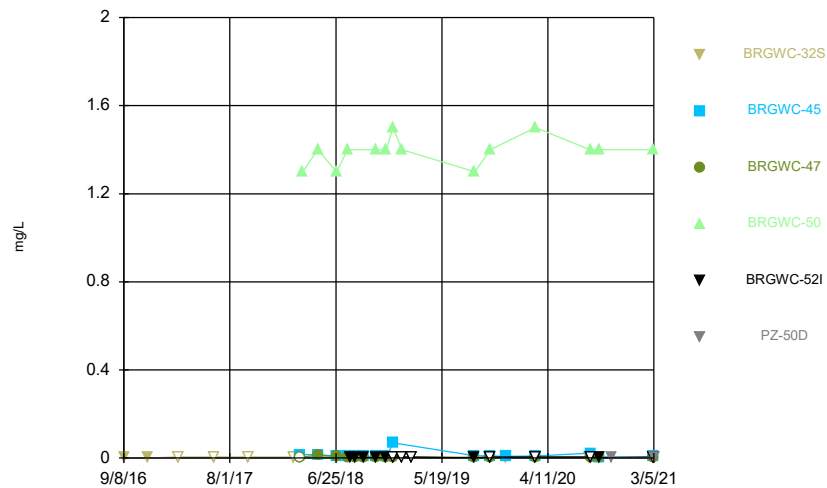
Constituent: Cobalt Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



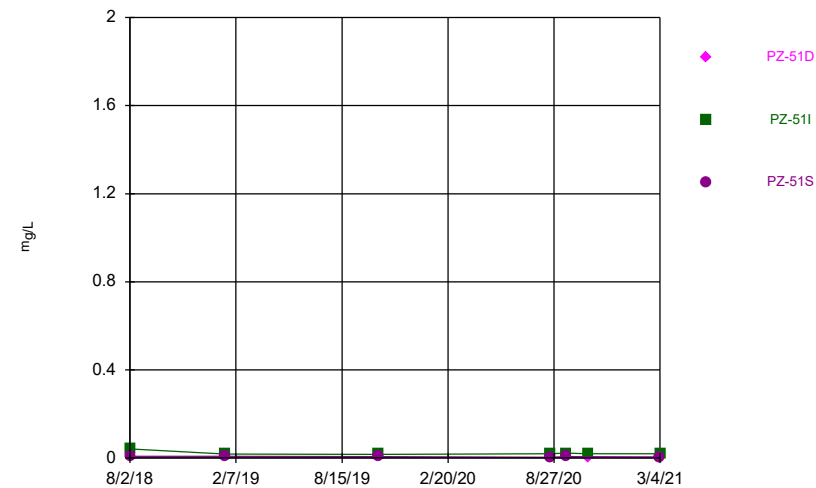
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Time Series



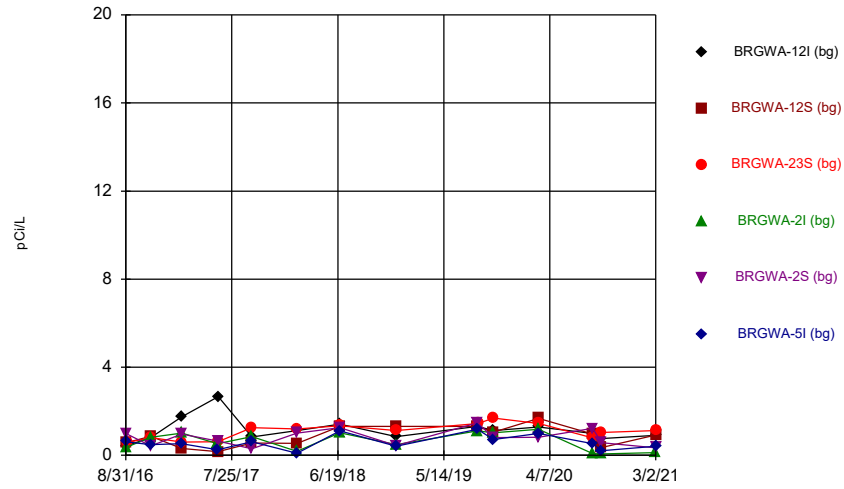
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Time Series



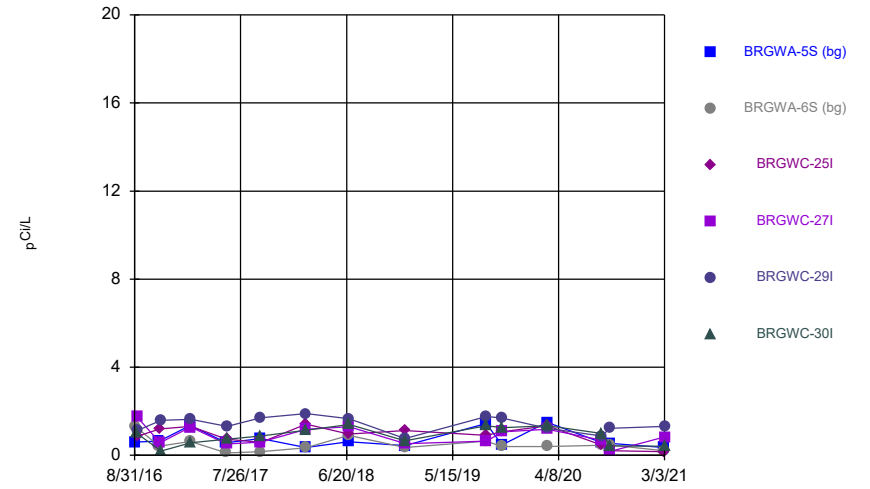
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



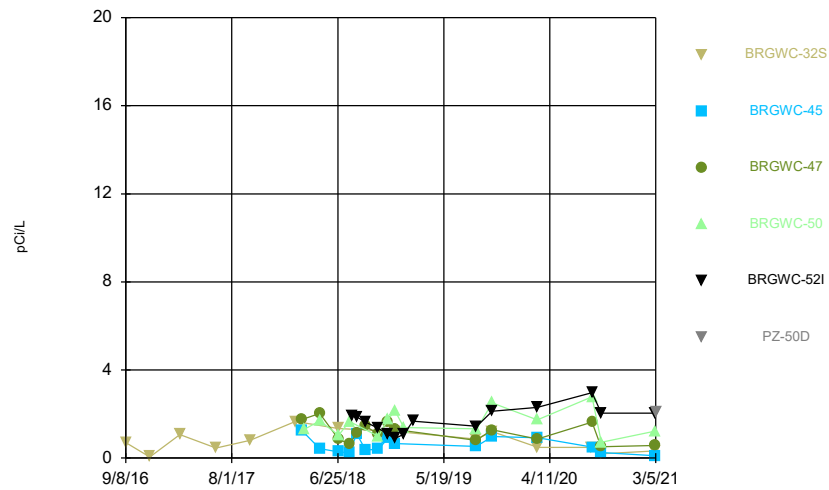
Constituent: Combined Radium 226 + 228 Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



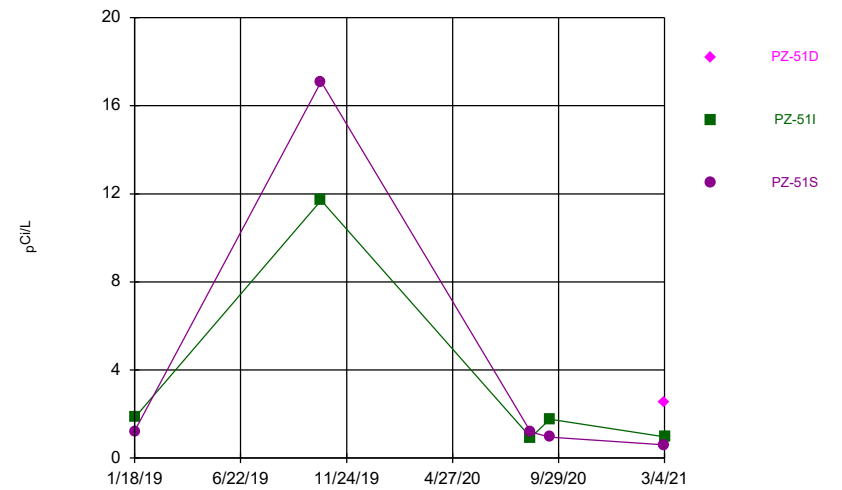
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



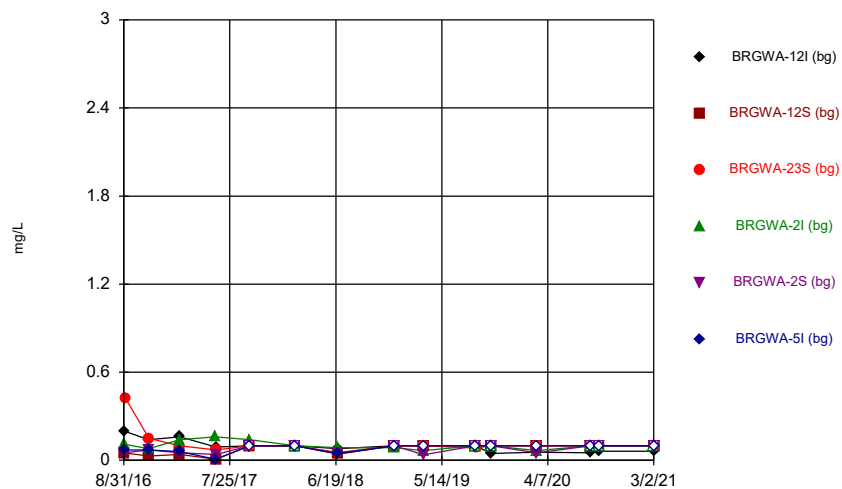
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



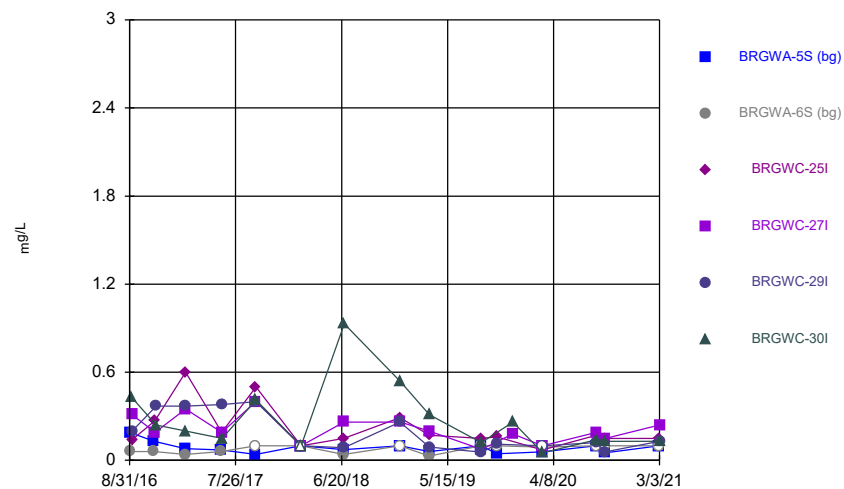
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



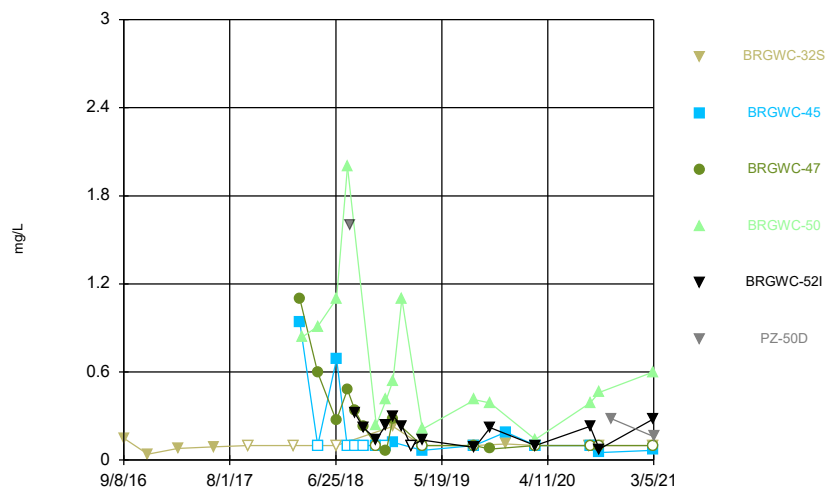
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



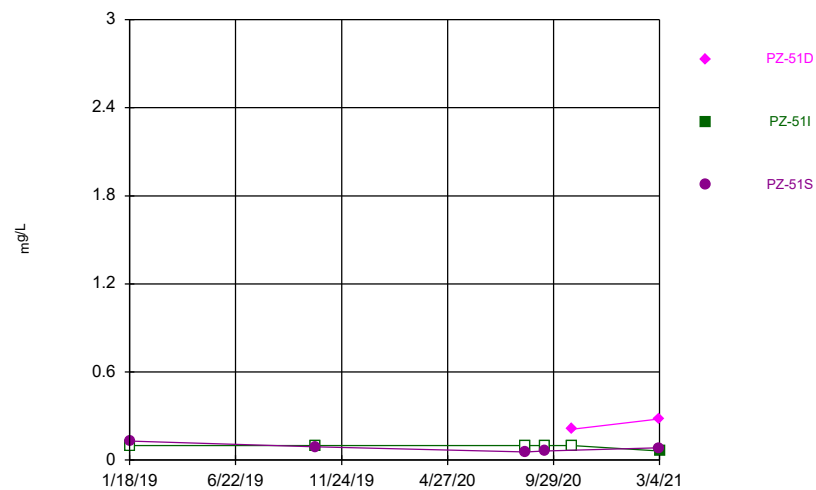
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



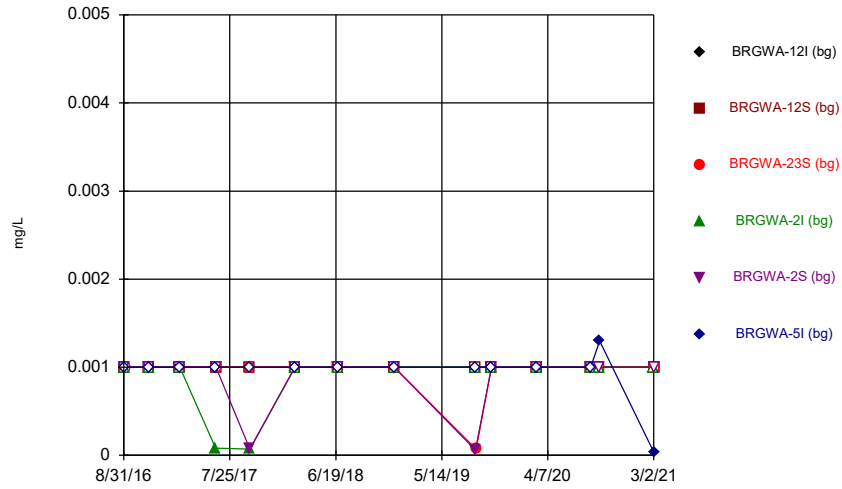
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



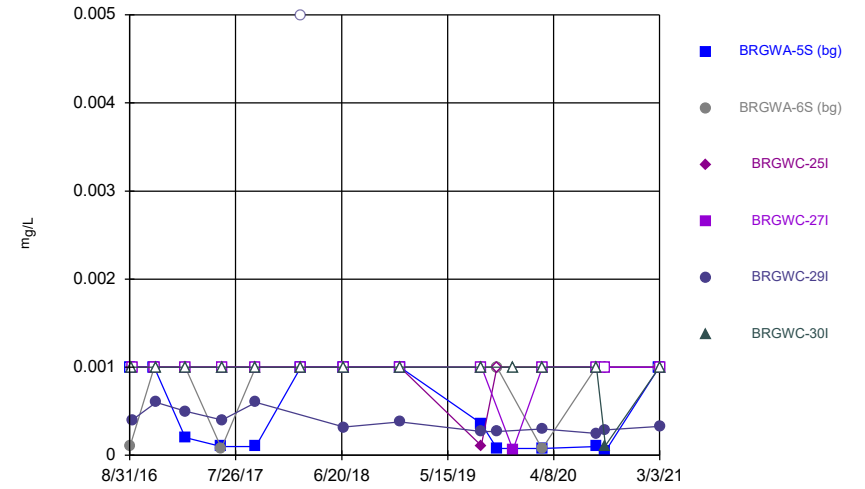
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



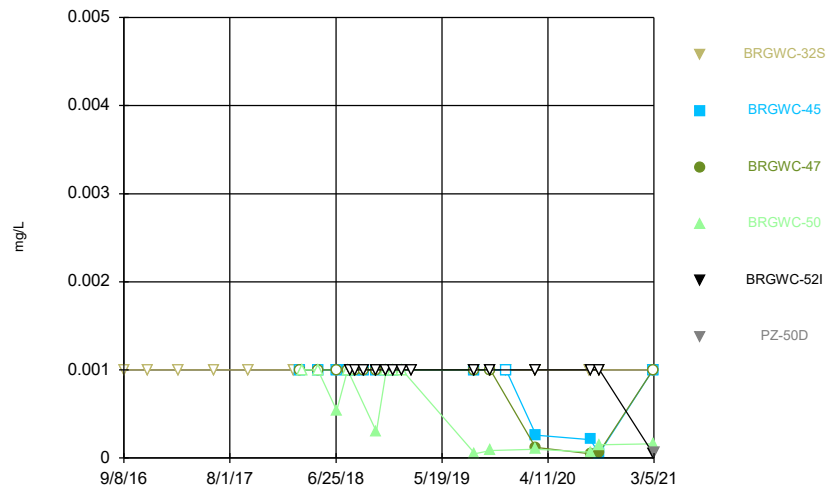
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Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



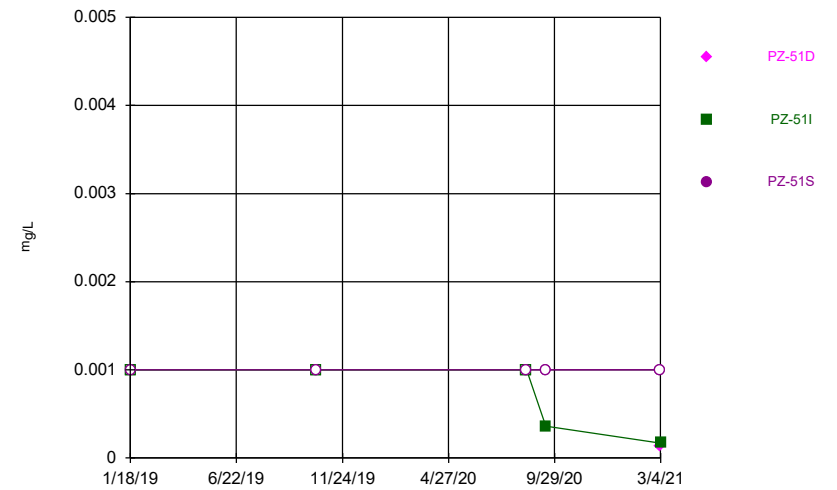
Constituent: Lead Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Lead Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

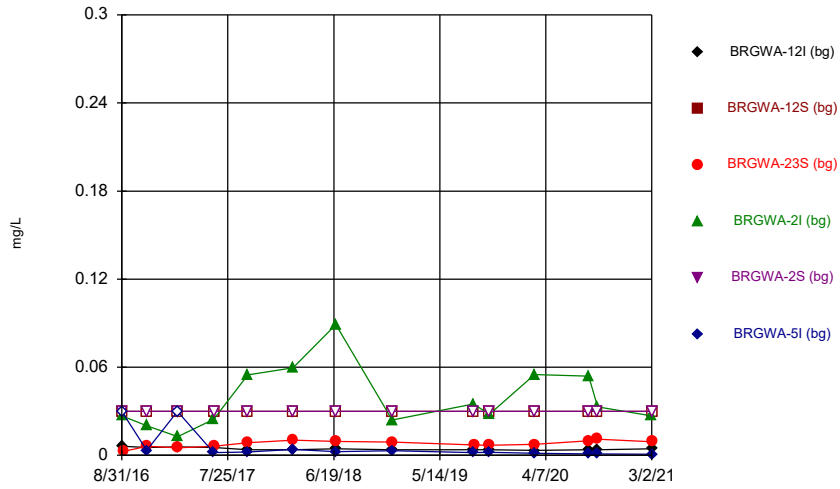
Time Series



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Plant Branch Client: Southern Company Data: Plant Branch AP

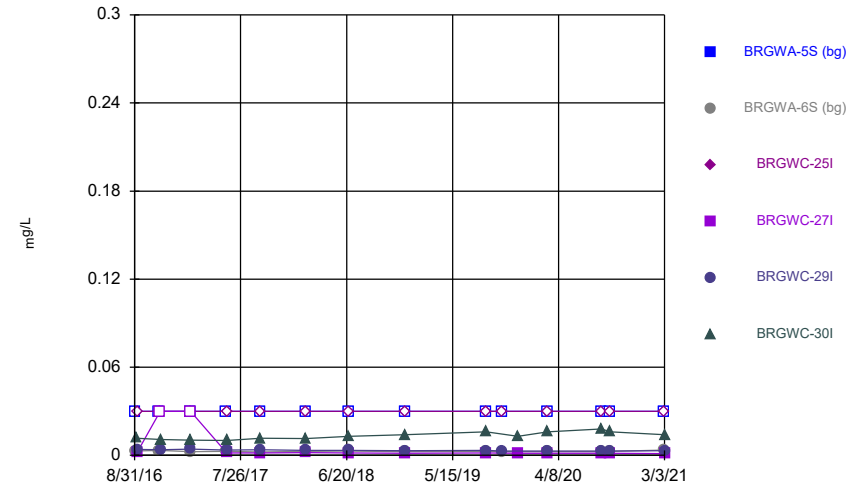


Time Series



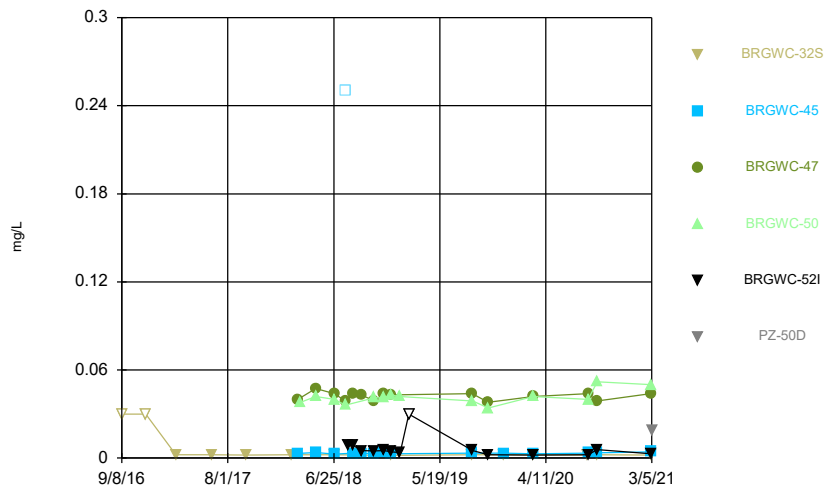
Constituent: Lithium Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



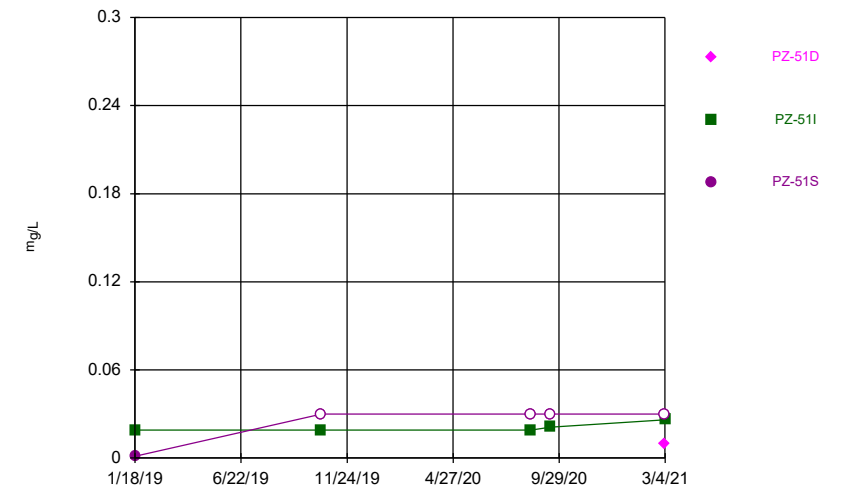
Constituent: Lithium Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



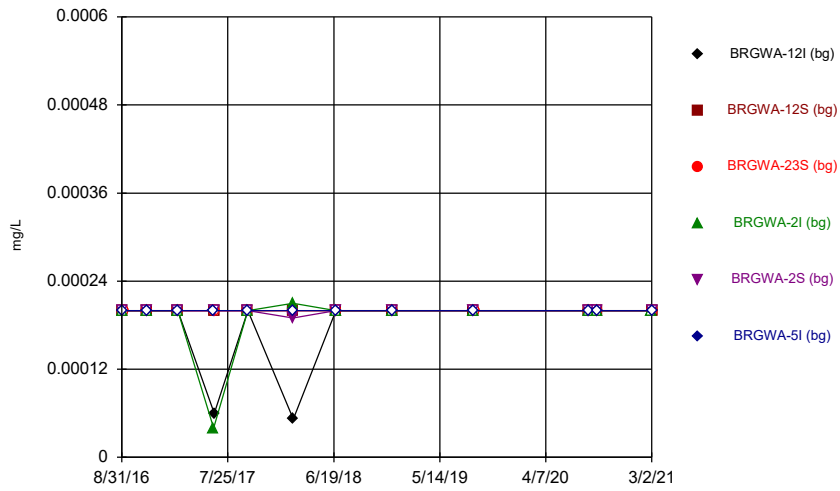
Constituent: Lithium Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



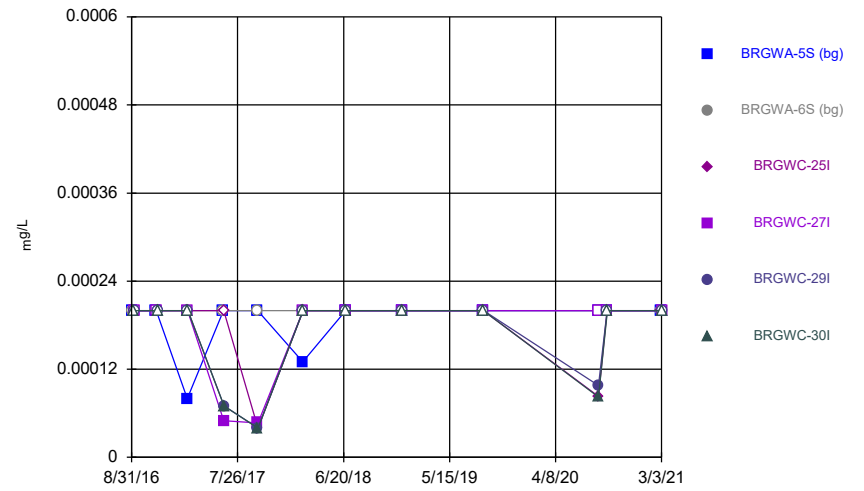
Constituent: Lithium Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



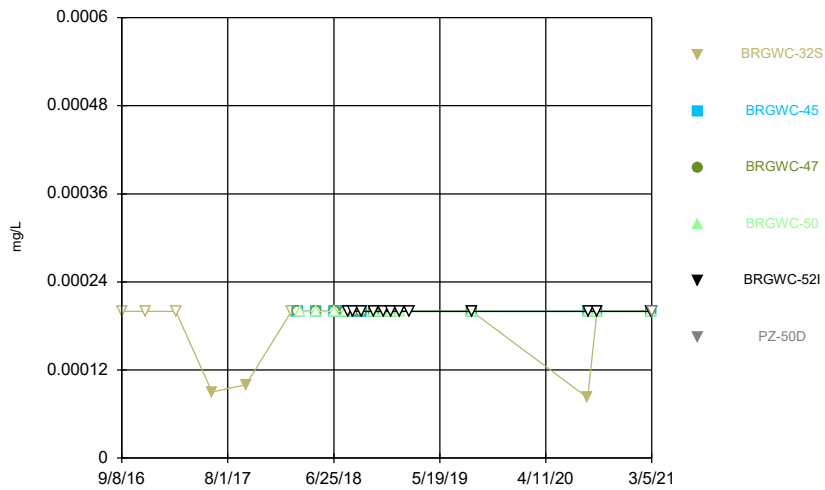
Constituent: Mercury Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



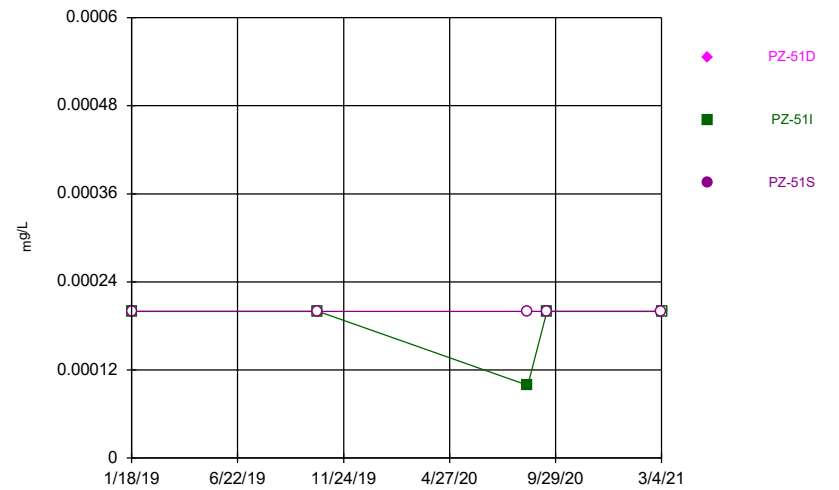
Constituent: Mercury Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



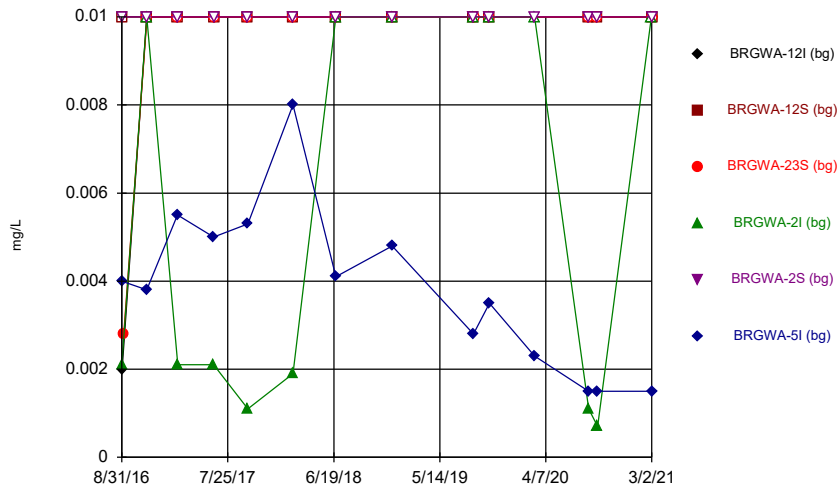
Constituent: Mercury Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



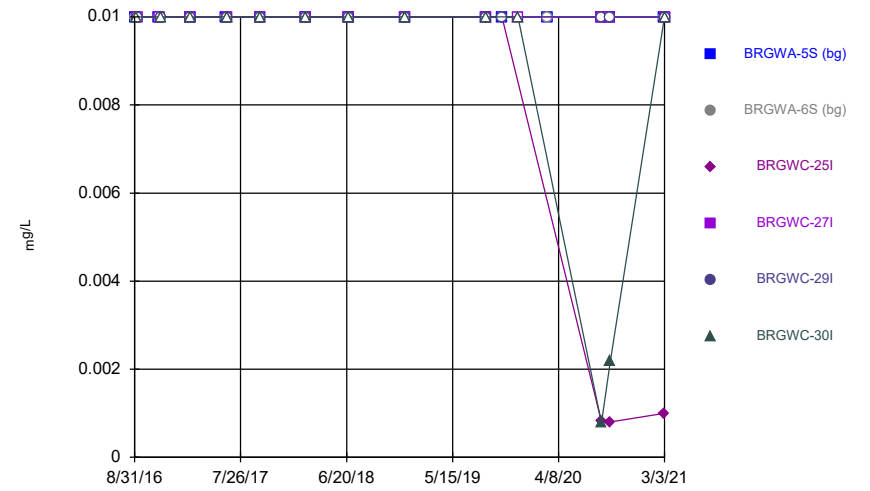
Constituent: Mercury Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



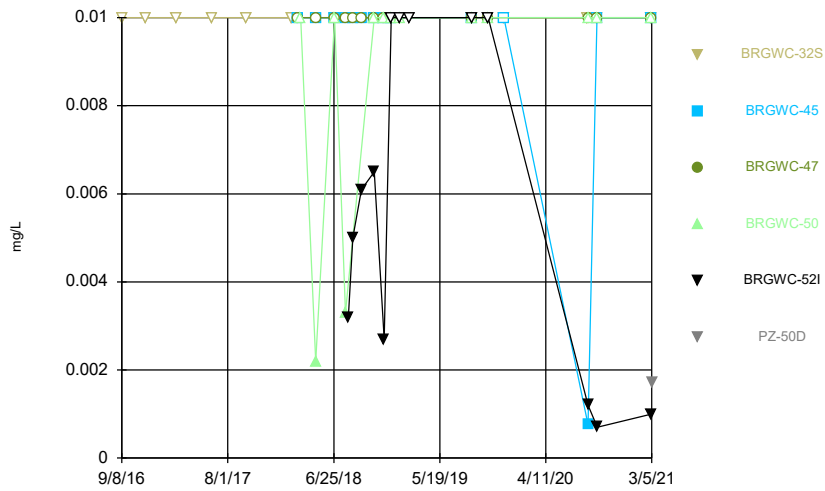
Constituent: Molybdenum Analysis Run 4/21/2021 2:19 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



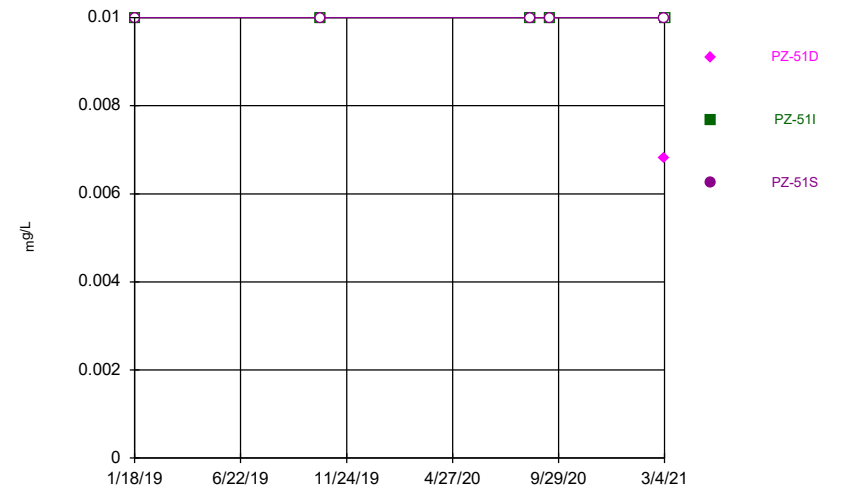
Constituent: Molybdenum Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



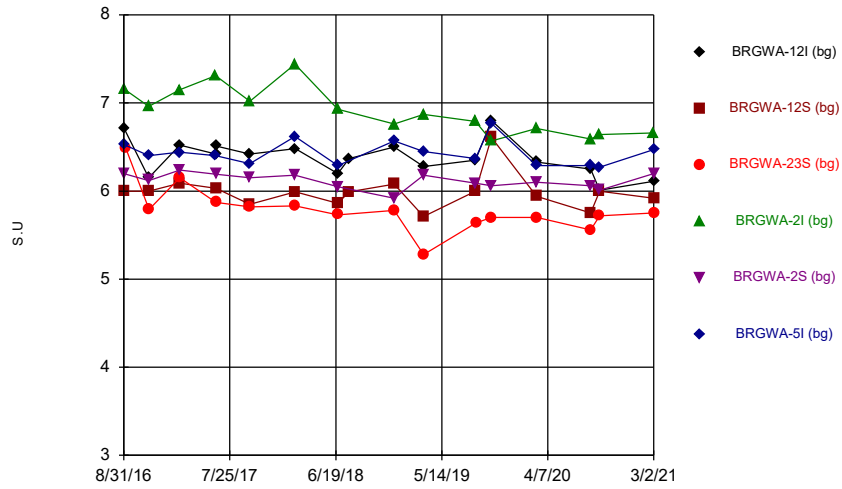
Constituent: Molybdenum Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



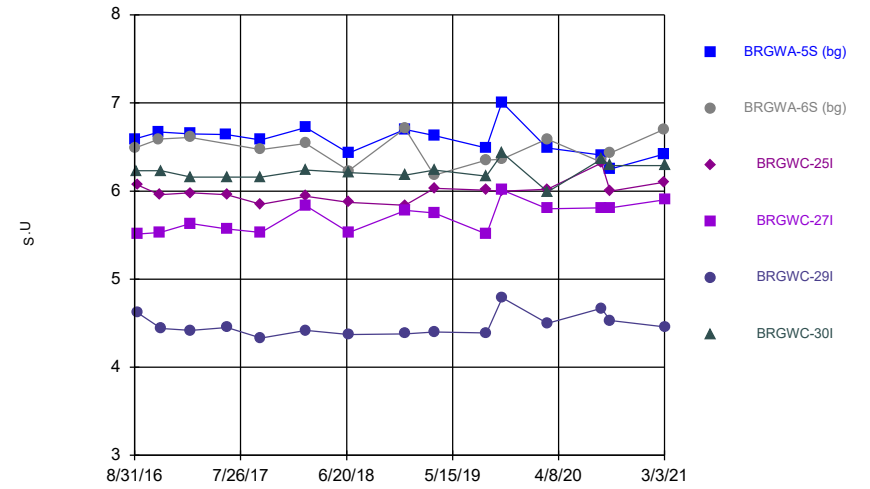
Constituent: Molybdenum Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



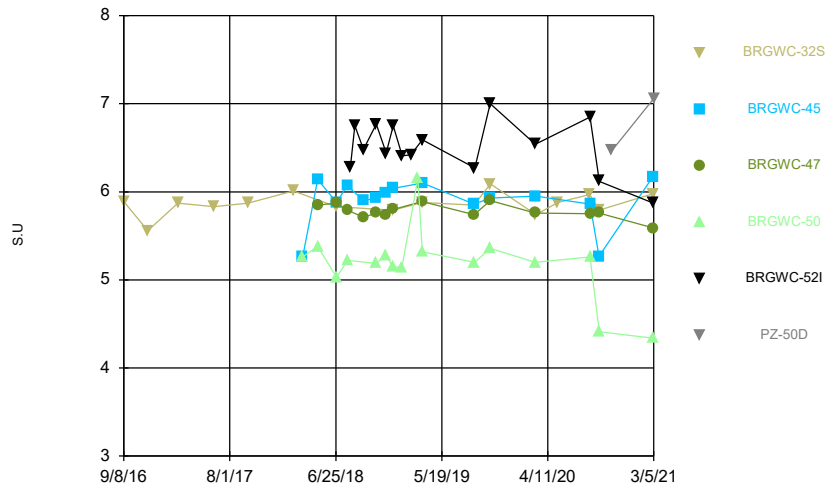
Constituent: pH, Field Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



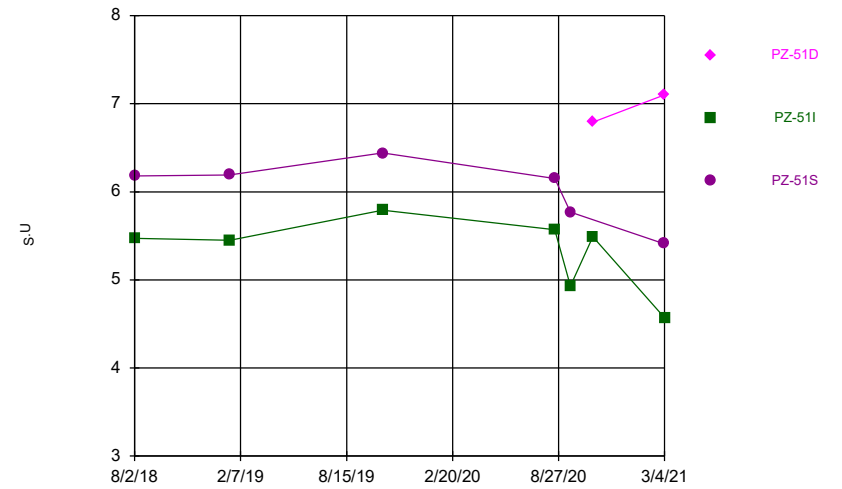
Constituent: pH, Field Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



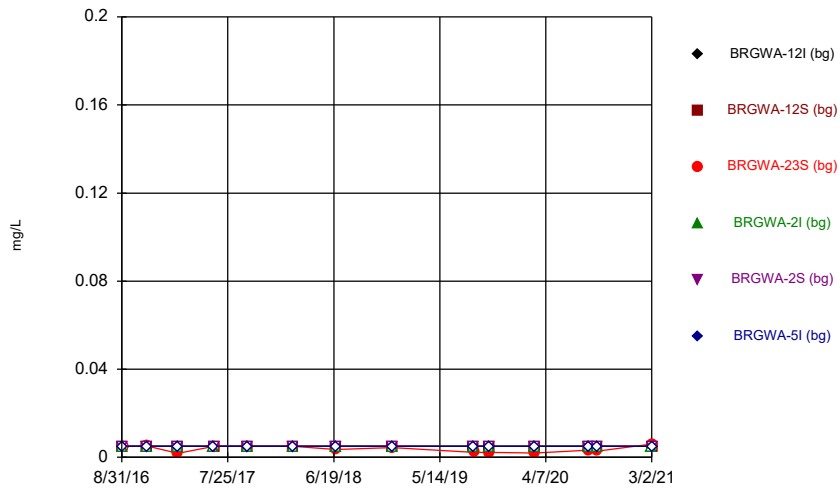
Constituent: pH, Field Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



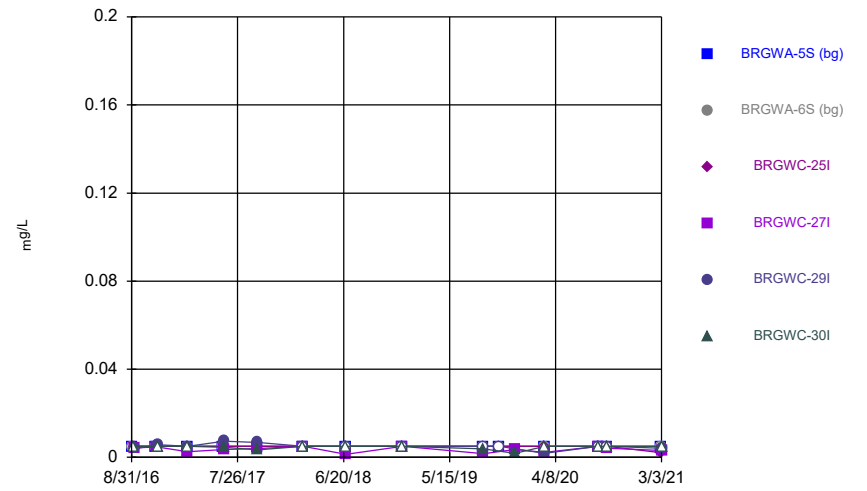
Constituent: pH, Field Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



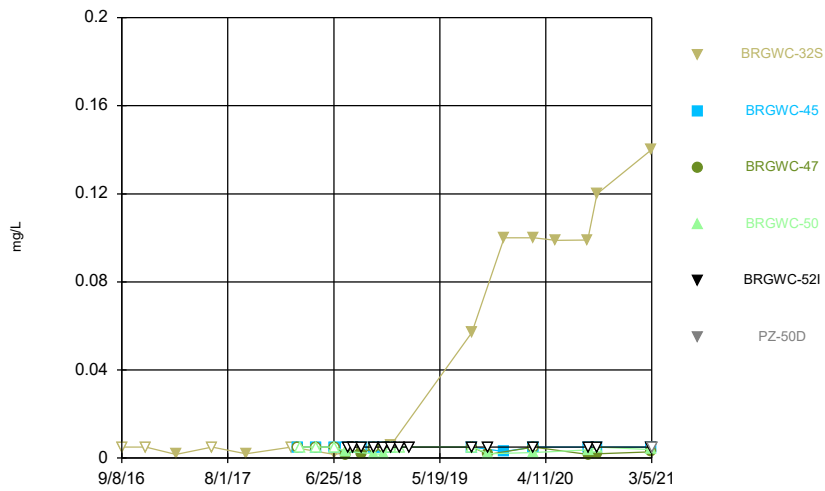
Constituent: Selenium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



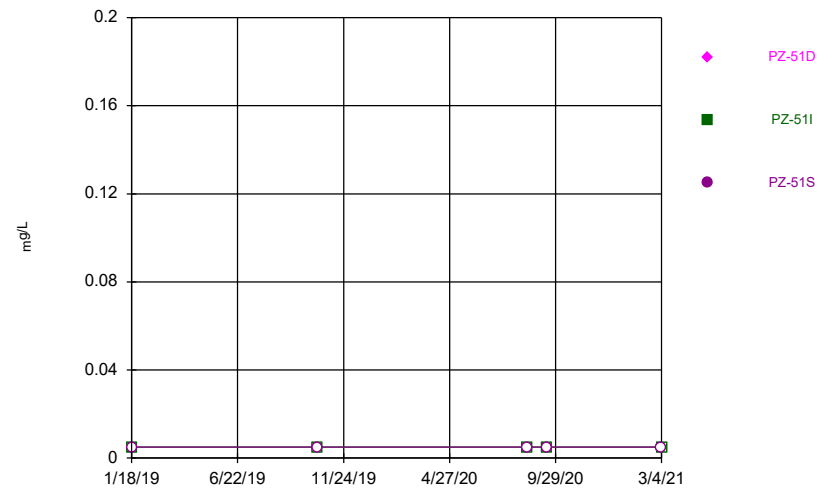
Constituent: Selenium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



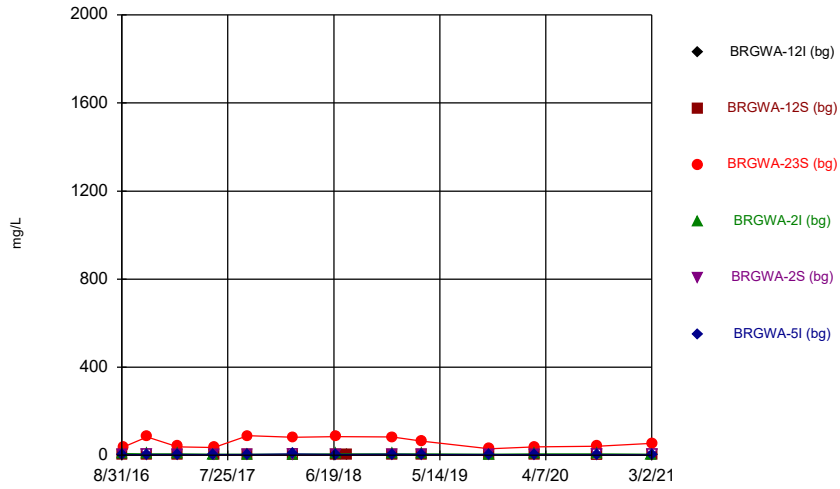
Constituent: Selenium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



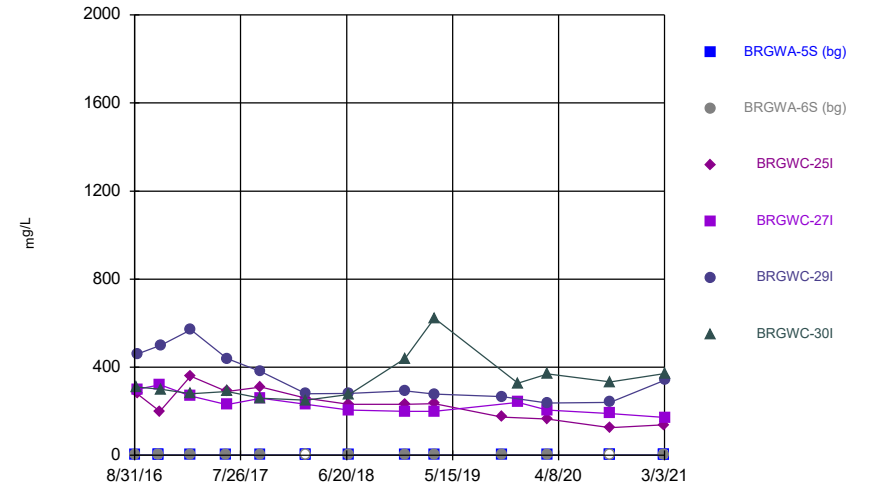
Constituent: Selenium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



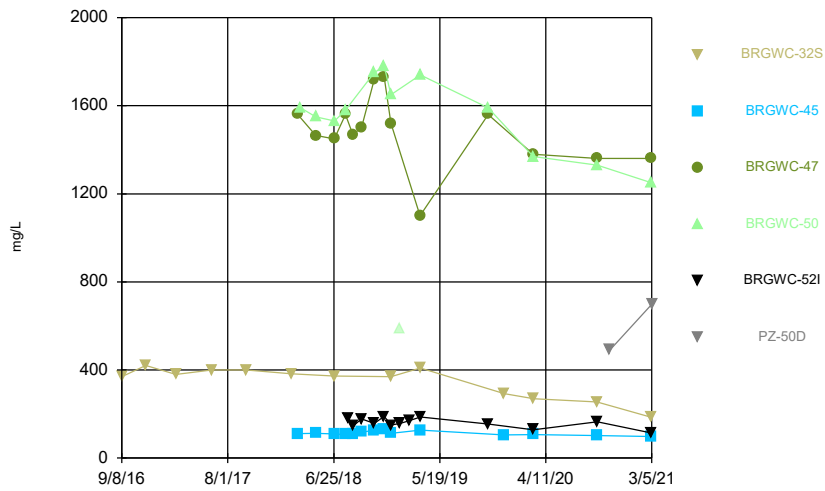
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



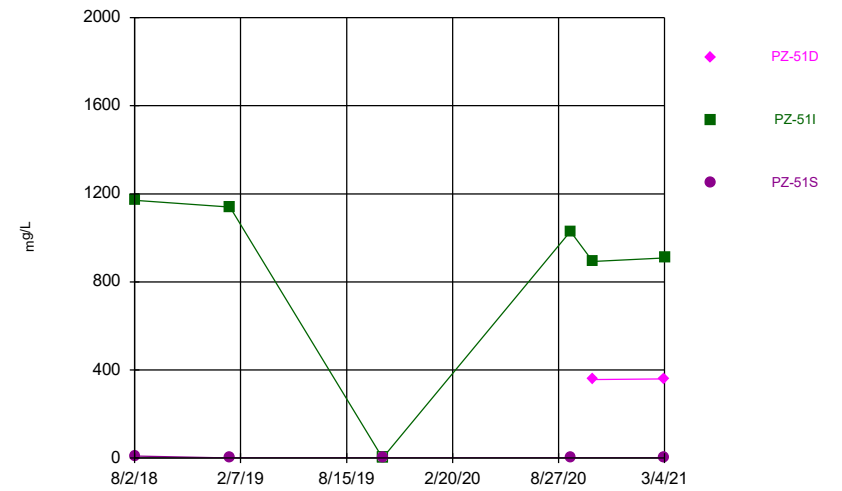
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



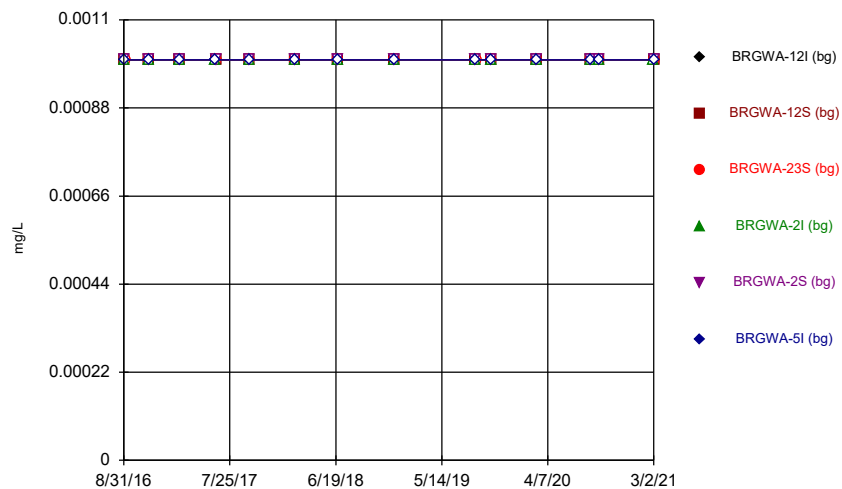
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



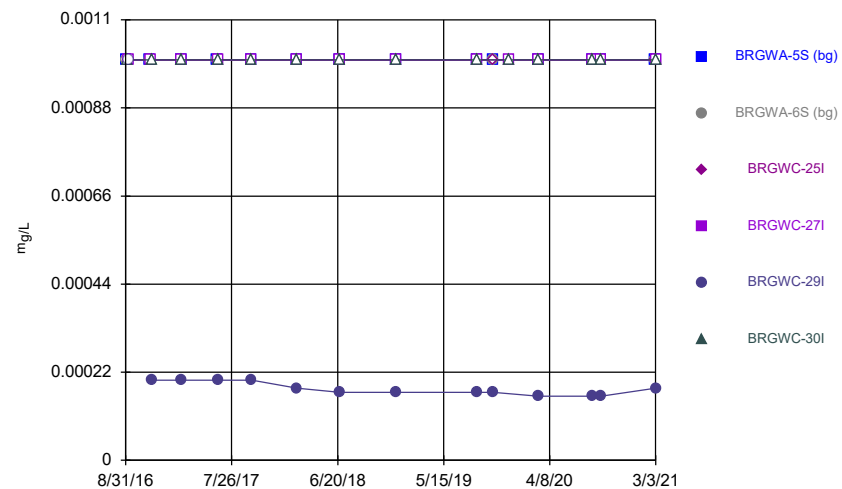
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



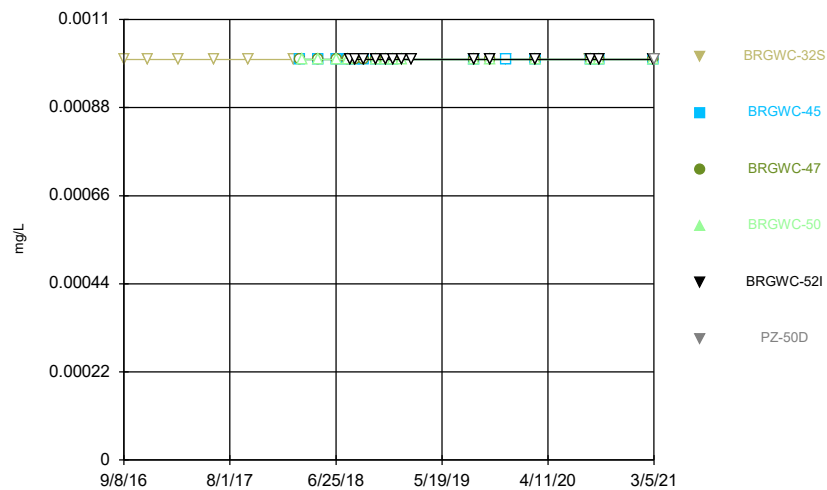
Constituent: Thallium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



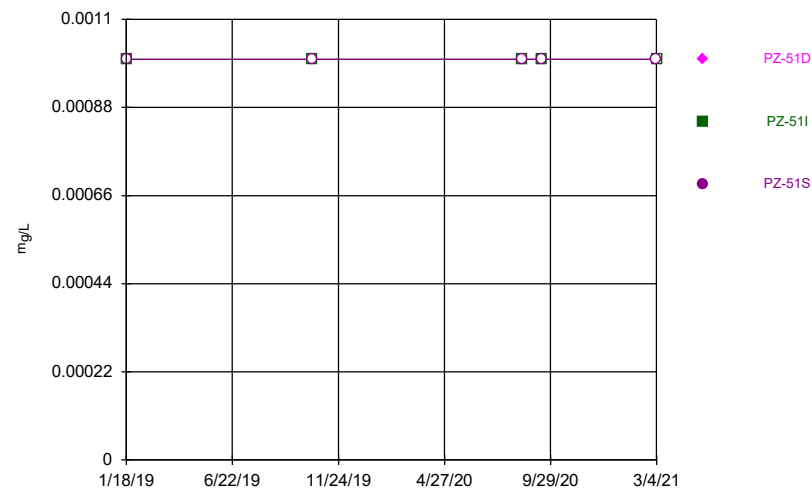
Constituent: Thallium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



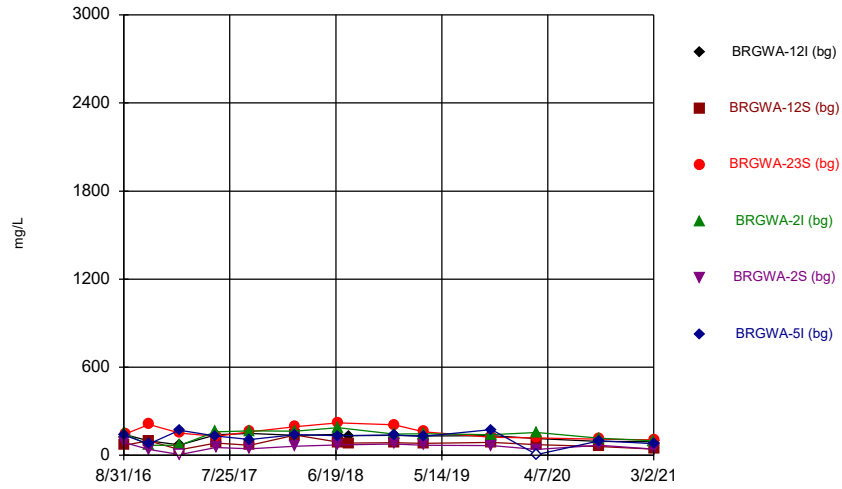
Constituent: Thallium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Time Series



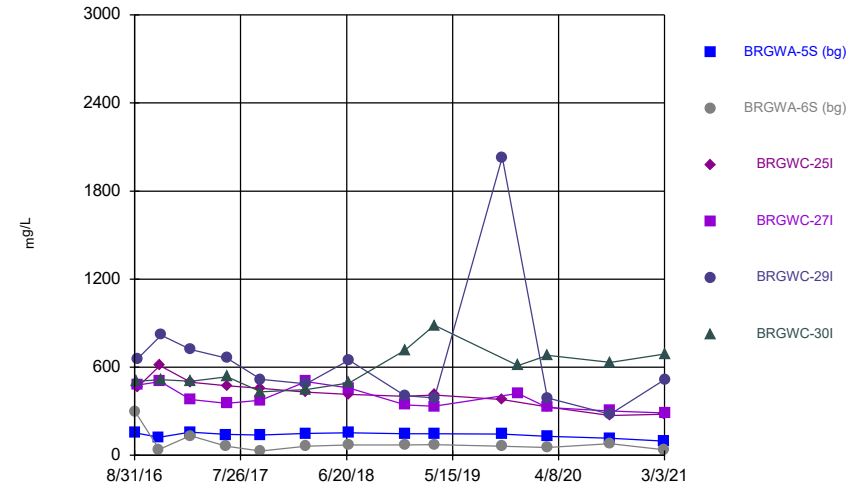
Constituent: Thallium Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



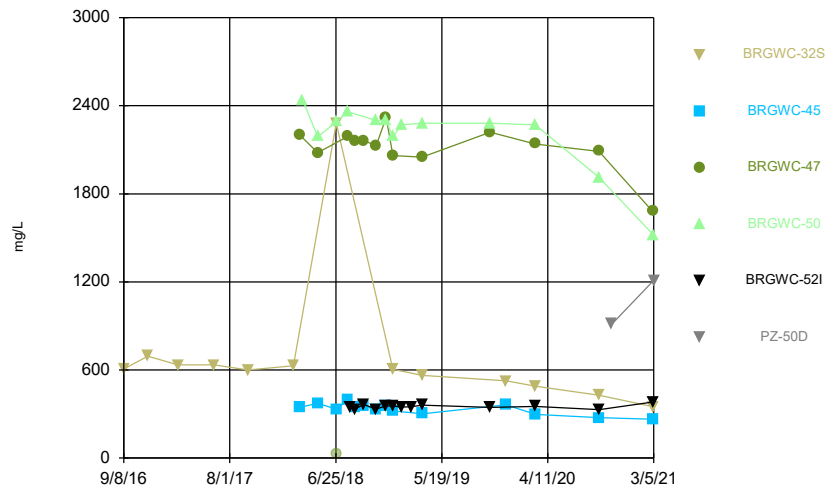
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



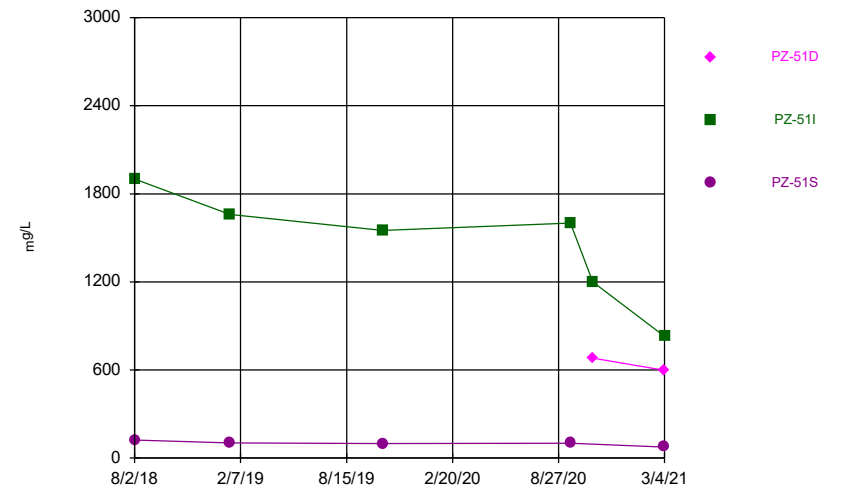
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:20 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP



# Time Series

Constituent: Antimony (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.0009 (J)	<0.003	<0.003
9/1/2016	0.0015 (J)	<0.003				
9/6/2016			<0.003			
11/16/2016	<0.003	0.0011 (J)		<0.003	<0.003	<0.003
11/17/2016			<0.003			
2/20/2017						<0.003
2/21/2017	<0.003	<0.003	<0.003	<0.003	<0.003	
6/12/2017				<0.003		<0.003
6/13/2017		0.0009 (J)	<0.003		0.0011 (J)	
6/14/2017	0.0014 (J)					
9/26/2017	<0.003	0.0032	<0.003	<0.003	<0.003	<0.003
2/13/2018				<0.003	<0.003	<0.003
2/14/2018	<0.003	<0.003	<0.003			
6/26/2018	<0.003	<0.003	0.002 (J)	<0.003	<0.003	<0.003
12/18/2018	0.009	<0.003	<0.003	<0.003	<0.003	<0.003
8/27/2019	0.0072	<0.003		<0.003	<0.003	<0.003
8/29/2019			<0.003			
10/15/2019	0.012	<0.003	<0.003	0.00047 (J)	<0.003	<0.003
3/3/2020	0.0063	<0.003		<0.003	<0.003	<0.003
3/4/2020			<0.003			
8/18/2020	0.0067	<0.003	<0.003	0.00054 (J)	0.00042 (J)	<0.003
9/15/2020	0.01	<0.003	0.00033 (J)	<0.003	<0.003	<0.003
3/1/2021				<0.003		
3/2/2021	0.0095	<0.003	<0.003		<0.003	<0.003

# Time Series

Constituent: Antimony (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.003					
9/1/2016		<0.003				
9/6/2016						<0.003
9/8/2016			<0.003	<0.003	<0.003	
11/15/2016	<0.003	<0.003				
11/17/2016			<0.003			
11/18/2016				<0.003		
11/21/2016					<0.003	<0.003
2/20/2017	<0.003	<0.003				
2/21/2017			<0.003	<0.003		
2/22/2017					<0.003	<0.003
6/12/2017	<0.003	<0.003				
6/13/2017			<0.003	<0.003		
6/14/2017					0.0007 (J)	<0.003
9/26/2017	<0.003	<0.003				
9/27/2017			<0.003	<0.003	<0.003	<0.003
2/13/2018	<0.003	<0.003				
2/14/2018			<0.003	<0.003	<0.003	<0.003
6/26/2018	<0.003	<0.003	<0.003			
6/27/2018				<0.003	<0.003	
6/28/2018						<0.003
12/18/2018	0.00087 (J)	<0.003	<0.003		<0.003	<0.003
12/20/2018				<0.003		
8/27/2019	<0.003	<0.003	<0.003			<0.003
8/28/2019				<0.003	<0.003	
10/15/2019	<0.003	<0.003	<0.003			
10/16/2019					<0.003	
12/4/2019				<0.003		<0.003
3/3/2020	<0.003	<0.003				
3/4/2020			<0.003	<0.003	<0.003	
3/5/2020						<0.003
8/18/2020	0.0016 (J)	<0.003				
8/19/2020			<0.003	<0.003	<0.003	<0.003
9/15/2020	<0.003	<0.003	<0.003		<0.003	
9/16/2020				<0.003		<0.003
3/1/2021		<0.003				
3/2/2021	<0.003		<0.003			
3/3/2021				<0.003	<0.003	<0.003

# Time Series

Constituent: Antimony (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.003					
11/21/2016	<0.003					
2/22/2017	<0.003					
6/14/2017	<0.003					
9/27/2017	<0.003					
2/14/2018	<0.003					
3/6/2018		<0.003	<0.003			
3/15/2018				<0.003		
5/1/2018		<0.003	<0.003 (D)	<0.003		
6/27/2018	<0.003		<0.003			
6/28/2018		<0.003		<0.003		
7/31/2018		<0.003				
8/1/2018			<0.003	<0.003		
8/10/2018					<0.003	
8/23/2018		<0.003	<0.003		0.00085 (J)	
9/19/2018		<0.003	<0.003		<0.003	
10/29/2018		<0.003	<0.003	<0.003	<0.003	
11/28/2018		<0.003	<0.003	<0.003	<0.003	
12/19/2018	<0.003		<0.003	<0.003		
12/20/2018		0.0024 (J)			<0.003	
1/16/2019				<0.003		
1/17/2019					<0.003	
2/13/2019					<0.003	
8/27/2019	<0.003					
8/28/2019		0.00046 (J)	<0.003			
8/29/2019				0.00052 (J)	<0.003	
10/16/2019			<0.003	<0.003	<0.003	
12/3/2019		0.00088 (J)				
12/4/2019	<0.003					
3/4/2020			<0.003	<0.003	0.00043 (J)	
3/5/2020	0.0014 (J)	0.0016 (J)				
8/19/2020	<0.003					
8/20/2020		0.0031	<0.003	<0.003	<0.003	
9/16/2020	<0.003	0.0012 (J)	0.00035 (J)			
9/17/2020				0.00041 (J)	<0.003	
3/2/2021		0.0014 (J)	<0.003			
3/4/2021	<0.003			0.00092 (J)	0.00091 (J)	
3/5/2021						0.00056 (J)

# Time Series

Constituent: Antimony (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.003
1/19/2019		<0.003	
10/18/2019		<0.003	<0.003
8/20/2020		0.0017 (J)	<0.003
9/17/2020		<0.003	0.00043 (J)
3/3/2021	0.0013 (J)		0.0018 (J)
3/4/2021		0.00079 (J)	

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.005	<0.005	<0.005
9/1/2016	<0.005	<0.005				
9/6/2016			<0.005			
11/16/2016	<0.005	<0.005		<0.005	<0.005	<0.005
11/17/2016			<0.005			
2/20/2017						<0.005
2/21/2017	<0.005	<0.005	<0.005	<0.005	<0.005	
6/12/2017				0.0007 (J)		0.0007 (J)
6/13/2017		<0.005	0.0008 (J)		<0.005	
6/14/2017	0.0009 (J)					
9/26/2017	0.0012 (J)	0.0006 (J)	0.0012 (J)	0.001 (J)	<0.005	0.0009 (J)
2/13/2018				<0.005	<0.005	<0.005
2/14/2018	<0.005	<0.005	0.0007 (J)			
6/26/2018	<0.005	<0.005	0.00062 (J)	0.00062 (J)	<0.005	<0.005
12/18/2018	<0.005	<0.005	<0.005	<0.005	<0.005 (X)	<0.005 (X)
8/27/2019	<0.005	<0.005		<0.005	<0.005	<0.005
8/29/2019			<0.005			
10/15/2019	0.00088 (J)	0.00046 (J)	0.00075 (J)	0.0008 (J)	0.00063 (J)	0.00058 (J)
3/3/2020	0.0023 (J)	0.0015 (J)		0.0027 (J)	0.00098 (J)	0.0024 (J)
3/4/2020			<0.005			
8/18/2020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/1/2021				<0.005		
3/2/2021	<0.005	<0.005	<0.005		<0.005	<0.005

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.005					
9/1/2016		<0.005				
9/6/2016						<0.005
9/8/2016			<0.005	<0.005	<0.005	
11/15/2016	<0.005	<0.005				
11/17/2016			<0.005			
11/18/2016				<0.005		
11/21/2016					0.0019 (J)	<0.005
2/20/2017	<0.005	<0.005				
2/21/2017			<0.005	<0.005		
2/22/2017					<0.005	<0.005
6/12/2017	0.0006 (J)	<0.005				
6/13/2017			0.0006 (J)	0.0009 (J)		
6/14/2017					0.002 (J)	<0.005
9/26/2017	0.0007 (J)	0.0007 (J)				
9/27/2017			<0.005	0.0007 (J)	0.0016 (J)	<0.005
2/13/2018	<0.005	<0.005				
2/14/2018			<0.005	<0.005	<0.005	<0.005
6/26/2018	<0.005	<0.005	0.00072 (J)			
6/27/2018				<0.005	<0.005	
6/28/2018						<0.005 (X)
12/18/2018	<0.005 (X)	<0.005 (X)	0.00091 (J)		<0.005	<0.005
12/20/2018				<0.005		
8/27/2019	<0.005	<0.005	<0.005			<0.005
8/28/2019				0.0014 (J)	0.00051 (J)	
10/15/2019	0.00039 (J)	<0.005	0.00052 (J)			
10/16/2019					0.00065 (J)	
12/4/2019				0.0011 (J)		0.00056 (J)
3/3/2020	0.0027 (J)	0.0018 (J)				
3/4/2020			<0.005	<0.005	0.00044 (J)	
3/5/2020						<0.005
8/18/2020	<0.005	<0.005				
8/19/2020			<0.005	<0.005	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005		<0.005	
9/16/2020				<0.005		<0.005
3/1/2021		<0.005				
3/2/2021	<0.005		<0.005			
3/3/2021				<0.005	0.0015 (J)	<0.005

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.005					
11/21/2016	<0.005					
2/22/2017	<0.005					
6/14/2017	<0.005					
9/27/2017	<0.005					
2/14/2018	<0.005					
3/6/2018		<0.005 (X)	<0.005 (X)			
3/15/2018				0.0014 (J)		
5/1/2018		0.0021 (J)	0.0018 (JD)	<0.005		
6/27/2018	<0.005		0.0016 (J)			
6/28/2018		<0.005 (X)		<0.005		
7/31/2018		<0.005				
8/1/2018			0.0028 (J)	0.00074 (J)		
8/10/2018					<0.005	
8/23/2018		0.00075 (J)	<0.005		<0.005	
9/19/2018		<0.005	<0.005		0.0013 (J)	
10/29/2018		<0.005	0.0012 (J)	<0.005	0.0038 (J)	
11/28/2018		0.00096 (J)	0.0019 (J)	<0.005	0.0016 (J)	
12/19/2018	<0.005		0.00075 (J)	<0.005		
12/20/2018		<0.005			0.0032 (J)	
1/16/2019				<0.005		
1/17/2019					0.0032 (J)	
2/13/2019					<0.005	
8/27/2019	<0.005					
8/28/2019		0.00058 (J)	0.0018 (J)			
8/29/2019				<0.005	0.00067 (J)	
10/16/2019			<0.005	<0.005	0.0026 (J)	
12/3/2019		0.0007 (J)				
12/4/2019	0.00053 (J)					
3/4/2020			0.00049 (J)	0.00046 (J)	0.0047 (J)	
3/5/2020	<0.005	<0.005				
8/19/2020	<0.005					
8/20/2020		<0.005	0.00089 (J)	<0.005	0.0031 (J)	
9/16/2020	<0.005	<0.005	<0.005			
9/17/2020				<0.005	<0.005	
3/2/2021		<0.005	<0.005			
3/4/2021	<0.005			<0.005	0.003 (J)	
3/5/2021						0.00087 (J)

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.005
1/19/2019		<0.005	
10/18/2019		<0.005	<0.005
8/20/2020		<0.005	<0.005
9/17/2020		<0.005	<0.005
3/3/2021	0.0014 (J)		<0.005
3/4/2021		<0.005	



# Time Series

Constituent: Barium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.0239	0.0099 (J)	0.0273
9/1/2016	0.0454	0.0528				
9/6/2016			0.0624			
11/16/2016	0.0623	0.0509		0.0147	0.0102	0.0365
11/17/2016			0.109			
2/20/2017						0.0336
2/21/2017	0.0644	0.0531	0.095	0.0109	0.0094 (J)	
6/12/2017				0.0094 (J)		0.0322
6/13/2017		0.0543	0.0861		0.0094 (J)	
6/14/2017	0.0726					
9/26/2017	0.0765	0.0547	0.104	0.0156	0.0096 (J)	0.0364
2/13/2018				0.0134	0.0102	0.054
2/14/2018	0.0786	0.0603	0.129			
6/26/2018	0.063	0.059	0.13	0.014	0.0093 (J)	0.032
12/18/2018	0.067	0.056	0.13	0.0076 (J)	0.01	0.038
8/27/2019	0.058	0.057		0.012	0.0095 (J)	0.028
8/29/2019			0.076			
10/15/2019	0.06	0.053	0.069	0.013	0.0091 (J)	0.032
3/3/2020	0.076	0.06		0.017	0.011	0.028
3/4/2020			0.087			
8/18/2020	0.053	0.058	0.067	0.01 (J)	0.01	0.022
9/15/2020	0.059	0.058	0.086	0.0083 (J)	0.0094 (J)	0.022
3/1/2021				0.0074		
3/2/2021	0.053	0.063	0.097		0.0094	0.023

# Time Series

Constituent: Barium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	0.0495					
9/1/2016		0.0142				
9/6/2016						0.0206
9/8/2016			0.0378	0.0184	0.0199	
11/15/2016	0.0512	0.0126				
11/17/2016			0.0448			
11/18/2016				0.0173		
11/21/2016					0.0221 (J)	0.0237 (J)
2/20/2017	0.0586	0.0142				
2/21/2017			0.0447	0.015		
2/22/2017					0.0179	0.0219
6/12/2017	0.0567	0.0134				
6/13/2017			0.0351	0.0143		
6/14/2017					0.0157	0.0197
9/26/2017	0.0586	0.0133				
9/27/2017			0.0383	0.017	0.0165	0.0213
2/13/2018	0.054	0.0145				
2/14/2018			0.0327	0.0166	0.0163	0.0236
6/26/2018	0.063	0.014	0.031			
6/27/2018				0.015	0.017	
6/28/2018						0.023
12/18/2018	0.045	0.013	0.03		0.017	0.029
12/20/2018				0.015		
8/27/2019	0.056	0.013	0.027			0.027
8/28/2019				0.019	0.02	
10/15/2019	0.049	0.013	0.027			
10/16/2019					0.019	
12/4/2019				0.016		0.021
3/3/2020	0.051	0.019				
3/4/2020			0.026	0.015	0.018	
3/5/2020						0.025
8/18/2020	0.04	0.014				
8/19/2020			0.027	0.016	0.019	0.026
9/15/2020	0.038	0.013	0.024		0.017	
9/16/2020				0.016		0.022
3/1/2021		0.016				
3/2/2021	0.037		0.026			
3/3/2021				0.016	0.021	0.028

# Time Series

Constituent: Barium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	0.0593					
11/21/2016	0.0532 (BR)					
2/22/2017	0.0498					
6/14/2017	0.0421					
9/27/2017	0.0411					
2/14/2018	0.0417					
3/6/2018		0.1	0.0519			
3/15/2018				0.021		
5/1/2018		0.084	0.057 (D)	0.024		
6/27/2018	0.038		0.046			
6/28/2018		0.067		0.021		
7/31/2018		0.087 (J+X)				
8/1/2018			0.043 (J+X)	0.02 (J+X)		
8/10/2018					0.038	
8/23/2018		0.084	0.038		0.03 (JX)	
9/19/2018		0.086	0.036		0.03	
10/29/2018		0.098 (J+X)	0.041 (J+X)	0.019 (J+X)	0.025 (J+X)	
11/28/2018		0.11	0.039	0.02	0.017	
12/19/2018	0.036		0.04	0.02		
12/20/2018		0.093			0.013	
1/16/2019				0.02		
1/17/2019					0.017	
2/13/2019					0.025	
8/27/2019	0.032					
8/28/2019		0.11	0.035			
8/29/2019				0.018	0.017	
10/16/2019			0.032	0.017	0.015	
12/3/2019		0.099				
12/4/2019	0.028					
3/4/2020			0.038	0.019	0.022	
3/5/2020	0.026	0.078				
8/19/2020	0.025					
8/20/2020		0.083	0.035	0.019	0.017	
9/16/2020	0.024	0.085	0.028			
9/17/2020				0.02	0.02	
3/2/2021		0.061	0.036			
3/4/2021	0.024			0.025	0.019	
3/5/2021						0.043

# Time Series

Constituent: Barium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			0.031
1/19/2019		0.017	
10/18/2019		0.014	0.032
8/20/2020		0.013	0.03
9/17/2020		0.015	0.033
3/3/2021	0.08		0.037
3/4/2021		0.016	

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.0005	<0.0005	<0.0005
9/1/2016	<0.0005	<0.0005				
9/6/2016			<0.0005			
11/16/2016	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
11/17/2016			<0.0005			
2/20/2017						<0.0005
2/21/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6/12/2017				<0.0005		<0.0005
6/13/2017		<0.0005	<0.0005		<0.0005	
6/14/2017	<0.0005					
9/26/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/13/2018				<0.0005	<0.0005	<0.0005
2/14/2018	<0.0005	<0.0005	<0.0005			
6/26/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
12/18/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8/27/2019	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
8/29/2019			<0.0005			
10/15/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/3/2020	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
3/4/2020			<0.0005			
8/18/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
9/15/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/1/2021				<0.0005		
3/2/2021	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.0005					
9/1/2016		<0.0005				
9/6/2016						<0.0005
9/8/2016			<0.0005	0.0002 (J)	0.0011 (J)	
11/15/2016	<0.0005	<0.0005				
11/17/2016			<0.0005			
11/18/2016				0.0002 (J)		
11/21/2016					0.0012 (J)	<0.0005
2/20/2017	<0.0005	<0.0005				
2/21/2017			<0.0005	0.0002 (J)		
2/22/2017					0.0014 (J)	<0.0005
6/12/2017	<0.0005	<0.0005				
6/13/2017			<0.0005	0.0002 (J)		
6/14/2017					0.0012 (J)	<0.0005
9/26/2017	<0.0005	<0.0005				
9/27/2017			<0.0005	0.0001 (J)	0.001 (J)	<0.0005
2/13/2018	<0.0005	<0.0005				
2/14/2018			<0.0005	<0.0005	<0.0005	<0.0005
6/26/2018	<0.0005	<0.0005	<0.0005			
6/27/2018				0.00014 (J)	0.0008 (J)	
6/28/2018						<0.0005
12/18/2018	<0.0005	<0.0005	<0.0005		0.00071 (J)	<0.0005
12/20/2018				<0.0005 (X)		
8/27/2019	<0.0005	<0.0005	<0.0005			<0.0005
8/28/2019				0.00012 (J)	0.0008 (J)	
10/15/2019	<0.0005	<0.0005	<0.0005			
10/16/2019					0.00072 (J)	
10/17/2019				<0.0005		<0.0005
12/4/2019				0.00012 (J)		<0.0005
3/3/2020	<0.0005	<0.0005				
3/4/2020			<0.0005	0.00012 (J)	0.00073 (J)	
3/5/2020						<0.0005
8/18/2020	<0.0005	<0.0005				
8/19/2020			<0.0005	9.9E-05 (J)	0.00074 (J)	<0.0005
9/15/2020	<0.0005	<0.0005	<0.0005		0.00071 (J)	
9/16/2020				0.00011 (J)		<0.0005
3/1/2021		<0.0005				
3/2/2021	<0.0005		<0.0005			
3/3/2021				7.1E-05 (J)	0.00094	<0.0005

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.0005					
11/21/2016	<0.0005					
2/22/2017	<0.0005					
6/14/2017	<0.0005					
9/27/2017	<0.0005					
2/14/2018	<0.0005					
3/6/2018		<0.0005	<0.0005			
3/15/2018				<0.0005		
5/1/2018		<0.0005	<0.0005 (D)	<0.0005		
6/27/2018	<0.0005		<0.0005			
6/28/2018		<0.0005		0.003 (J)		
7/31/2018		<0.0005				
8/1/2018			<0.0005	0.0025 (J)		
8/10/2018					<0.0005	
8/23/2018		7.9E-05 (J)	5.5E-05 (J)		<0.0005	
9/19/2018		<0.0005	<0.0005		<0.0005	
10/29/2018		<0.0005	<0.0005	0.0042	<0.0005	
11/28/2018		<0.0005	5.6E-05 (J)	0.0029 (J)	<0.0005	
12/19/2018	<0.0005		<0.0005 (X)	0.0043		
12/20/2018		<0.0005			<0.0005	
1/16/2019				0.0038		
1/17/2019					<0.0005	
2/13/2019					<0.0005	
8/27/2019	<0.0005					
8/28/2019		<0.0005	<0.0005			
8/29/2019				0.0029 (J)	<0.0005	
10/16/2019			<0.0005	0.0027 (J)	<0.0005	
10/17/2019	<0.0005	<0.0005				
12/3/2019		<0.0005				
12/4/2019	<0.0005					
3/4/2020			<0.0005	0.0052	<0.0005	
3/5/2020	<0.0005	<0.0005				
8/19/2020	<0.0005					
8/20/2020		4.6E-05 (J)	4.7E-05 (J)	0.0044	<0.0005	
9/16/2020	<0.0005	<0.0005	<0.0005			
9/17/2020				0.0065	<0.0005	
3/2/2021		<0.0005	<0.0005			
3/4/2021	<0.0005			0.0059	<0.0005	
3/5/2021						<0.0005

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.0005
1/19/2019		6.4E-05 (J)	
10/18/2019		<0.0005	<0.0005
8/20/2020		7.7E-05 (J)	<0.0005
9/17/2020		9.6E-05 (J)	<0.0005
3/3/2021	<0.0005		<0.0005
3/4/2021		9.7E-05 (J)	



# Time Series

Constituent: Boron (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.0072 (J)	<0.04	<0.04
9/1/2016	0.0093 (J)	<0.04				
9/6/2016			0.0362 (J)			
11/16/2016	0.0127 (J)	0.0081 (J)		0.0117 (J)	0.0109 (J)	0.0187 (J)
11/17/2016			0.0617			
2/20/2017						0.0066 (J)
2/21/2017	0.0071 (J)	<0.04	0.0245 (J)	0.0088 (J)	<0.04	
6/12/2017				0.0133 (J)		<0.04
6/13/2017		<0.04	<0.04		<0.04	
6/14/2017	0.0078 (J)					
9/26/2017	<0.04	<0.04	<0.04	0.0093 (J)	<0.04	<0.04
2/13/2018				0.0141 (J)	<0.04	<0.04
2/14/2018	0.0068 (J)	<0.04	0.0314 (J)			
6/26/2018	0.008 (J)	<0.04	0.062	0.012 (J)	<0.04	0.0042 (J)
12/18/2018	0.0083 (J)	0.0053 (J)	0.055	0.0086 (J)	<0.04	<0.04
3/19/2019	0.008 (J)	<0.04	0.068	0.00565 (JD)	<0.04	<0.04
10/15/2019	0.006 (J)	<0.04	0.022 (J)	0.0067 (J)	<0.04	<0.04
3/3/2020	0.01 (J)	0.0065 (J)		0.0082 (J)	<0.04	<0.04
3/4/2020			0.044 (J)			
9/15/2020	0.0071 (J)	<0.04	0.033 (J)	<0.04	<0.04	<0.04
3/1/2021				<0.04		
3/2/2021	0.0057 (J)	<0.04	0.042		<0.04	0.0053 (J)

# Time Series

Constituent: Boron (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.04					
9/1/2016		<0.04				
9/6/2016						1.96
9/8/2016			1.03	1.63	1.35	
11/15/2016	0.0085 (J)	0.0123 (J)				
11/17/2016			1.7			
11/18/2016				1.91		
11/21/2016					1.74	1.68
2/20/2017	0.0093 (J)	0.0157 (J)				
2/21/2017			1.55	1.39		
2/22/2017					1.5	1.48
6/12/2017	<0.04	<0.04				
6/13/2017			1.77	1.62		
6/14/2017					1.6	1.71
9/26/2017	<0.04	<0.04				
9/27/2017			1.75	1.16	1.83	1.61
2/13/2018	<0.04	<0.04				
2/14/2018			1.47	1.17	1.8	1.47
6/26/2018	0.0056 (J)	0.0041 (J)	1.8			
6/27/2018				1.4 (J+X)	1.8 (J+X)	
6/28/2018						1.4
12/18/2018	0.0062 (J)	<0.04	1.5		1.5	1.6
12/20/2018				1.4		
3/19/2019	<0.04	<0.04		1.1		
3/20/2019			1.5 (D)		1.5	1.7
10/15/2019	0.006 (J)	0.01 (J)	1.2			
10/16/2019					1.2	
10/17/2019				0.97		1.7
12/4/2019				0.89		1.6
3/3/2020	<0.04	<0.04				
3/4/2020			1.2	0.81	1.1	
3/5/2020						1.5
9/15/2020	<0.04	<0.04	1.2		1.1	
9/16/2020				1.2		1.7
3/1/2021		<0.04				
3/2/2021	0.0071 (J)		1.1			
3/3/2021				0.91	1	1.4

# Time Series

Constituent: Boron (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	1.28					
11/21/2016	1.19					
2/22/2017	1.43					
6/14/2017	1.57					
9/27/2017	1.51					
2/14/2018	1.6					
3/6/2018		0.0198 (J)	0.428			
3/15/2018				0.32		
5/1/2018		0.015 (J)	0.435 (D)	0.32		
6/27/2018	1.5 (J+X)		0.49 (J+X)			
6/28/2018		<0.04 (X)		0.34		
7/31/2018		0.035 (J)				
8/1/2018			0.39	0.28		
8/10/2018					1.3	
8/23/2018		0.022 (J)	0.39		1.4	
9/19/2018		0.021 (J)	0.43		1.7	
10/29/2018		0.021 (J)	0.4	0.3	1.3	
11/28/2018		<0.04 (X)	0.51	0.35	1.5	
12/19/2018	1.6		0.41	0.35		
12/20/2018		0.028 (J)			1.6	
1/16/2019				0.37		
1/17/2019					1.5	
2/13/2019					1.7	
3/19/2019			0.41			
3/20/2019	1.4	0.043		0.34	1.6 (D)	
10/16/2019			0.36	0.31	1.3	
10/17/2019	1.5	0.064				
12/3/2019		0.027 (J)				
12/4/2019	1.6					
3/4/2020			0.49	0.32	1.4	
3/5/2020	1.5	0.044 (J)				
9/16/2020	1.4	0.028 (J)	0.47			
9/17/2020				0.36	1.9	
10/27/2020						0.15
3/2/2021		0.044	0.58			
3/4/2021	1.1			0.31	1.4	
3/5/2021						0.2

# Time Series

Constituent: Boron (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
8/2/2018			0.016 (J)
8/3/2018		0.3	
1/18/2019			0.0057 (J)
1/19/2019		0.39	
10/18/2019		0.38	0.0057 (J)
9/17/2020		0.43	0.0063 (J)
10/27/2020	0.029 (J)	0.37	
3/3/2021	0.028 (J)		0.0096 (J)
3/4/2021		0.36	

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.0005	<0.0005	<0.0005
9/1/2016	<0.0005	<0.0005				
9/6/2016			<0.0005			
11/16/2016	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
11/17/2016			<0.0005			
2/20/2017						<0.0005
2/21/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6/12/2017				<0.0005		<0.0005
6/13/2017		<0.0005	<0.0005		<0.0005	
6/14/2017	<0.0005					
9/26/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/13/2018				<0.0005	<0.0005	<0.0005
2/14/2018	<0.0005	<0.0005	<0.0005			
6/26/2018	<0.0005	<0.0005	0.00015 (J)	<0.0005	<0.0005	<0.0005
7/31/2018	<0.0005	<0.0005				
12/18/2018	<0.0005	<0.0005	0.0001 (J)	<0.0005	<0.0005	<0.0005
8/27/2019	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
8/29/2019			<0.0005			
10/15/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/3/2020	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
3/4/2020			<0.0005			
8/18/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
9/15/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/1/2021				<0.0005		
3/2/2021	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.0005					
9/1/2016		<0.0005				
9/6/2016						<0.0005
9/8/2016			<0.0005	7E-05 (J)	<0.0005	
11/15/2016	<0.0005	<0.0005				
11/17/2016			<0.0005			
11/18/2016				9E-05 (J)		
11/21/2016					<0.0005	8E-05 (J)
2/20/2017	<0.0005	<0.0005				
2/21/2017			<0.0005	<0.0005		
2/22/2017					<0.0005	<0.0005
6/12/2017	<0.0005	<0.0005				
6/13/2017			<0.0005	<0.0005		
6/14/2017					<0.0005	<0.0005
9/26/2017	<0.0005	<0.0005				
9/27/2017			<0.0005	<0.0005	<0.0005	<0.0005
2/13/2018	<0.0005	<0.0005				
2/14/2018			<0.0005	<0.0005	<0.0005	<0.0005
6/26/2018	<0.0005	<0.0005	<0.0005			
6/27/2018				<0.0005	<0.0005	
6/28/2018						<0.0005
12/18/2018	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005
12/20/2018				<0.0005		
8/27/2019	<0.0005	<0.0005	<0.0005			<0.0005
8/28/2019				<0.0005	<0.0005	
10/15/2019	<0.0005	<0.0005	<0.0005			
10/16/2019					<0.0005	
10/17/2019				<0.0005		<0.0005
12/4/2019				<0.0005		<0.0005
3/3/2020	<0.0005	<0.0005				
3/4/2020			<0.0005	<0.0005	<0.0005	
3/5/2020						<0.0005
8/18/2020	<0.0005	<0.0005				
8/19/2020			<0.0005	<0.0005	<0.0005	<0.0005
9/15/2020	<0.0005	<0.0005	<0.0005		<0.0005	
9/16/2020				<0.0005		<0.0005
3/1/2021		<0.0005				
3/2/2021	<0.0005		<0.0005			
3/3/2021				<0.0005	<0.0005	<0.0005

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.0005					
11/21/2016	8E-05 (J)					
2/22/2017	0.0001 (J)					
6/14/2017	<0.0005					
9/27/2017	<0.0005					
2/14/2018	<0.0005					
3/6/2018		<0.0005	<0.0005			
3/15/2018				0.038		
5/1/2018		<0.0005	<0.0005 (D)	0.011		
6/27/2018	0.00011 (J)		0.00014 (J)			
6/28/2018		<0.0005		0.087		
7/31/2018		<0.0005				
8/1/2018			0.00011 (J)	0.042		
8/10/2018					<0.0005	
8/23/2018		<0.0005	0.00018 (J)		<0.0005	
9/19/2018		<0.0005	0.00015 (J)		<0.0005	
10/29/2018		9.8E-05 (J)	0.00019 (J)	0.083	<0.0005	
11/28/2018		<0.0005	0.00022 (J)	0.031	<0.0005	
12/19/2018	<0.0005 (X)		<0.0005	0.042		
12/20/2018		<0.0005 (X)			<0.0005	
1/16/2019				0.028		
1/17/2019					<0.0005	
2/13/2019					<0.0005	
8/27/2019	<0.0005					
8/28/2019		<0.0005	0.00017 (J)			
8/29/2019				0.0071	<0.0005	
10/16/2019			0.00018 (J)	0.014	<0.0005	
10/17/2019	<0.0005	<0.0005				
12/3/2019		0.00011 (J)				
12/4/2019	<0.0005					
3/4/2020			0.00024 (J)	0.013	<0.0005	
3/5/2020	<0.0005	<0.0005				
8/19/2020	<0.0005					
8/20/2020		0.00014 (J)	<0.0005	0.0079	<0.0005	
9/16/2020	<0.0005	<0.0005	<0.0005			
9/17/2020				0.021	<0.0005	
10/27/2020						<0.0005
3/2/2021		0.0002 (J)	<0.0005			
3/4/2021	<0.0005			0.019	<0.0005	
3/5/2021						<0.0005

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
8/2/2018			<0.0005
8/3/2018		0.0015	
1/18/2019			<0.0005
1/19/2019		0.0016	
10/18/2019		0.00083 (J)	<0.0005
8/20/2020		0.0019 (J)	<0.0005
9/17/2020		0.033	<0.0005
10/27/2020	<0.0005	0.0051	
3/3/2021	<0.0005		<0.0005
3/4/2021		0.017	



# Time Series

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				12.6	4.09	13.5
9/1/2016	8.98	4.61				
9/6/2016			12.8			
11/16/2016	15.4	4.17		12.1	4.25	14.9
11/17/2016			19.2			
2/20/2017						13.9
2/21/2017	17.4	5	15.1	11.4	4.02	
6/12/2017				9.34		13.7
6/13/2017		4.98	10.2		3.84	
6/14/2017	18.1					
9/26/2017	19.3	4.49	15	14.3	3.31	14.4
2/13/2018				<25	3.94	<25
2/14/2018	<25	<25	<25			
6/26/2018	15.5 (J)	6.4	18.5 (J)	16 (J)	3.6	13.5 (J)
7/31/2018	18.2 (J)	6.1				
12/18/2018	18.7 (J)	5.5	16.8 (J)	14.5 (J)	3.8	16.4 (J)
3/19/2019	15.9 (J)	5.9	13.5 (J)	14.3 (JD)	3.9	12.3 (J)
10/15/2019	15.9	6.2	8.6	15.1	3.7	14.4
3/3/2020	19.4	6.8		20	4	14.9
3/4/2020			11.5			
9/15/2020	14.5	5.7	10.7	14.1	3.9	12.7
3/1/2021				15.4		
3/2/2021	11.7	5.4	11.6		4	13.2

# Time Series

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	19.6					
9/1/2016		3.3				
9/6/2016						63.3
9/8/2016			59.4	87.2	93.9	
11/15/2016	21.7	3.44				
11/17/2016			78.4			
11/18/2016				82.4		
11/21/2016					99.1	60.7
2/20/2017	21.1	3.52				
2/21/2017			80.9	75.1		
2/22/2017					105	62.1
6/12/2017	21.5	3.11				
6/13/2017			62	61		
6/14/2017					91.3	63.5
9/26/2017	24	3.15				
9/27/2017			65.8	72.6	84	63.5
2/13/2018	<25	3.65				
2/14/2018			58.8	74.1	72.1	62.8
6/26/2018	23.5 (J)	3.3	55.5			
6/27/2018				68.2	61.1	
6/28/2018						73.3
12/18/2018	19.8 (J)	3.5	54.7		52.9	102
12/20/2018				63.9		
3/19/2019	21.4 (J)	3.6		60.2		
3/20/2019			53.95 (D)		55.4	141
10/15/2019	20	3.5	48.3			
10/16/2019					54	
12/4/2019				76.8		92.6
3/3/2020	23.2	5				
3/4/2020			52	72.3	59.3	
3/5/2020						119
9/15/2020	16.8	3.7	40.1		55.1	
9/16/2020				62.5		106
3/1/2021		4.2				
3/2/2021	16.8		44.1			
3/3/2021				58.2	73.3	122

# Time Series

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	60.5					
11/21/2016	31.1					
2/22/2017	67.3					
6/14/2017	60.2					
9/27/2017	68.4					
2/14/2018	70.2					
3/6/2018		39.5	326			
3/15/2018				233		
5/1/2018		45.5	302 (D)	225		
6/27/2018	67.1		340			
6/28/2018		41.9		242		
7/31/2018		41.5				
8/1/2018			358	246		
8/10/2018					410 (O)	
8/23/2018		42.3	323		33.9	
9/19/2018		41.9	321		42.3	
10/29/2018		40.8	326	236	39.8	
11/28/2018		45.1	354	254	38.2	
12/19/2018	61.2		330	252		
12/20/2018		39			43.2	
1/16/2019				248		
1/17/2019					39.4	
2/13/2019					36.9	
3/19/2019			335			
3/20/2019	52.8	31.2		222	40.85 (D)	
10/16/2019			338	241	48.4	
12/3/2019		43.7				
12/4/2019	52.7					
3/4/2020			353	245	49.5	
3/5/2020	52.1	37.9				
9/16/2020	43.1	39.7	309			
9/17/2020				206	35.4	
10/27/2020						159
3/2/2021		33.9	353			
3/4/2021	35.7			214	47.5	
3/5/2021						207

# Time Series

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			9.1
1/19/2019		196	
10/18/2019		177	7.1
9/17/2020		168	7.7
10/27/2020	132	183	
3/3/2021	119		7.9
3/4/2021		182	

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				2.3	2	4.4
9/1/2016	3.3	3.5				
9/6/2016			5.8			
11/16/2016	3.6	3.6		2	1.8	4.4
11/17/2016			4.3			
2/20/2017						4.8
2/21/2017	3.2	3.2	3.5	2	1.8	
6/12/2017				2.1		4.2
6/13/2017		3.3	3.2		1.7	
6/14/2017	3.1					
9/26/2017	3.3	3.3	3.5	2	1.8	4.4
2/13/2018				2.1	1.7	4.7
2/14/2018	3.1	3.5	3.8			
6/26/2018	3.4	3.4	3.8	2.4	2.2	4.5
7/31/2018	2.6	2.9				
12/18/2018	2.8	2.9	3.9	1.8	1.9	4.5
3/19/2019	3.2	3.5	3.8	2.45 (D)	2	4.5
10/15/2019	3.1	3.4	3.5	2.2	1.9	4.2
3/3/2020	2.6	3.2		1.9	1.9	3.9
3/4/2020			3.3			
9/15/2020	2.4	3.5	3.1	1.9	1.7	3.7
3/1/2021				1.8		
3/2/2021	2.6	3.7	3.5		1.7	3.8

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	3.6					
9/1/2016		2.5				
9/6/2016						6.7
9/8/2016			5.5	6	6.4	
11/15/2016	4	2.3				
11/17/2016			7.7			
11/18/2016				6.3		
11/21/2016					6.9	6.5
2/20/2017	3.9	2.4				
2/21/2017			7.3	5.1		
2/22/2017					6.2	5.6
6/12/2017	3.8	2.2				
6/13/2017			7.5	4.7		
6/14/2017					7.2	5.7
9/26/2017	4.1	2.3				
9/27/2017			7.9	4.9	8.7	6
2/13/2018	4.1	2.3				
2/14/2018			6.7	5.6	7.2	5.9
6/26/2018	4.1	2.6	6.7			
6/27/2018				5.9	6.3	
6/28/2018						7 (J-X)
12/18/2018	3.8	2.3	6.2		5.4	5.8
12/20/2018				5.6 (J-X)		
3/19/2019	4.2	2.6		5.8		
3/20/2019			6.3 (D)		5.6	5.8
10/15/2019	3.7	2.4	5			
10/16/2019					6.9	
12/4/2019				5.6		5
3/3/2020	3.6	2.9				
3/4/2020			5	5.1	5.8	
3/5/2020						4.3
9/15/2020	3.7	2.3	4.9		5.5	
9/16/2020				5.4		4.4
3/1/2021		2.1				
3/2/2021	3.7		4.5			
3/3/2021				4.5	5.6	4

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	6.8					
11/21/2016	7.8					
2/22/2017	7					
6/14/2017	7.1					
9/27/2017	7.2					
2/14/2018	7.4					
3/6/2018		56.6	8.4			
3/15/2018				23.3		
5/1/2018		58.5	5.7 (D)	23.4		
6/27/2018	7.1		4.4			
6/28/2018		50.2 (J-X)		24 (J-X)		
7/31/2018		59				
8/1/2018			5.2	25.7		
8/10/2018					6.9	
8/23/2018		54	3.6		7.5	
9/19/2018		58.4	4.1		6.6	
10/29/2018		62.6	4.3	24.9	7.8	
11/28/2018		58.1	5.1	24	7.2	
12/19/2018	7 (J-X)		4.5 (J-X)	23.3 (J-X)		
12/20/2018		47.2 (J-X)			6.6 (J-X)	
1/16/2019				24.1		
1/17/2019					6.4	
2/13/2019					6.5	
3/19/2019			4.7			
3/20/2019	7.3	27.7		23.5	6.7 (D)	
10/16/2019			4.6	21.9	7	
12/3/2019		52.8				
12/4/2019	6.6					
3/4/2020			4.2	21.6	6.1	
3/5/2020	6	37.1				
9/16/2020	5.6	54.9	4.1			
9/17/2020				20.1	6.3	
10/27/2020						5.6
3/2/2021		25.8	4.8			
3/4/2021	4.6			18.9	5.6	
3/5/2021						8

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			4.6
1/19/2019		11.6	
10/18/2019		10.9	4.7
9/17/2020		10.5	4.6
10/27/2020	6.3	11	
3/3/2021	18.9		4.5
3/4/2021		12.2	



# Time Series

Constituent: Chromium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.001 (J)	0.0034 (J)	0.0058 (J)
9/1/2016	0.0009 (J)	0.0013 (J)				
9/6/2016			<0.005			
11/16/2016	0.0015 (J)	0.0012 (J)		<0.005	0.0029 (J)	0.0051 (J)
11/17/2016			<0.005			
2/20/2017						0.0049 (J)
2/21/2017	0.001 (J)	0.0017 (J)	<0.005	<0.005	0.0036 (J)	
6/12/2017				0.0005 (J)		0.0052 (J)
6/13/2017		0.0019 (J)	<0.005		0.0038 (J)	
6/14/2017	0.0012 (J)					
9/26/2017	0.0014 (J)	0.0018 (J)	<0.005	0.0005 (J)	0.0045 (J)	0.0039 (J)
2/13/2018				<0.005	<0.005	<0.005
2/14/2018	<0.005	<0.005	<0.005			
6/26/2018	<0.005	0.0022 (J)	<0.005	<0.005	0.008 (J)	0.0053 (J)
12/18/2018	0.0016 (J)	0.0022 (J)	<0.005	<0.005	0.012	0.0032 (J)
8/27/2019	0.0023 (J)	0.0024 (J)		0.0004 (J)	0.0083 (J)	0.0055 (J)
8/29/2019			0.0016 (J)			
10/15/2019	0.0021 (J)	0.0023 (J)	0.0017 (J)	<0.005	0.0083 (J)	0.0047 (J)
3/3/2020	0.0026 (J)	0.0028 (J)		0.00047 (J)	0.0098 (J)	0.0069 (J)
3/4/2020			0.0019 (J)			
8/18/2020	0.0023 (J)	0.0029 (J)	0.0017 (J)	0.00096 (J)	0.0085 (J)	0.0069 (J)
9/15/2020	0.00096 (J)	0.0025 (J)	0.0019 (J)	<0.005	0.0082 (J)	0.0069 (J)
3/1/2021				<0.005		
3/2/2021	0.002 (J)	0.0021 (J)	0.002 (J)		0.0074	0.0064

# Time Series

Constituent: Chromium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	0.0028 (J)					
9/1/2016		0.0147				
9/6/2016						<0.005
9/8/2016			<0.005	0.001 (J)	<0.005	
11/15/2016	0.003 (J)	0.0154 (B)				
11/17/2016			<0.005			
11/18/2016				<0.005		
11/21/2016					<0.005	<0.005
2/20/2017	0.0047 (J)	0.014				
2/21/2017			<0.005	<0.005		
2/22/2017					<0.005	<0.005
6/12/2017	0.0041 (J)	0.016				
6/13/2017			<0.005	<0.005		
6/14/2017					<0.005	<0.005
9/26/2017	0.0037 (J)	0.0144				
9/27/2017			<0.005	<0.005	<0.005	<0.005
2/13/2018	<0.005	0.0144				
2/14/2018			<0.005	<0.005	<0.005	<0.005
6/26/2018	0.0043 (J)	0.015	<0.005			
6/27/2018				<0.005	<0.005	
6/28/2018						<0.005
12/18/2018	0.0054 (J)	0.015	<0.005		<0.005	<0.005
12/20/2018				0.003 (J)		
8/27/2019	0.0043 (J)	0.015	0.0016 (J)			0.0051 (J)
8/28/2019				<0.005	<0.005	
10/15/2019	0.0055 (J)	0.014	0.00098 (J)			
10/16/2019					<0.005	
12/4/2019				<0.005		<0.005
3/3/2020	0.0057 (J)	0.011				
3/4/2020			<0.005	<0.005	0.02	
3/5/2020						<0.005
8/18/2020	0.005 (J)	0.015				
8/19/2020			<0.005	<0.005	<0.005	<0.005
9/15/2020	0.0048 (J)	0.014	<0.005		<0.005	
9/16/2020				<0.005		0.014
3/1/2021		0.011				
3/2/2021	0.0044 (J)		<0.005			
3/3/2021				<0.005	<0.005	<0.005

# Time Series

Constituent: Chromium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.005					
11/21/2016	<0.005					
2/22/2017	0.0012 (J)					
6/14/2017	0.0009 (J)					
9/27/2017	0.0011 (J)					
2/14/2018	<0.005					
3/6/2018		<0.005	<0.005			
3/15/2018				<0.005		
5/1/2018		<0.005	<0.005 (D)	<0.005		
6/27/2018	<0.005		<0.005			
6/28/2018		<0.005		0.0023 (J)		
7/31/2018		<0.005				
8/1/2018			<0.005	0.0046 (J)		
8/10/2018					0.0017 (J)	
8/23/2018		<0.005	<0.005		<0.005	
9/19/2018		<0.005	<0.005		<0.005	
10/29/2018		<0.005	<0.005	<0.005	<0.005	
11/28/2018		<0.005	<0.005	<0.005	<0.005	
12/19/2018	<0.005		0.0018 (J)	<0.005		
12/20/2018		<0.005			<0.005	
1/16/2019				<0.005		
1/17/2019					<0.005	
2/13/2019					<0.005	
8/27/2019	0.0019 (J)					
8/28/2019		<0.005	0.00092 (J)			
8/29/2019				<0.005	<0.005	
10/16/2019			<0.005	0.0005 (J)	<0.005	
12/3/2019		<0.005				
12/4/2019	0.0014 (J)					
3/4/2020			0.00078 (J)	0.00071 (J)	<0.005	
3/5/2020	0.0014 (J)	0.00053 (J)				
8/19/2020	0.0021 (J)					
8/20/2020		0.001 (J)	0.00064 (J)	0.00065 (J)	<0.005	
9/16/2020	0.0025 (J)	0.0014 (J)	<0.005			
9/17/2020				0.00098 (J)	<0.005	
3/2/2021		<0.005	<0.005			
3/4/2021	0.002 (J)			0.001 (J)	<0.005	
3/5/2021						<0.005

# Time Series

Constituent: Chromium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.005
1/19/2019		<0.005	
10/18/2019		<0.005	0.00042 (J)
8/20/2020		<0.005	0.00063 (J)
9/17/2020		0.00098 (J)	<0.005
3/3/2021	<0.005		<0.005
3/4/2021		0.0008 (J)	

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.0016 (J)	0.0034 (J)	0.0013 (J)
9/1/2016	<0.005	<0.005				
9/6/2016			0.0028 (J)			
11/16/2016	<0.005	<0.005		0.0006 (J)	0.003 (J)	<0.01 (o)
11/17/2016			0.0072 (J)			
2/20/2017						0.0012 (J)
2/21/2017	<0.005	<0.005	0.0045 (J)	<0.005	0.0028 (J)	
6/12/2017				<0.005		0.0011 (J)
6/13/2017		<0.005	0.0036 (J)		0.0025 (J)	
6/14/2017	<0.005					
9/26/2017	<0.005	<0.005	0.0037 (J)	<0.005	0.002 (J)	0.0016 (J)
2/13/2018				<0.005	<0.005	<0.01 (o)
2/14/2018	<0.005	<0.005	0.0135			
6/26/2018	<0.005	<0.005	0.0098 (J)	<0.005	0.0019 (J)	0.0009 (J)
7/31/2018	<0.005	<0.005				
12/18/2018	<0.005	<0.005	0.0057 (J)	<0.005	0.0032 (J)	0.00062 (J)
8/27/2019	<0.005	<0.005		<0.005	0.0012 (J)	0.00068 (J)
8/29/2019			0.0015 (J)			
10/15/2019	<0.005	<0.005	0.0011 (J)	<0.005	0.00097 (J)	0.00083 (J)
3/3/2020	<0.005	<0.005		<0.005	0.0015 (J)	0.00043 (J)
3/4/2020			0.0012 (J)			
8/18/2020	<0.005	<0.005	0.00067 (J)	<0.005	0.0014 (J)	0.00048 (J)
9/15/2020	<0.005	<0.005	0.00076 (J)	<0.005	0.001 (J)	0.0005 (J)
3/1/2021				<0.005		
3/2/2021	<0.005	<0.005	<0.005		0.001 (J)	0.00053 (J)

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.005					
9/1/2016		<0.005				
9/6/2016						0.0006 (J)
9/8/2016			0.0073 (J)	0.0149	0.0122	
11/15/2016	<0.005	<0.005				
11/17/2016			0.0086 (J)			
11/18/2016				0.0131		
11/21/2016					0.0122	<0.005
2/20/2017	0.0009 (J)	<0.005				
2/21/2017			0.0079 (J)	0.0099 (J)		
2/22/2017					0.0136	0.0016 (J)
6/12/2017	0.0006 (J)	0.0003 (J)				
6/13/2017			0.0083 (J)	0.0094 (J)		
6/14/2017					0.0113	0.0015 (J)
9/26/2017	0.0005 (J)	0.0003 (J)				
9/27/2017			0.0087 (J)	0.0095 (J)	0.0094 (J)	0.0007 (J)
2/13/2018	<0.005	<0.005				
2/14/2018			<0.005	0.0112	<0.005	<0.005
6/26/2018	0.00052 (J)	<0.005	0.006 (J)			
6/27/2018				0.0093 (J)	0.0069 (J)	
6/28/2018						0.00078 (J)
12/18/2018	<0.005	<0.005	0.0055 (J)		0.0067 (J)	0.0011 (J)
12/20/2018				0.0081 (J)		
8/27/2019	0.00042 (J)	<0.005	0.0042 (J)			0.0014 (J)
8/28/2019				0.01	0.0061	
10/15/2019	<0.005	<0.005	0.0043 (J)			
10/16/2019					0.0058	
10/17/2019				0.011 (J)		<0.005
12/4/2019				0.0086		0.0012 (J)
3/3/2020	<0.005	0.0011 (J)				
3/4/2020			0.0039 (J)	0.008	0.007	
3/5/2020						0.0011 (J)
8/18/2020	<0.005	0.00061 (J)				
8/19/2020			0.0039 (J)	0.0078	0.0065	0.0008 (J)
9/15/2020	<0.005	<0.005	0.0035 (J)		0.0064	
9/16/2020				0.008		0.0008 (J)
3/1/2021		<0.005				
3/2/2021	<0.005		0.003 (J)			
3/3/2021				0.0062	0.0095	0.0015 (J)

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	0.0025 (J)					
11/21/2016	0.001 (J)					
2/22/2017	<0.005					
6/14/2017	<0.005					
9/27/2017	<0.005					
2/14/2018	<0.005					
3/6/2018		0.0162	<0.005			
3/15/2018				1.3		
5/1/2018		0.015	0.0125 (D)	1.4		
6/27/2018	<0.005		0.0076 (J)			
6/28/2018		0.01		1.3		
7/31/2018		0.0098 (J)				
8/1/2018			0.004 (J)	1.4		
8/10/2018					0.0043 (J)	
8/23/2018		0.0093 (J)	0.0016 (J)		0.0026 (J)	
9/19/2018		0.0084 (J)	0.0018 (J)		0.0028 (J)	
10/29/2018		0.0064 (J)	0.0014 (J)	1.4	0.0015 (J)	
11/28/2018		0.0071 (J)	0.0016 (J)	1.4	0.0012 (J)	
12/19/2018	<0.005		0.0014 (J)	1.5		
12/20/2018		0.069			<0.005	
1/16/2019				1.4		
1/17/2019					<0.005	
2/13/2019					<0.005	
8/27/2019	<0.005					
8/28/2019		0.011	0.00037 (J)			
8/29/2019				1.3	0.00063 (J)	
10/16/2019			0.00032 (J)	1.4	<0.005	
10/17/2019	<0.005	0.0098 (J)				
12/3/2019		0.0076				
12/4/2019	<0.005					
3/4/2020			0.0011 (J)	1.5	<0.005	
3/5/2020	<0.005	0.0091				
8/19/2020	<0.005					
8/20/2020		0.022	0.00043 (J)	1.4	<0.005	
9/16/2020	<0.005	0.0049 (J)	0.00053 (J)			
9/17/2020				1.4	0.00046 (J)	
10/27/2020						0.0037 (J)
3/2/2021		0.0057	0.0005 (J)			
3/4/2021	<0.005			1.4	<0.005	
3/5/2021						0.0038 (J)

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
8/2/2018			0.0079 (J)
8/3/2018		0.041	
1/18/2019			0.0082 (J)
1/19/2019		0.018	
10/18/2019		0.017	0.0063
8/20/2020		0.02	0.0039 (J)
9/17/2020		0.022	0.0062
10/27/2020	0.00041 (J)	0.02	
3/3/2021	0.0004 (J)		0.005
3/4/2021		0.019	



# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.351 (U)	1 (U)	0.62 (U)
9/1/2016	0.428 (U)	0.566 (U)				
9/6/2016			0.585 (U)			
11/16/2016	0.799 (U)	0.863 (U)		0.824 (U)	0.43 (U)	0.493 (U)
11/17/2016			0.804 (U)			
2/20/2017						0.534 (U)
2/21/2017	1.75 (U)	0.318 (U)	0.595 (U)	1.01 (U)	0.96 (U)	
6/12/2017				0.532 (U)		0.254 (U)
6/13/2017		0.163 (U)	0.618 (U)		0.645 (U)	
6/14/2017	2.66					
9/26/2017	0.841 (U)	0.56 (U)	1.26 (U)	0.845 (U)	0.299 (U)	0.62 (U)
2/13/2018				0.176 (U)	1.01 (U)	0.0914 (U)
2/14/2018	1.13 (UX)	0.537 (U)	1.2 (U)			
6/26/2018	1.42 (J+X)	1.31 (UX)	1.34 (U)	1.02 (U)	1.26 (J+X)	1.11 (U)
12/18/2018	0.855 (U)	1.31 (J+X)	1.13 (U)	0.487 (U)	0.44 (U)	0.42 (U)
8/27/2019	1.31	1.32		1.11	1.47	1.19
8/29/2019			1.45 (U)			
10/15/2019	1.13 (U)	1.05 (U)	1.69	1.02 (U)	0.807 (U)	0.714 (U)
3/3/2020	1.29 (U)	1.68		1.18 (U)	0.818 (U)	0.996 (U)
3/4/2020			1.45			
8/18/2020	0.988 (U)	0.969 (U)	0.784 (U)	0.0861 (U)	1.22 (U)	0.53 (U)
9/15/2020	0.762 (U)	0.359 (U)	1.04 (U)	0.0583 (U)	0.579 (U)	0.215 (U)
3/1/2021				0.127 (U)		
3/2/2021	0.901	0.925	1.12		0.342 (U)	0.409 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	0.603 (U)					
9/1/2016		1.33				
9/6/2016						1.01 (U)
9/8/2016			0.862 (U)	1.74	1.13	
11/15/2016	0.645 (U)	0.412 (U)				
11/17/2016			1.2 (U)			
11/18/2016				0.571 (U)		
11/21/2016					1.59	0.201 (U)
2/20/2017	1.36	0.633 (U)				
2/21/2017			1.31	1.28 (U)		
2/22/2017					1.64	0.57 (U)
6/12/2017	0.566 (U)	0.112 (U)				
6/13/2017			0.738 (U)	0.521 (U)		
6/14/2017					1.32	0.726 (U)
9/26/2017	0.762 (U)	0.167 (U)				
9/27/2017			0.583 (U)	0.595 (U)	1.7	0.884 (U)
2/13/2018	0.349 (U)	0.347 (U)				
2/14/2018			1.41 (J+X)	1.18 (U)	1.89 (J+X)	1.14 (U)
6/26/2018	0.614 (U)	0.903 (U)	0.968 (U)			
6/27/2018				1.3 (U)	1.66 (J+X)	
6/28/2018						1.4 (UX)
12/18/2018	0.445 (U)	0.353 (U)	1.13 (U)		0.759 (U)	0.661 (U)
12/20/2018				0.527 (U)		
8/27/2019	1.44	0.65 (U)	0.91 (U)			1.35
8/28/2019				0.643 (U)	1.76	
10/15/2019	0.467 (U)	0.402 (U)	1.06 (U)			
10/16/2019					1.69 (U)	
10/17/2019				1.07 (U)		1.25 (U)
3/3/2020	1.5	0.397 (U)				
3/4/2020			1.34	1.18	1.23	
3/5/2020						1.35
8/18/2020	0.581 (U)	0.453 (U)				
8/19/2020			0.467 (U)	0.684 (U)	0.876 (U)	1 (U)
9/15/2020	0.55 (U)	0.474 (U)	0.205 (U)		1.23 (U)	
9/16/2020				0.175 (U)		0.43 (U)
3/1/2021		0.215 (U)				
3/2/2021	0.362 (U)		0.161 (U)			
3/3/2021				0.829 (U)	1.31 (U)	0.415 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	0.706 (U)					
11/21/2016	0.0569 (U)					
2/22/2017	1.07 (U)					
6/14/2017	0.459 (U)					
9/27/2017	0.807 (U)					
2/14/2018	1.67 (J+X)					
3/6/2018		1.25 (U)	1.75 (J+X)			
3/15/2018				1.31		
5/1/2018		0.423 (U)	2.02 (D)	1.69 (J+X)		
6/27/2018	1.34 (UX)		0.878 (U)			
6/28/2018		0.283 (U)		1.04 (U)		
7/31/2018		0.243 (U)				
8/1/2018			0.638 (U)	1.67		
8/10/2018					1.91	
8/23/2018		1.1 (U)	1.14 (U)		1.86 (J+X)	
9/19/2018		0.369 (U)	1.45 (UX)		1.64 (UX)	
10/29/2018		0.401 (U)	1.09 (U)	0.992 (U)	1.36 (U)	
11/28/2018		0.901 (U)	1.67 (UX)	1.76 (UX)	1.07 (U)	
12/19/2018	1.21 (U)		1.3	2.15 (J+X)		
12/20/2018		0.657 (U)			0.892 (U)	
1/16/2019				1.39		
1/17/2019					1.1 (U)	
2/13/2019					1.68	
8/27/2019	0.86 (U)					
8/28/2019		0.528 (U)	0.804 (U)			
8/29/2019				1.33	1.44	
10/16/2019			1.28 (U)	2.51	2.13	
10/17/2019	1.2 (U)	0.977 (U)				
3/4/2020			0.862 (U)	1.73	2.3	
3/5/2020	0.483 (U)	0.921 (U)				
8/19/2020	0.482 (U)					
8/20/2020		0.501 (U)	1.64	2.78	2.97	
9/16/2020	0.195 (U)	0.254 (U)	0.51 (U)			
9/17/2020				0.717 (U)	2.04	
3/2/2021		0.107 (U)	0.571 (U)			
3/4/2021	0.32 (U)			1.22	2.04	
3/5/2021						2.11

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			1.22
1/19/2019		1.86	
10/18/2019		11.7 (U)	17.1 (U)
8/20/2020		0.937 (U)	1.19
9/17/2020		1.76	0.952 (U)
3/3/2021	2.54		0.599 (U)
3/4/2021		0.966 (U)	

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.11 (J)	0.05 (J)	0.07 (J)
9/1/2016	0.2 (J)	0.05 (J)				
9/6/2016			0.42			
11/16/2016	0.14 (J)	0.03 (J)		0.08 (J)	0.07 (J)	0.07 (J)
11/17/2016			0.15 (J)			
2/20/2017						0.06 (J)
2/21/2017	0.16 (J)	0.04 (J)	0.1 (J)	0.14 (J)	0.05 (J)	
6/12/2017				0.16 (J)		0.008 (J)
6/13/2017		0.008 (J)	0.07 (J)		0.04 (J)	
6/14/2017	0.09 (J)					
9/26/2017	0.1 (J)	<0.1	<0.1	0.14 (J)	<0.1	<0.1
2/13/2018				<0.1	<0.1	<0.1
2/14/2018	<0.1	<0.1	<0.1			
6/26/2018	0.079 (J)	0.042 (J)	0.053 (J)	0.085 (J)	0.048 (J)	0.045 (J)
12/18/2018	<0.1	<0.1	<0.1	0.085 (J)	<0.1	<0.1
3/19/2019	<0.1	<0.1	<0.1	0.0655 (JD)	0.037 (J)	<0.1
8/27/2019	<0.1	<0.1		<0.1	<0.1	<0.1
8/29/2019			0.084 (J)			
10/15/2019	0.047 (J)	<0.1	<0.1	<0.1	<0.1	<0.1
3/3/2020	0.056 (J)	<0.1		0.066 (J)	0.05 (J)	<0.1
3/4/2020			<0.1			
8/18/2020	0.052 (J)	<0.1	<0.1	<0.1	<0.1	<0.1
9/15/2020	0.062 (J)	<0.1	<0.1	<0.1	<0.1	<0.1
3/1/2021				<0.1		
3/2/2021	0.061 (J)	<0.1	<0.1		<0.1	<0.1

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	0.19 (J)					
9/1/2016		0.06 (J)				
9/6/2016						0.43
9/8/2016			0.14 (J)	0.31	0.2 (J)	
11/15/2016	0.13 (J)	0.06 (J)				
11/17/2016			0.27 (J)			
11/18/2016				0.19 (J)		
11/21/2016					0.37	0.24 (J)
2/20/2017	0.08 (J)	0.04 (J)				
2/21/2017			0.6	0.35		
2/22/2017					0.37	0.2 (J)
6/12/2017	0.07 (J)	0.06 (J)				
6/13/2017			0.19 (J)	0.19 (J)		
6/14/2017					0.38	0.15 (J)
9/26/2017	0.04 (J)	<0.1				
9/27/2017			0.5	0.4	0.4	0.41
2/13/2018	<0.1	<0.1				
2/14/2018			<0.1	<0.1	<0.1	<0.1
6/26/2018	0.072 (J)	0.041 (J)	0.15 (J)			
6/27/2018				0.26 (J)	0.085 (J)	
6/28/2018						0.93 (J+X)
12/18/2018	<0.1	<0.1	0.29 (J)		0.26 (J)	0.54
12/20/2018				0.26 (J)		
3/19/2019	0.06 (J)	0.03 (J)		0.2 (J)		
3/20/2019			0.17 (JD)		0.091 (J)	0.31
8/27/2019	<0.1	<0.1	0.15 (J)			0.12 (J)
8/28/2019				0.074 (J)	0.055 (J)	
10/15/2019	0.045 (J)	<0.1	0.16 (J)			
10/16/2019					0.11 (J)	
12/4/2019				0.18 (J)		0.26 (J)
3/3/2020	0.057 (J)	0.09 (J)				
3/4/2020			0.07 (J)	<0.1	<0.1	
3/5/2020						0.051 (J)
8/18/2020	<0.1	<0.1				
8/19/2020			0.17	0.19	0.12	0.14
9/15/2020	0.051 (J)	<0.1	0.15		0.057 (J)	
9/16/2020				0.15		0.13
3/1/2021		<0.1				
3/2/2021	<0.1		0.15			
3/3/2021				0.24	0.13	0.13

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	0.15 (J)					
11/21/2016	0.04 (J)					
2/22/2017	0.08 (J)					
6/14/2017	0.09 (J)					
9/27/2017	<0.1					
2/14/2018	<0.1					
3/6/2018		0.94	1.1			
3/15/2018				0.84 (JX)		
5/1/2018		<0.1	0.595 (D)	0.91		
6/27/2018	<0.1		0.27 (J)			
6/28/2018		0.69 (J+X)		1.1 (J+X)		
7/31/2018		<0.1				
8/1/2018			0.48	2		
8/10/2018					1.6 (O)	
8/23/2018		<0.1	0.34		0.32	
9/19/2018		<0.1	0.23 (J)		0.22 (J)	
10/29/2018		<0.1	<0.1	0.24 (J)	0.14 (J)	
11/28/2018		<0.1	0.063 (J)	0.41	0.24 (J)	
12/19/2018	0.23 (J)		0.28 (J)	0.54		
12/20/2018		0.12 (J)			0.3	
1/16/2019				1.1		
1/17/2019					0.23 (J)	
2/13/2019					<0.1	
3/19/2019			<0.1			
3/20/2019	<0.1	0.066 (J)		0.21 (J)	0.135 (JD)	
8/27/2019	<0.1					
8/28/2019		<0.1	<0.1			
8/29/2019				0.41	0.087 (J)	
10/16/2019			0.076 (J)	0.39	0.22 (J)	
12/3/2019		0.19 (J)				
12/4/2019	0.11 (J)					
3/4/2020			<0.1	0.14 (J)	0.1 (J)	
3/5/2020	<0.1	<0.1				
8/19/2020	<0.1					
8/20/2020		<0.1	<0.1	0.39	0.23	
9/16/2020	<0.1	0.052 (J)	<0.1			
9/17/2020				0.46	0.074 (J)	
10/27/2020						0.28
3/2/2021		0.067 (J)	<0.1			
3/4/2021	<0.1			0.6	0.28	
3/5/2021						0.16

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			0.13 (J)
1/19/2019		<0.1	
10/18/2019		<0.1	0.09 (J)
8/20/2020		<0.1	0.056 (J)
9/17/2020		<0.1	0.062 (J)
10/27/2020	0.21	<0.1	
3/3/2021	0.28		0.083 (J)
3/4/2021		0.061 (J)	



# Time Series

Constituent: Lead (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.001	<0.001	<0.001
9/1/2016	<0.001	<0.001				
9/6/2016			<0.001			
11/16/2016	<0.001	<0.001		<0.001	<0.001	<0.001
11/17/2016			<0.001			
2/20/2017						<0.001
2/21/2017	<0.001	<0.001	<0.001	<0.001	<0.001	
6/12/2017				8E-05 (J)		<0.001
6/13/2017		<0.001	<0.001		<0.001	
6/14/2017	<0.001					
9/26/2017	<0.001	<0.001	<0.001	7E-05 (J)	7E-05 (J)	<0.001
2/13/2018				<0.001	<0.001	<0.001
2/14/2018	<0.001	<0.001	<0.001			
6/26/2018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/18/2018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/27/2019	<0.001	<0.001		<0.001	5.8E-05 (J)	<0.001
8/29/2019			7E-05 (J)			
10/15/2019	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/3/2020	<0.001	<0.001		<0.001	<0.001	<0.001
3/4/2020			<0.001			
8/18/2020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/15/2020	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013 (J)
3/1/2021				<0.001		
3/2/2021	<0.001	<0.001	<0.001		<0.001	3.7E-05 (J)

# Time Series

Constituent: Lead (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.001					
9/1/2016		0.0001 (J)				
9/6/2016						<0.001
9/8/2016			<0.001	<0.001	0.0004 (J)	
11/15/2016	<0.001	<0.001				
11/17/2016			<0.001			
11/18/2016				<0.001		
11/21/2016					0.0006 (J)	<0.001
2/20/2017	0.0002 (J)	<0.001				
2/21/2017			<0.001	<0.001		
2/22/2017					0.0005 (J)	<0.001
6/12/2017	0.0001 (J)	8E-05 (J)				
6/13/2017			<0.001	<0.001		
6/14/2017					0.0004 (J)	<0.001
9/26/2017	0.0001 (J)	<0.001				
9/27/2017			<0.001	<0.001	0.0006 (J)	<0.001
2/13/2018	<0.001	<0.001				
2/14/2018			<0.001	<0.001	<0.005 (o)	<0.001
6/26/2018	<0.001	<0.001	<0.001			
6/27/2018				<0.001	0.00032 (J)	
6/28/2018						<0.001
12/18/2018	<0.001	<0.001	<0.001		0.00038 (J)	<0.001
12/20/2018				<0.001		
8/27/2019	0.00036 (J)	<0.001	0.00011 (J)			<0.001
8/28/2019				<0.001	0.00027 (J)	
10/15/2019	7.9E-05 (J)	<0.001	<0.001			
10/16/2019					0.00027 (J)	
12/4/2019				6.3E-05 (J)		<0.001
3/3/2020	7.9E-05 (J)	7.3E-05 (J)				
3/4/2020			<0.001	<0.001	0.0003 (J)	
3/5/2020						<0.001
8/18/2020	0.0001 (J)	<0.001				
8/19/2020			<0.001	<0.001	0.00025 (J)	<0.001
9/15/2020	4.3E-05 (J)	<0.001	<0.001		0.00029 (J)	
9/16/2020				<0.001		0.00011 (J)
3/1/2021		<0.001				
3/2/2021	<0.001		<0.001			
3/3/2021				<0.001	0.00033 (J)	<0.001

# Time Series

Constituent: Lead (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.001					
11/21/2016	<0.001					
2/22/2017	<0.001					
6/14/2017	<0.001					
9/27/2017	<0.001					
2/14/2018	<0.001					
3/6/2018		<0.001	<0.001			
3/15/2018				<0.001		
5/1/2018		<0.001	<0.001 (D)	<0.001		
6/27/2018	<0.001		<0.001			
6/28/2018		<0.001		0.00054 (J)		
7/31/2018		<0.001				
8/1/2018			<0.001	<0.001		
8/10/2018					<0.001	
8/23/2018		<0.001	<0.001		<0.001	
9/19/2018		<0.001	<0.001		<0.001	
10/29/2018		<0.001	<0.001	0.0003 (J)	<0.001	
11/28/2018		<0.001	<0.001	<0.001	<0.001	
12/19/2018	<0.001		<0.001	<0.001		
12/20/2018		<0.001			<0.001	
1/16/2019				<0.001		
1/17/2019					<0.001	
2/13/2019					<0.001	
8/27/2019	<0.001					
8/28/2019		<0.001	<0.001			
8/29/2019				4.9E-05 (J)	<0.001	
10/16/2019			<0.001	8.5E-05 (J)	<0.001	
12/3/2019		<0.001				
12/4/2019	<0.001					
3/4/2020			0.00012 (J)	0.0001 (J)	<0.001	
3/5/2020	<0.001	0.00026 (J)				
8/19/2020	<0.001					
8/20/2020		0.00021 (J)	4.8E-05 (J)	6.7E-05 (J)	<0.001	
9/16/2020	<0.001	5.3E-05 (J)	6.6E-05 (J)			
9/17/2020				0.00015 (J)	<0.001	
3/2/2021		<0.001	<0.001			
3/4/2021	<0.001			0.00016 (J)	4.2E-05 (J)	
3/5/2021						5.6E-05 (J)

# Time Series

Constituent: Lead (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.001
1/19/2019		<0.001	
10/18/2019		<0.001	<0.001
8/20/2020		<0.001	<0.001
9/17/2020		0.00036 (J)	<0.001
3/3/2021	0.00013 (J)		<0.001
3/4/2021		0.00017 (J)	

# Time Series

Constituent: Lithium (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.0268 (J)	<0.03	<0.03
9/1/2016	0.0061 (J)	<0.03				
9/6/2016			0.0028 (J)			
11/16/2016	0.0054 (J)	<0.03		0.0201 (J)	<0.03	0.0033 (J)
11/17/2016			0.0063 (J)			
2/20/2017						<0.03
2/21/2017	0.0058 (J)	<0.03	0.0052 (J)	0.0128 (J)	<0.03	
6/12/2017				0.0245 (J)		0.0019 (J)
6/13/2017		<0.03	0.0061 (J)		<0.03	
6/14/2017	0.0054 (J)					
9/26/2017	0.0037 (J)	<0.03	0.0087 (J)	0.0549	<0.03	0.0022 (J)
2/13/2018				0.0595	<0.03	0.0041 (J)
2/14/2018	0.0038 (J)	<0.03	0.0104 (J)			
6/26/2018	0.0045 (J)	<0.03	0.0095 (J)	0.089	<0.03	0.0025 (J)
12/18/2018	0.0038 (J)	<0.03	0.0091 (J)	0.024 (J)	<0.03	0.0032 (J)
8/27/2019	0.0039 (J)	<0.03		0.035	<0.03	0.0019 (J)
8/29/2019			0.007 (J)			
10/15/2019	0.0037 (J)	<0.03	0.0069 (J)	0.028 (J)	<0.03	0.002 (J)
3/3/2020	0.0033 (J)	<0.03		0.055	<0.03	0.0013 (J)
3/4/2020			0.0074 (J)			
8/18/2020	0.0039 (J)	<0.03	0.0099 (J)	0.054	<0.03	0.00095 (J)
9/15/2020	0.0037 (J)	<0.03	0.011 (J)	0.033	<0.03	0.001 (J)
3/1/2021				0.027 (J)		
3/2/2021	0.0045 (J)	<0.03	0.0093 (J)		<0.03	0.00081 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.03					
9/1/2016		0.003 (J)				
9/6/2016						0.0117 (J)
9/8/2016			<0.03	0.0021 (J)	0.004 (J)	
11/15/2016	<0.03	0.0033 (J)				
11/17/2016			<0.03			
11/18/2016				<0.03		
11/21/2016					0.0039 (J)	0.0108 (J)
2/20/2017	<0.03	0.0025 (J)				
2/21/2017			<0.03	<0.03		
2/22/2017					0.0043 (J)	0.0103 (J)
6/12/2017	<0.03	0.0027 (J)				
6/13/2017			<0.03	0.0017 (J)		
6/14/2017					0.0036 (J)	0.0101 (J)
9/26/2017	<0.03	0.0023 (J)				
9/27/2017			<0.03	0.0016 (J)	0.0038 (J)	0.0116 (J)
2/13/2018	<0.03	0.0027 (J)				
2/14/2018			<0.03	0.0018 (J)	0.0034 (J)	0.0115 (J)
6/26/2018	<0.03	0.0029 (J)	<0.03			
6/27/2018				0.0016 (J)	0.0034 (J)	
6/28/2018						0.013 (J)
12/18/2018	<0.03	0.0026 (J)	<0.03		0.0032 (J)	0.014 (J)
12/20/2018				0.0015 (J)		
8/27/2019	<0.03	0.0028 (J)	<0.03			0.016 (J)
8/28/2019				0.0016 (J)	0.0033 (J)	
10/15/2019	<0.03	0.0024 (J)	<0.03			
10/16/2019					0.0029 (J)	
12/4/2019				0.0014 (J)		0.013 (J)
3/3/2020	<0.03	0.0026 (J)				
3/4/2020			<0.03	0.0014 (J)	0.0029 (J)	
3/5/2020						0.016 (J)
8/18/2020	<0.03	0.0026 (J)				
8/19/2020			<0.03	0.0014 (J)	0.0029 (J)	0.018 (J)
9/15/2020	<0.03	0.0027 (J)	<0.03		0.003 (J)	
9/16/2020				0.0014 (J)		0.016 (J)
3/1/2021		0.0036 (J)				
3/2/2021	<0.03		<0.03			
3/3/2021				0.0012 (J)	0.0032 (J)	0.014 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.03					
11/21/2016	<0.03					
2/22/2017	0.0023 (J)					
6/14/2017	0.0022 (J)					
9/27/2017	0.0021 (J)					
2/14/2018	0.0023 (J)					
3/6/2018		0.0031 (J)	0.0399 (J)			
3/15/2018				0.038 (J)		
5/1/2018		0.0038 (J)	0.0475 (D)	0.042 (J)		
6/27/2018	0.0023 (J)		0.044 (J)			
6/28/2018		0.0028 (J)		0.04 (J)		
7/31/2018		<0.25 (o)				
8/1/2018			0.039 (J)	0.036 (J)		
8/10/2018					0.0087 (J)	
8/23/2018		0.0033 (J)	0.044 (J)		0.0089 (J)	
9/19/2018		0.0033 (J)	0.043 (J)		0.005 (J)	
10/29/2018		0.003 (J)	0.039 (J)	0.041 (J)	0.0048 (J)	
11/28/2018		0.0035 (J)	0.044 (J)	0.041 (J)	0.0052 (J)	
12/19/2018	0.0018 (J)		0.043 (J)	0.043 (J)		
12/20/2018		0.003 (J)			0.0042 (J)	
1/16/2019				0.042 (J)		
1/17/2019					0.0039 (J)	
2/13/2019					<0.03	
8/27/2019	0.0022 (J)					
8/28/2019		0.0034 (J)	0.044			
8/29/2019				0.039	0.0052 (J)	
10/16/2019			0.038	0.034	0.0023 (J)	
12/3/2019		0.0033 (J)				
12/4/2019	0.0022 (J)					
3/4/2020			0.042	0.042	0.002 (J)	
3/5/2020	0.0022 (J)	0.003 (J)				
8/19/2020	0.002 (J)					
8/20/2020		0.0034 (J)	0.044	0.04	0.0022 (J)	
9/16/2020	0.0022 (J)	0.0036 (J)	0.039			
9/17/2020				0.052	0.0058 (J)	
3/2/2021		0.0043 (J)	0.044			
3/4/2021	0.002 (J)			0.05	0.003 (J)	
3/5/2021						0.019 (J)

# Time Series

Constituent: Lithium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			0.0012 (J)
1/19/2019		0.019 (J)	
10/18/2019		0.019 (J)	<0.03
8/20/2020		0.019 (J)	<0.03
9/17/2020		0.021 (J)	<0.03
3/3/2021	0.0093 (J)		<0.03
3/4/2021		0.026 (J)	



# Time Series

Constituent: Mercury (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.0002	<0.0002	<0.0002
9/1/2016	<0.0002	<0.0002				
9/6/2016			<0.0002			
11/16/2016	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
11/17/2016			<0.0002			
2/20/2017						<0.0002
2/21/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
6/12/2017				4E-05 (J)		<0.0002
6/13/2017		<0.0002	<0.0002		<0.0002	
6/14/2017	6E-05 (J)					
9/26/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
2/13/2018				0.00021	0.00019 (J)	<0.0002
2/14/2018	5.2E-05 (J)	<0.0002	<0.0002			
6/26/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
12/18/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/27/2019	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
8/29/2019			<0.0002			
8/18/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/15/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/1/2021				<0.0002		
3/2/2021	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002

# Time Series

Constituent: Mercury (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.0002					
9/1/2016		<0.0002				
9/6/2016						<0.0002
9/8/2016			<0.0002	<0.0002	<0.0002	
11/15/2016	<0.0002	<0.0002				
11/17/2016			<0.0002			
11/18/2016				<0.0002		
11/21/2016					<0.0002	<0.0002
2/20/2017	8E-05 (J)	<0.0002				
2/21/2017			<0.0002	<0.0002		
2/22/2017					<0.0002	<0.0002
6/12/2017	<0.0002	<0.0002				
6/13/2017			<0.0002	5E-05 (J)		
6/14/2017					7E-05 (J)	7E-05 (J)
9/26/2017	<0.0002	<0.0002				
9/27/2017			4E-05 (J)	4.7E-05 (J)	4E-05 (J)	4E-05 (J)
2/13/2018	0.00013 (J)	<0.0002				
2/14/2018			<0.0002	<0.0002	<0.0002	<0.0002
6/26/2018	<0.0002	<0.0002	<0.0002			
6/27/2018				<0.0002	<0.0002	
6/28/2018						<0.0002
12/18/2018	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
12/20/2018				<0.0002		
8/27/2019	<0.0002	<0.0002	<0.0002			<0.0002
8/28/2019				<0.0002	<0.0002	
8/18/2020	<0.0002	<0.0002				
8/19/2020			8.3E-05 (J)	<0.0002	9.8E-05 (J)	8.2E-05 (J)
9/15/2020	<0.0002	<0.0002	<0.0002		<0.0002	
9/16/2020				<0.0002		<0.0002
3/1/2021		<0.0002				
3/2/2021	<0.0002		<0.0002			
3/3/2021				<0.0002	<0.0002	<0.0002

# Time Series

Constituent: Mercury (mg/L) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.0002					
11/21/2016	<0.0002					
2/22/2017	<0.0002					
6/14/2017	9E-05 (J)					
9/27/2017	0.0001 (J)					
2/14/2018	<0.0002					
3/6/2018		<0.0002	<0.0002			
3/15/2018				<0.0002		
5/1/2018		<0.0002	<0.0002 (D)	<0.0002		
6/27/2018	<0.0002		<0.0002			
6/28/2018		<0.0002		<0.0002		
7/31/2018		<0.0002				
8/1/2018			<0.0002	<0.0002		
8/10/2018					<0.0002	
8/23/2018		<0.0002	<0.0002		<0.0002	
9/19/2018		<0.0002	<0.0002		<0.0002	
10/29/2018		<0.0002	<0.0002	<0.0002	<0.0002	
11/28/2018		<0.0002	<0.0002	<0.0002	<0.0002	
12/19/2018	<0.0002		<0.0002	<0.0002		
12/20/2018		<0.0002			<0.0002	
1/16/2019				<0.0002		
1/17/2019					<0.0002	
2/13/2019					<0.0002	
8/27/2019	<0.0002					
8/28/2019		<0.0002	<0.0002			
8/29/2019				<0.0002	<0.0002	
8/19/2020	8.2E-05 (J)					
8/20/2020		<0.0002	<0.0002	<0.0002	<0.0002	
9/16/2020	<0.0002	<0.0002	<0.0002			
9/17/2020				<0.0002	<0.0002	
3/2/2021		<0.0002	<0.0002			
3/4/2021	<0.0002			<0.0002	<0.0002	
3/5/2021						<0.0002

# Time Series

Constituent: Mercury (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.0002
1/19/2019		<0.0002	
10/18/2019		<0.0002	<0.0002
8/20/2020		9.9E-05 (J)	<0.0002
9/17/2020		<0.0002	<0.0002
3/3/2021	<0.0002		<0.0002
3/4/2021		<0.0002	

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				0.0021 (J)	<0.01	0.004 (J)
9/1/2016	0.002 (J)	<0.01				
9/6/2016			0.0028 (J)			
11/16/2016	<0.01	<0.01		<0.01	<0.01	0.0038 (J)
11/17/2016			<0.01			
2/20/2017						0.0055 (J)
2/21/2017	<0.01	<0.01	<0.01	0.0021 (J)	<0.01	
6/12/2017				0.0021 (J)		0.005 (J)
6/13/2017		<0.01	<0.01		<0.01	
6/14/2017	<0.01					
9/26/2017	<0.01	<0.01	<0.01	0.0011 (J)	<0.01	0.0053 (J)
2/13/2018				0.0019 (J)	<0.01	0.008 (J)
2/14/2018	<0.01	<0.01	<0.01			
6/26/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.0041 (J)
12/18/2018	<0.01	<0.01	<0.01	<0.01	<0.01	0.0048 (J)
8/27/2019	<0.01	<0.01		<0.01	<0.01	0.0028 (J)
8/29/2019			<0.01			
10/15/2019	<0.01	<0.01	<0.01	<0.01	<0.01	0.0035 (J)
3/3/2020				<0.01	<0.01	0.0023 (J)
8/18/2020	<0.01	<0.01	<0.01	0.0011 (J)	<0.01	0.0015 (J)
9/15/2020	<0.01	<0.01	<0.01	0.0007 (J)	<0.01	0.0015 (J)
3/1/2021				<0.01		
3/2/2021	<0.01	<0.01	<0.01		<0.01	0.0015 (J)

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.01					
9/1/2016		<0.01				
9/6/2016						<0.01
9/8/2016			<0.01	<0.01	<0.01	
11/15/2016	<0.01	<0.01				
11/17/2016			<0.01			
11/18/2016				<0.01		
11/21/2016					<0.01	<0.01
2/20/2017	<0.01	<0.01				
2/21/2017			<0.01	<0.01		
2/22/2017					<0.01	<0.01
6/12/2017	<0.01	<0.01				
6/13/2017			<0.01	<0.01		
6/14/2017					<0.01	<0.01
9/26/2017	<0.01	<0.01				
9/27/2017			<0.01	<0.01	<0.01	<0.01
2/13/2018	<0.01	<0.01				
2/14/2018			<0.01	<0.01	<0.01	<0.01
6/26/2018	<0.01	<0.01	<0.01			
6/27/2018				<0.01	<0.01	
6/28/2018						<0.01
12/18/2018	<0.01	<0.01	<0.01		<0.01	<0.01
12/20/2018				<0.01		
8/27/2019	<0.01	<0.01	<0.01			<0.01
8/28/2019				<0.01	<0.01	
10/15/2019	<0.01	<0.01	<0.01			
10/16/2019					<0.01	
12/4/2019				<0.01		<0.01
3/3/2020	<0.01	<0.01				
8/18/2020	<0.01	<0.01				
8/19/2020			0.00081 (J)	<0.01	<0.01	0.00078 (J)
9/15/2020	<0.01	<0.01	0.0008 (J)		<0.01	
9/16/2020				<0.01		0.0022 (J)
3/1/2021		<0.01				
3/2/2021	<0.01		0.001 (J)			
3/3/2021				<0.01	<0.01	<0.01

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.01					
11/21/2016	<0.01					
2/22/2017	<0.01					
6/14/2017	<0.01					
9/27/2017	<0.01					
2/14/2018	<0.01					
3/6/2018		<0.01	<0.01			
3/15/2018				<0.01		
5/1/2018		<0.01	<0.01 (D)	0.0022 (J)		
6/27/2018	<0.01		<0.01			
6/28/2018		<0.01		<0.01		
7/31/2018		<0.01				
8/1/2018			<0.01	0.0033 (J)		
8/10/2018					0.0032 (J)	
8/23/2018		<0.01	<0.01		0.005 (J)	
9/19/2018		<0.01	<0.01		0.0061 (J)	
10/29/2018		<0.01	<0.01	<0.01	0.0065 (J)	
11/28/2018		<0.01	<0.01	<0.01	0.0027 (J)	
12/19/2018	<0.01		<0.01	<0.01		
12/20/2018		<0.01			<0.01	
1/16/2019				<0.01		
1/17/2019					<0.01	
2/13/2019					<0.01	
8/27/2019	<0.01					
8/28/2019		<0.01	<0.01			
8/29/2019				<0.01	<0.01	
10/16/2019			<0.01	<0.01	<0.01	
12/3/2019		<0.01				
12/4/2019	<0.01					
8/19/2020	<0.01					
8/20/2020		0.00076 (J)	<0.01	<0.01	0.0012 (J)	
9/16/2020	<0.01	<0.01	<0.01			
9/17/2020				<0.01	0.0007 (J)	
3/2/2021		<0.01	<0.01			
3/4/2021	<0.01			<0.01	0.001 (J)	
3/5/2021						0.0017 (J)

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.01
1/19/2019		<0.01	
10/18/2019		<0.01	<0.01
8/20/2020		<0.01	<0.01
9/17/2020		<0.01	<0.01
3/3/2021	0.0068 (J)		<0.01
3/4/2021		<0.01	



# Time Series

Constituent: pH, Field (S.U) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				7.16	6.2	6.53
9/1/2016	6.71	6				
9/6/2016			6.49			
11/16/2016	6.15	6		6.96	6.12	6.4
11/17/2016			5.79			
2/20/2017						6.44
2/21/2017	6.52	6.09	6.15	7.15	6.24	
6/12/2017				7.31		6.4
6/13/2017	6.42	6.03	5.87		6.19	
6/14/2017	6.51					
9/26/2017	6.42	5.85	5.82	7.02	6.15	6.31
2/13/2018				7.44	6.18	6.62
2/14/2018	6.48	5.99	5.83			
6/26/2018	6.2	5.86	5.73	6.93	6.05	6.29
7/31/2018	6.37	5.99				
12/18/2018	6.5	6.08	5.78	6.76	5.92	6.57
3/19/2019	6.28	5.71	5.28	6.87	6.18	6.45
8/27/2019	6.35	6		6.79	6.09	6.37
8/29/2019			5.64			
10/15/2019	6.8	6.61	5.7	6.57	6.06	6.77
3/3/2020	6.33	5.94		6.71	6.1	6.29
3/4/2020			5.7			
8/18/2020	6.25	5.75	5.56	6.59	6.06	6.29
9/15/2020	6.01	6	5.72	6.64	6.01	6.27
3/1/2021				6.66		
3/2/2021	6.11	5.92	5.75		6.2	6.47

# Time Series

Constituent: pH, Field (S.U) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	6.59					
9/1/2016		6.49				
9/6/2016						6.23
9/8/2016			6.07	5.51	4.62	
11/15/2016	6.67	6.59				
11/16/2016			5.96			
11/18/2016				5.53		
11/21/2016					4.44	6.23
2/20/2017	6.65	6.61				
2/21/2017			5.98	5.63		
2/22/2017					4.42	6.16
6/12/2017	6.64					
6/13/2017			5.96	5.57		
6/14/2017					4.45	6.16
9/26/2017	6.58	6.47				
9/27/2017			5.85	5.53	4.33	6.16
2/13/2018	6.72	6.54				
2/14/2018			5.94	5.83	4.42	6.24
6/26/2018	6.43	6.23	5.87			
6/27/2018				5.53	4.37	
6/28/2018						6.21
12/18/2018	6.7	6.71	5.84		4.38	6.18
12/20/2018				5.78		
3/19/2019	6.63	6.18		5.75		
3/20/2019			6.03		4.4	6.24
8/27/2019	6.49	6.35	6.01			6.17
8/28/2019				5.51	4.39	
10/15/2019	7.01	6.36	6			
10/16/2019					4.79	
10/17/2019				6.01 (D)		6.43
3/3/2020	6.49	6.59				
3/4/2020			6.02	5.8	4.5	
3/5/2020						5.99
8/18/2020	6.41	6.33				
8/19/2020			6.32	5.81	4.67	6.36
9/15/2020	6.25	6.43	6		4.53	
9/16/2020				5.81		6.29
3/1/2021		6.7				
3/2/2021	6.42		6.1			
3/3/2021				5.9	4.46	6.29

# Time Series

Constituent: pH, Field (S.U) Analysis Run 4/21/2021 2:24 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	5.89					
11/21/2016	5.56					
2/22/2017	5.87					
6/14/2017	5.83					
9/27/2017	5.87					
2/14/2018	6.01					
3/15/2018		5.26		5.26		
5/1/2018		6.14	5.85	5.38		
6/27/2018	5.83		5.87			
6/28/2018		5.88		5.03		
7/31/2018		6.07				
8/1/2018			5.79	5.22		
8/10/2018					6.28	
8/23/2018					6.75	
9/19/2018		5.9	5.71		6.48	
10/29/2018		5.93	5.76	5.19	6.77	
11/28/2018		5.99	5.74	5.28	6.44	
12/19/2018	5.79		5.8	5.15		
12/20/2018		6.04			6.75	
1/16/2019				5.14		
1/17/2019					6.41	
2/13/2019					6.42	
3/6/2019				6.15		
3/19/2019			5.89			
3/20/2019	5.88	6.1		5.32	6.59	
8/27/2019	5.85					
8/28/2019		5.86	5.74			
8/29/2019				5.2	6.27	
10/16/2019			5.9	5.36	7	
10/17/2019	6.09	5.93				
3/4/2020			5.76	5.2	6.54	
3/5/2020	5.74	5.95				
5/12/2020	5.88					
8/19/2020	5.97					
8/20/2020		5.86	5.75	5.26	6.85	
9/16/2020	5.79	5.27	5.76			
9/17/2020				4.41	6.12	
10/27/2020						6.47
3/2/2021		6.17	5.59			
3/4/2021	5.98			4.34	5.87	
3/5/2021						7.06

# Time Series

Constituent: pH, Field (S.U) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
8/2/2018			6.18
8/3/2018		5.47	
1/18/2019			6.19
1/19/2019		5.45	
10/18/2019		5.79	6.44
8/20/2020		5.57	6.15
9/17/2020		4.93	5.77
10/27/2020	6.79	5.49	
3/3/2021	7.1		5.41
3/4/2021		4.57	

# Time Series

Constituent: Selenium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.005	<0.005	<0.005
9/1/2016	<0.005	<0.005				
9/6/2016			<0.005			
11/16/2016	<0.005	<0.005		<0.005	<0.005	<0.005
11/17/2016			0.0052 (J)			
2/20/2017						<0.005
2/21/2017	<0.005	<0.005	0.0018 (J)	<0.005	<0.005	
6/12/2017				<0.005		<0.005
6/13/2017		<0.005	<0.005		<0.005	
6/14/2017	<0.005					
9/26/2017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2/13/2018				<0.005	<0.005	<0.005
2/14/2018	<0.005	<0.005	<0.005			
6/26/2018	<0.005	<0.005	0.0036 (J)	<0.005	<0.005	<0.005
12/18/2018	<0.005	<0.005	0.0044 (J)	<0.005	<0.005	<0.005
8/27/2019	<0.005	<0.005		<0.005	<0.005	<0.005
8/29/2019			0.0023 (J)			
10/15/2019	<0.005	<0.005	0.0022 (J)	<0.005	<0.005	<0.005
3/3/2020	<0.005	<0.005		<0.005	<0.005	<0.005
3/4/2020			0.0019 (J)			
8/18/2020	<0.005	<0.005	0.0033 (J)	<0.005	<0.005	<0.005
9/15/2020	<0.005	<0.005	0.0028 (J)	<0.005	<0.005	<0.005
3/1/2021				<0.005		
3/2/2021	<0.005	<0.005	0.006		<0.005	<0.005

# Time Series

Constituent: Selenium (mg/L) Analysis Run 4/21/2021 2:24 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.005					
9/1/2016		<0.005				
9/6/2016						<0.005
9/8/2016			<0.005	0.0043 (J)	0.0039 (J)	
11/15/2016	<0.005	<0.005				
11/17/2016			<0.005			
11/18/2016				0.0047 (J)		
11/21/2016					0.0058 (J)	<0.005
2/20/2017	<0.005	<0.005				
2/21/2017			<0.005	0.0025 (J)		
2/22/2017					0.005 (J)	<0.005
6/12/2017	<0.005	<0.005				
6/13/2017			<0.005	0.0036 (J)		
6/14/2017					0.0074 (J)	0.0045 (J)
9/26/2017	<0.005	<0.005				
9/27/2017			<0.005	0.004 (J)	0.0068 (J)	0.0034 (J)
2/13/2018	<0.005	<0.005				
2/14/2018			<0.005	<0.005	<0.005	<0.005
6/26/2018	<0.005	<0.005	<0.005			
6/27/2018				0.0014 (J)	<0.005	
6/28/2018						<0.005
12/18/2018	<0.005	<0.005	<0.005		<0.005	<0.005
12/20/2018				<0.005		
8/27/2019	<0.005	<0.005	<0.005			0.0038 (J)
8/28/2019				0.0017 (J)	<0.005	
10/15/2019	<0.005	<0.005	<0.005			
10/16/2019					<0.005	
12/4/2019				0.0036 (J)		0.0018 (J)
3/3/2020	<0.005	<0.005				
3/4/2020			<0.005	0.0022 (J)	0.0018 (J)	
3/5/2020						<0.005
8/18/2020	<0.005	<0.005				
8/19/2020			<0.005	<0.005	<0.005	<0.005
9/15/2020	<0.005	<0.005	<0.005		<0.005	
9/16/2020				0.0042 (J)		<0.005
3/1/2021		<0.005				
3/2/2021	<0.005		0.0021 (J)			
3/3/2021				0.0031 (J)	0.0042 (J)	<0.005

# Time Series

Constituent: Selenium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.005					
11/21/2016	<0.005					
2/22/2017	0.0017 (J)					
6/14/2017	<0.005					
9/27/2017	0.0019 (J)					
2/14/2018	<0.005					
3/6/2018		<0.005	<0.005			
3/15/2018				<0.005		
5/1/2018		<0.005	<0.005 (D)	<0.005		
6/27/2018	0.0017 (J)		<0.005			
6/28/2018		<0.005		<0.005		
7/31/2018		<0.005				
8/1/2018			0.0015 (J)	0.0031 (J)		
8/10/2018					<0.005	
8/23/2018		<0.005	<0.005 (X)		<0.005	
9/19/2018		<0.005	0.002 (J)		<0.005	
10/29/2018		<0.005	<0.005	0.002 (J)	<0.005	
11/28/2018		<0.005	<0.005	0.0017 (J)	<0.005	
12/19/2018	0.0059 (J)		<0.005	<0.005		
12/20/2018		<0.005			<0.005	
1/16/2019				<0.005		
1/17/2019					<0.005	
2/13/2019					<0.005	
8/27/2019	0.057					
8/28/2019		<0.005	<0.005			
8/29/2019				<0.005	<0.005	
10/16/2019			0.0017 (J)	0.002 (J)	<0.005	
12/3/2019		0.0029 (J)				
12/4/2019	0.1					
3/4/2020			<0.005	0.0026 (J)	<0.005	
3/5/2020	0.1	<0.005				
5/12/2020	0.0989					
8/19/2020	0.099					
8/20/2020		<0.005	0.0016 (J)	0.0037 (J)	<0.005	
9/16/2020	0.12	<0.005	0.002 (J)			
9/17/2020				<0.005	<0.005	
3/2/2021		<0.005	0.0028 (J)			
3/4/2021	0.14			0.0039 (J)	<0.005	
3/5/2021						<0.005

# Time Series

Constituent: Selenium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.005
1/19/2019		<0.005	
10/18/2019		<0.005	<0.005
8/20/2020		<0.005	<0.005
9/17/2020		<0.005	<0.005
3/3/2021	<0.005		<0.005
3/4/2021		<0.005	



# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				7.5	0.38 (J)	2.7
9/1/2016	2.7	1.7				
9/6/2016			38			
11/16/2016	3.6	1.2		6.6	<1 (J)	3.4
11/17/2016			84			
2/20/2017						3.9 (B-01)
2/21/2017	3	1.1	39	6.1	1.5	
6/12/2017				5		3.7
6/13/2017		1.1	35		0.67 (J)	
6/14/2017	2.6					
9/26/2017	2.5	1.3	89	5.4	0.62 (J)	4.1
2/13/2018				4.7 (J)	<1	6.6
2/14/2018	2.1 (J)	<1	82.2			
6/26/2018	2	0.84 (J)	84.2	6.2	0.69 (J)	3.5
7/31/2018	1.9	0.63 (J)				
12/18/2018	2.1	0.66 (J)	83.4	5.9	0.72 (J)	4.3
3/19/2019	2.2	0.75 (J)	65	6 (D)	0.78 (J)	3
10/15/2019	1.9	0.61 (J)	30	5.2	0.47 (J)	3.8
3/3/2020	1.8	0.51 (J)		7.1	0.93 (J)	2.8
3/4/2020			38.6			
9/15/2020	1.7	<1	41.5	5.9	<1	1.7
3/1/2021				4.7		
3/2/2021	1.7	0.51 (J)	54		<1	2.2

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	0.81 (J)					
9/1/2016		0.6 (J)				
9/6/2016						310
9/8/2016			280	300	460	
11/15/2016	<1 (J)	0.68 (J)				
11/17/2016			200			
11/18/2016				320		
11/21/2016					500	300
2/20/2017	1 (B-01)	0.98 (J)				
2/21/2017			360	270		
2/22/2017					570	280
6/12/2017	0.94 (J)	0.54 (J)				
6/13/2017			290	230		
6/14/2017					440	290
9/26/2017	0.92 (J)	0.53 (J)				
9/27/2017			310	260	380	260
2/13/2018	<1	<1				
2/14/2018			260	232	280	250
6/26/2018	0.91 (J)	0.54 (J)	231			
6/27/2018				205	281	
6/28/2018						276
12/18/2018	0.68 (J)	0.39 (J)	231		293	440
12/20/2018				200		
3/19/2019	0.74 (J)	0.68 (J)		199		
3/20/2019			235 (D)		278	623
10/15/2019	0.68 (J)	0.48 (J)	174			
10/16/2019					266	
12/4/2019				241		327
3/3/2020	0.71 (J)	2.5				
3/4/2020			165	205	238	
3/5/2020						369
9/15/2020	<1	<1	126		241	
9/16/2020				190		334
3/1/2021		0.74 (J)				
3/2/2021	<1		139			
3/3/2021				172	341	371

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	370					
11/21/2016	420					
2/22/2017	380					
6/14/2017	400					
9/27/2017	400					
2/14/2018	383					
3/6/2018		111	1560			
3/15/2018				1590		
5/1/2018		112	1465 (D)	1550		
6/27/2018	372		1450			
6/28/2018		109		1530		
7/31/2018		107				
8/1/2018			1560	1580		
8/10/2018					183	
8/23/2018		108	1470		145	
9/19/2018		117	1500		178	
10/29/2018		127	1720	1750	157	
11/28/2018		133	1730	1780	189	
12/19/2018	370		1520	1650		
12/20/2018		113			150	
1/16/2019				589 (O)		
1/17/2019					157	
2/13/2019					169	
3/19/2019			1100			
3/20/2019	409	127		1740	186.5 (D)	
10/16/2019			1560	1590	155	
12/3/2019		105				
12/4/2019	293					
3/4/2020			1380	1370	129	
3/5/2020	269	106				
9/16/2020	255	103	1360			
9/17/2020				1330	165	
10/27/2020						492
3/2/2021		98.3	1360			
3/4/2021	185			1250	114	
3/5/2021						698

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
8/2/2018			8.9
8/3/2018		1170	
1/18/2019			0.64 (J)
1/19/2019		1140	
10/18/2019		<1	0.76 (J)
9/17/2020		1030	0.53 (J)
10/27/2020	357	893	
3/3/2021	360		0.66 (J)
3/4/2021		909	

# Time Series

Constituent: Thallium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				<0.001	<0.001	<0.001
9/1/2016	<0.001	<0.001				
9/6/2016			<0.001			
11/16/2016	<0.001	<0.001		<0.001	<0.001	<0.001
11/17/2016			<0.001			
2/20/2017						<0.001
2/21/2017	<0.001	<0.001	<0.001	<0.001	<0.001	
6/12/2017				<0.001		<0.001
6/13/2017		<0.001	<0.001		<0.001	
6/14/2017	<0.001					
9/26/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2/13/2018				<0.001	<0.001	<0.001
2/14/2018	<0.001	<0.001	<0.001			
6/26/2018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/18/2018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/27/2019	<0.001	<0.001		<0.001	<0.001	<0.001
8/29/2019			<0.001			
10/15/2019	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/3/2020	<0.001	<0.001		<0.001	<0.001	<0.001
3/4/2020			<0.001			
8/18/2020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/15/2020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
3/1/2021				<0.001		
3/2/2021	<0.001	<0.001	<0.001		<0.001	<0.001

# Time Series

Constituent: Thallium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	<0.001					
9/1/2016		<0.001				
9/6/2016						<0.001
9/8/2016			<0.001	<0.001	<0.001 (o)	
11/15/2016	<0.001	<0.001				
11/17/2016			<0.001			
11/18/2016				<0.001		
11/21/2016					0.0002 (J)	<0.001
2/20/2017	<0.001	<0.001				
2/21/2017			<0.001	<0.001		
2/22/2017					0.0002 (J)	<0.001
6/12/2017	<0.001	<0.001				
6/13/2017			<0.001	<0.001		
6/14/2017					0.0002 (J)	<0.001
9/26/2017	<0.001	<0.001				
9/27/2017			<0.001	<0.001	0.0002 (J)	<0.001
2/13/2018	<0.001	<0.001				
2/14/2018			<0.001	<0.001	0.00018 (J)	<0.001
6/26/2018	<0.001	<0.001	<0.001			
6/27/2018				<0.001	0.00017 (J)	
6/28/2018						<0.001
12/18/2018	<0.001	<0.001	<0.001		0.00017 (J)	<0.001
12/20/2018				<0.001		
8/27/2019	<0.001	<0.001	<0.001			<0.001
8/28/2019				<0.001	0.00017 (J)	
10/15/2019	<0.001	<0.001	<0.001			
10/16/2019					0.00017 (J)	
12/4/2019				<0.001		<0.001
3/3/2020	<0.001	<0.001				
3/4/2020			<0.001	<0.001	0.00016 (J)	
3/5/2020						<0.001
8/18/2020	<0.001	<0.001				
8/19/2020			<0.001	<0.001	0.00016 (J)	<0.001
9/15/2020	<0.001	<0.001	<0.001		0.00016 (J)	
9/16/2020				<0.001		<0.001
3/1/2021		<0.001				
3/2/2021	<0.001		<0.001			
3/3/2021				<0.001	0.00018 (J)	<0.001

# Time Series

Constituent: Thallium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	<0.001					
11/21/2016	<0.001					
2/22/2017	<0.001					
6/14/2017	<0.001					
9/27/2017	<0.001					
2/14/2018	<0.001					
3/6/2018		<0.001	<0.001			
3/15/2018				<0.001		
5/1/2018		<0.001	<0.001 (D)	<0.001		
6/27/2018	<0.001		<0.001			
6/28/2018		<0.001		<0.001		
7/31/2018		<0.001				
8/1/2018			<0.001	<0.001		
8/10/2018					<0.001	
8/23/2018		<0.001	<0.001		<0.001	
9/19/2018		<0.001	<0.001		<0.001	
10/29/2018		<0.001	<0.001	<0.001	<0.001	
11/28/2018		<0.001	<0.001	<0.001	<0.001	
12/19/2018	<0.001		<0.001	<0.001		
12/20/2018		<0.001			<0.001	
1/16/2019				<0.001		
1/17/2019					<0.001	
2/13/2019					<0.001	
8/27/2019	<0.001					
8/28/2019		<0.001	<0.001			
8/29/2019				<0.001	<0.001	
10/16/2019			<0.001	<0.001	<0.001	
12/3/2019		<0.001				
12/4/2019	<0.001					
3/4/2020			<0.001	<0.001	<0.001	
3/5/2020	<0.001	<0.001				
8/19/2020	<0.001					
8/20/2020		<0.001	<0.001	<0.001	<0.001	
9/16/2020	<0.001	<0.001	<0.001			
9/17/2020				<0.001	<0.001	
3/2/2021		<0.001	<0.001			
3/4/2021	<0.001			<0.001	<0.001	
3/5/2021						<0.001

# Time Series

Constituent: Thallium (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
1/18/2019			<0.001
1/19/2019		<0.001	
10/18/2019		<0.001	<0.001
8/20/2020		<0.001	<0.001
9/17/2020		<0.001	<0.001
3/3/2021	<0.001		<0.001
3/4/2021		<0.001	



# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-23S (bg)	BRGWA-2I (bg)	BRGWA-2S (bg)	BRGWA-5I (bg)
8/31/2016				151	88	138
9/1/2016	142	69				
9/6/2016			146			
11/16/2016	100	100		69	41	77
11/17/2016			211			
2/20/2017						170
2/21/2017	71	37	151	68	<10	
6/12/2017				161		132
6/13/2017		84	130		53	
6/14/2017	140					
9/26/2017	149	68	160	167	45	108
2/13/2018				165	63	141
2/14/2018	137	138	194			
6/26/2018	142	90	221	188	71	133
7/31/2018	133	83				
12/18/2018	135	85	208	145 (X)	78 (X)	138 (X)
3/19/2019	132 (JX)	82 (JX)	161 (JX)	146.5 (D)	68	130
10/15/2019	134	89	124	140	66	175
3/3/2020	115	72		155	41	<10
3/4/2020			118			
9/15/2020	95	60	109	116	69	100
3/1/2021				98		
3/2/2021	93	43	105		43	80

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-6S (bg)	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
8/31/2016	154					
9/1/2016		299				
9/6/2016						505
9/8/2016			460	478	654	
11/15/2016	123	41				
11/17/2016			611			
11/18/2016				503		
11/21/2016					819	515
2/20/2017	158	133				
2/21/2017			497	380		
2/22/2017					721	504
6/12/2017	142	61				
6/13/2017			474	354		
6/14/2017					661	536
9/26/2017	138	29				
9/27/2017			457	376	518	432
2/13/2018	150	61				
2/14/2018			431	503 (JX)	487	448
6/26/2018	154	71	414			
6/27/2018				458 (X)	648 (X)	
6/28/2018						494
12/18/2018	147	70 (X)	401		407	715
12/20/2018				344		
3/19/2019	146	72		334 (JX)		
3/20/2019			410.5 (D)		391	885
10/15/2019	144	63	380			
10/16/2019					2030	
12/4/2019				422		612
3/3/2020	130	54				
3/4/2020			330	326	391	
3/5/2020						681
9/15/2020	116	79	272		281	
9/16/2020				301		634
3/1/2021		39				
3/2/2021	96		280			
3/3/2021				288	515	690

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:24 PM

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I	PZ-50D
9/8/2016	607					
11/21/2016	695					
2/22/2017	635					
6/14/2017	635					
9/27/2017	601					
2/14/2018	628					
3/6/2018		346	2200			
3/15/2018				2440		
5/1/2018		374	2080 (D)	2190		
6/27/2018	2280		31 (OX)			
6/28/2018		333		2290		
7/31/2018		393				
8/1/2018			2190	2360		
8/10/2018					344	
8/23/2018		350	2160		333	
9/19/2018		353	2160		364	
10/29/2018		329	2130	2300	334	
11/28/2018		358	2320	2300	357	
12/19/2018	605		2060	2190		
12/20/2018		322			355	
1/16/2019				2270		
1/17/2019					347	
2/13/2019					350	
3/19/2019			2050 (JX)			
3/20/2019	564	302		2280	360 (D)	
10/16/2019			2220	2280	346	
12/3/2019		362				
12/4/2019	526					
3/4/2020			2140	2270	351	
3/5/2020	489	297				
9/16/2020	428	275	2090			
9/17/2020				1910	329	
10/27/2020						914
3/2/2021		264	1680			
3/4/2021	350			1520	383	
3/5/2021						1210

# Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:24 PM

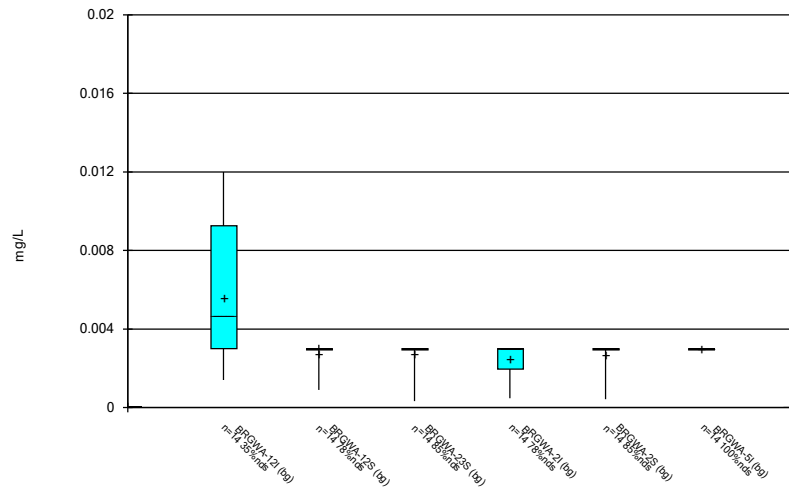
Plant Branch Client: Southern Company Data: Plant Branch AP

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	PZ-51D	PZ-51I	PZ-51S
8/2/2018			123
8/3/2018		1900	
1/18/2019			103
1/19/2019		1660	
10/18/2019		1550	99
9/17/2020		1600	101
10/27/2020	680	1200	
3/3/2021	598		76
3/4/2021		830	

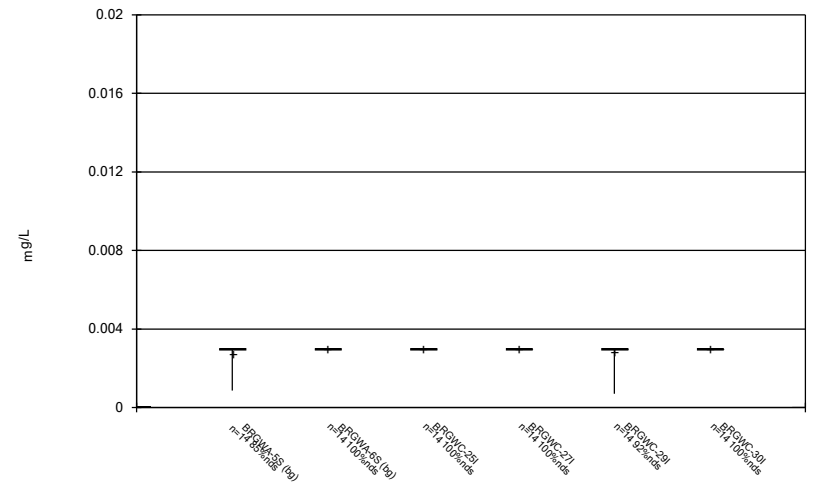
FIGURE B.

Box & Whiskers Plot



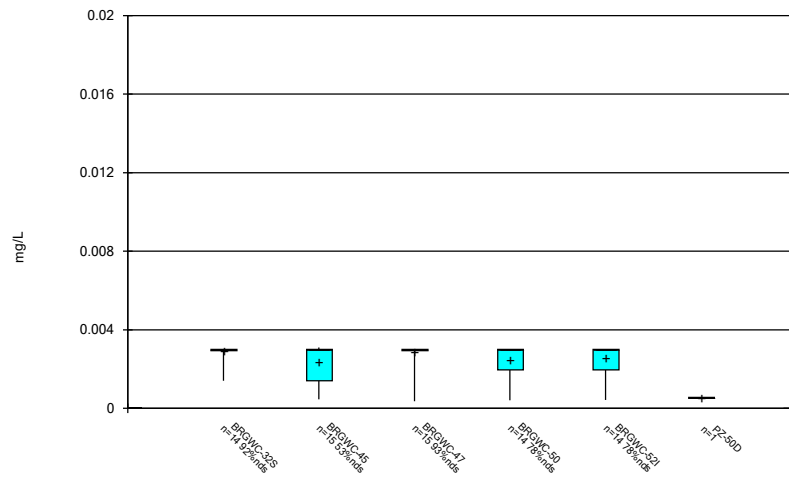
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



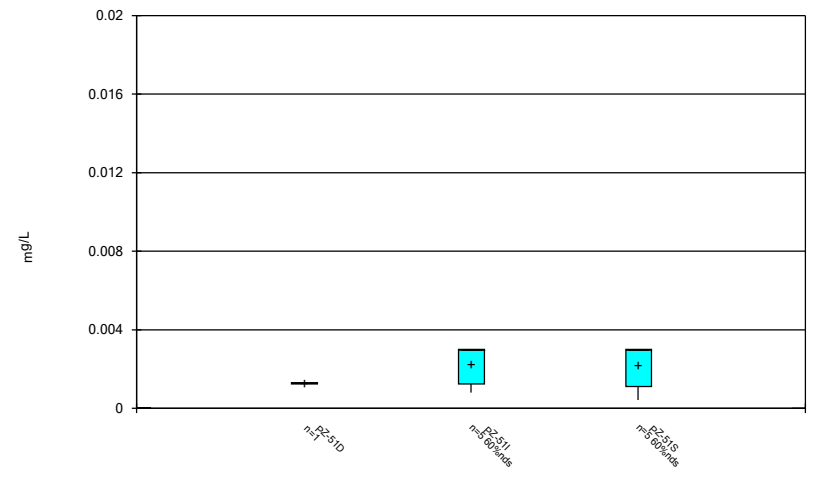
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



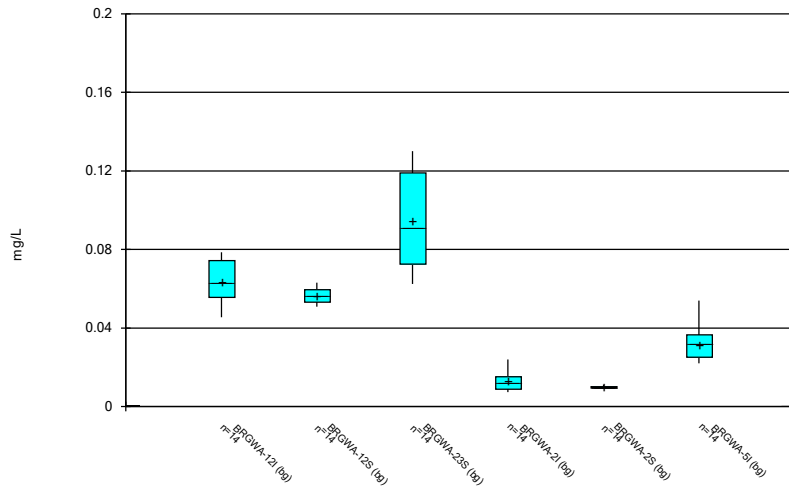
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Box & Whiskers Plot



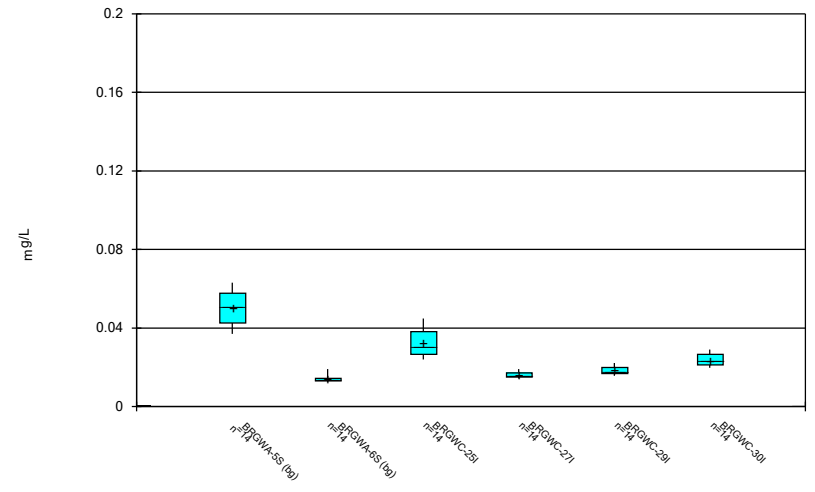
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Box & Whiskers Plot



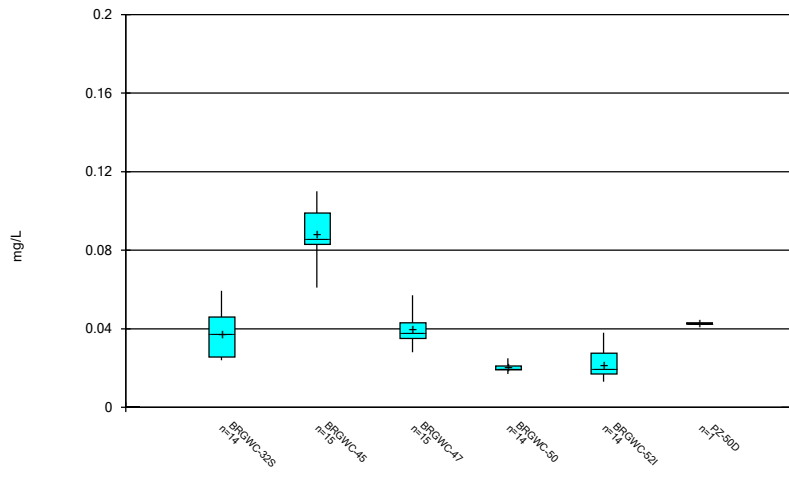
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



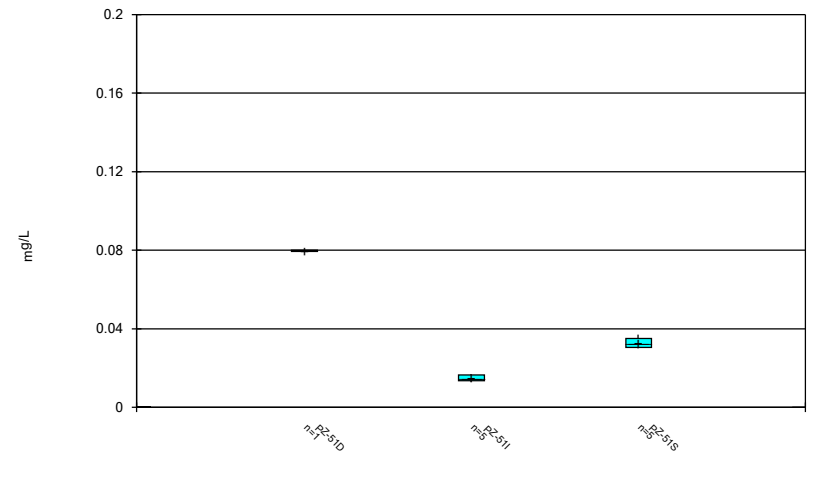
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



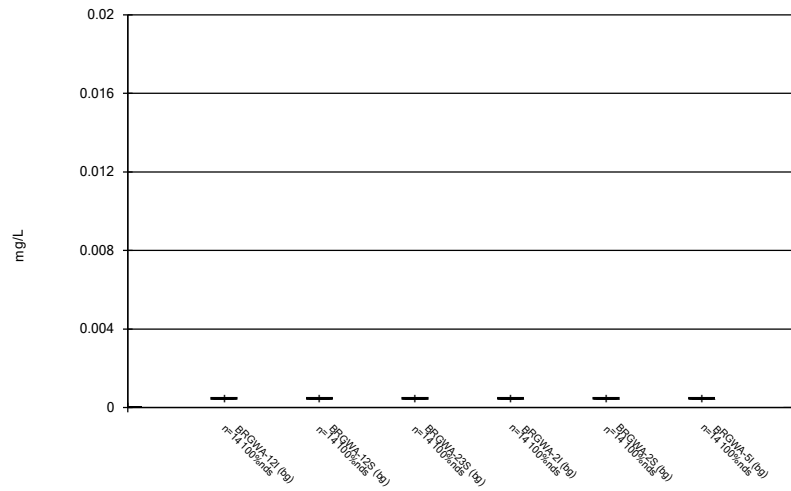
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Box & Whiskers Plot



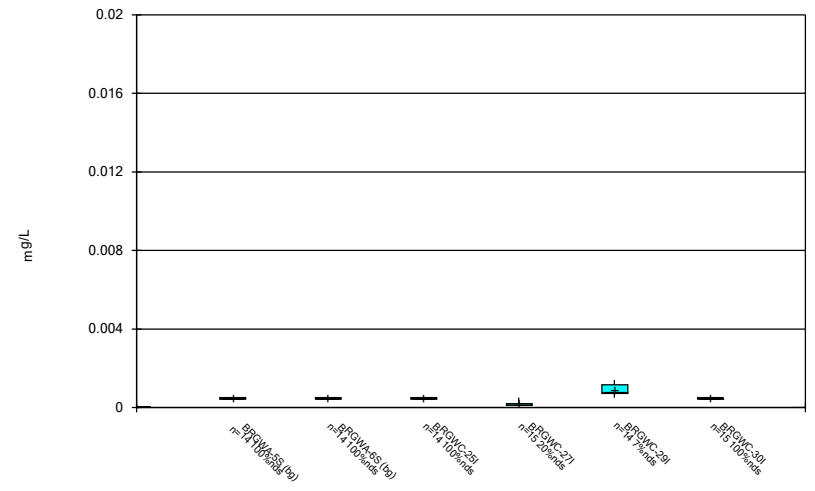
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



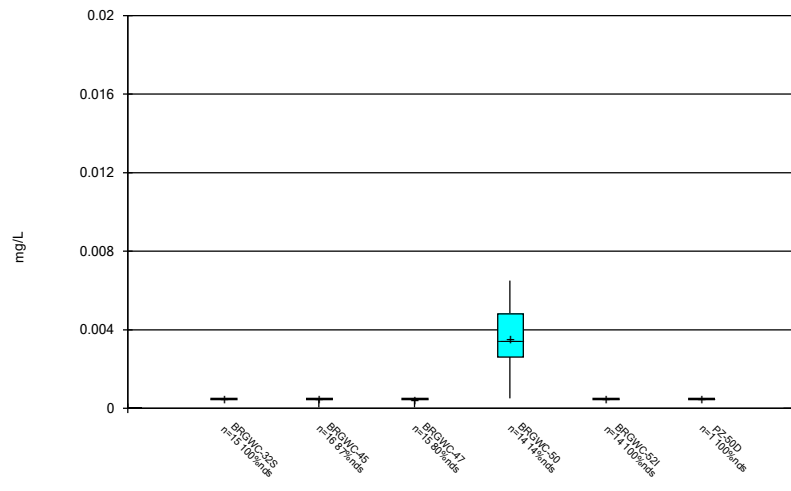
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



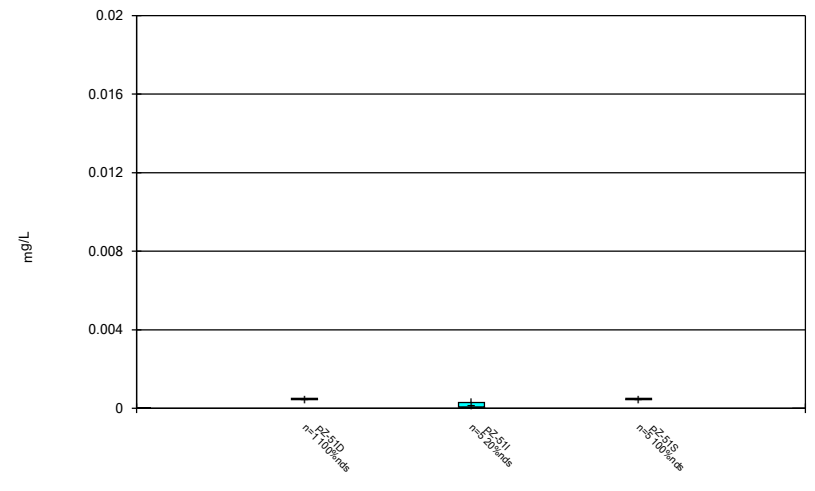
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



Constituent: Beryllium Analysis Run 4/21/2021 2:29 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

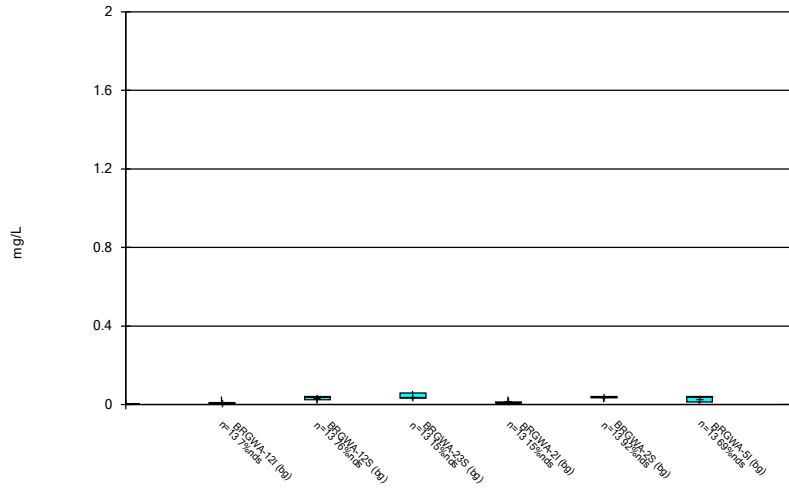
### Box & Whiskers Plot



Constituent: Beryllium Analysis Run 4/21/2021 2:29 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

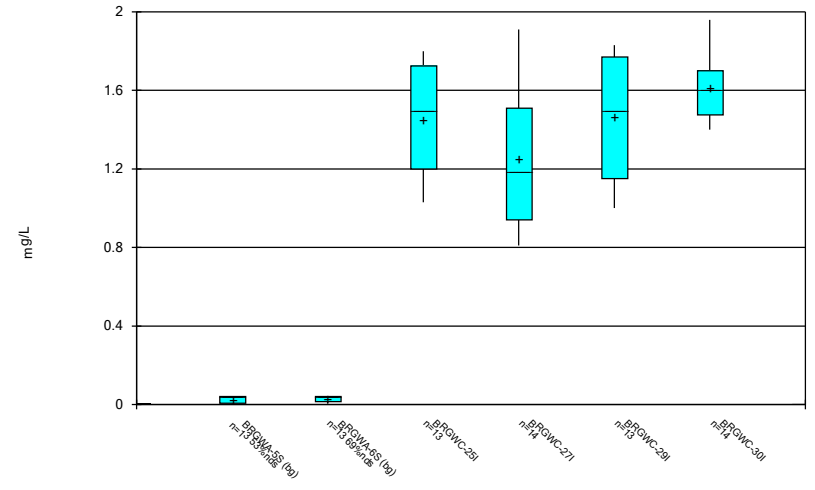


Box & Whiskers Plot



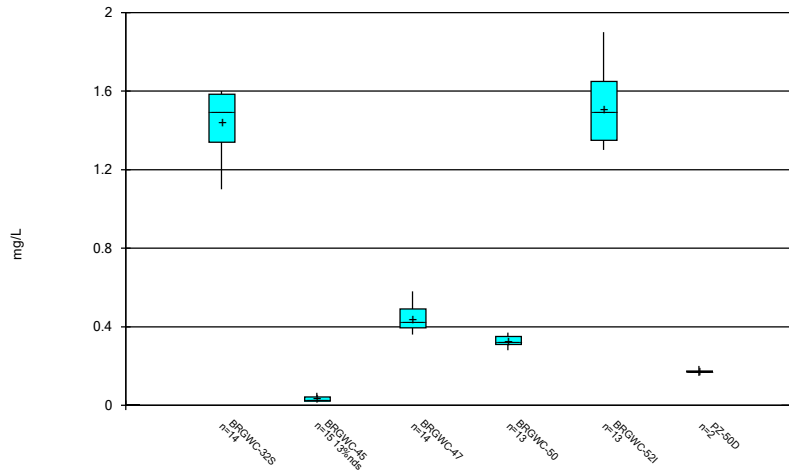
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Box & Whiskers Plot



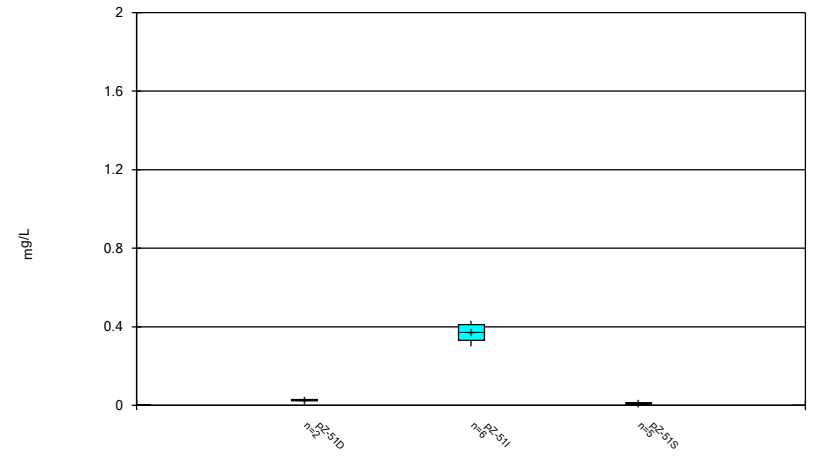
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



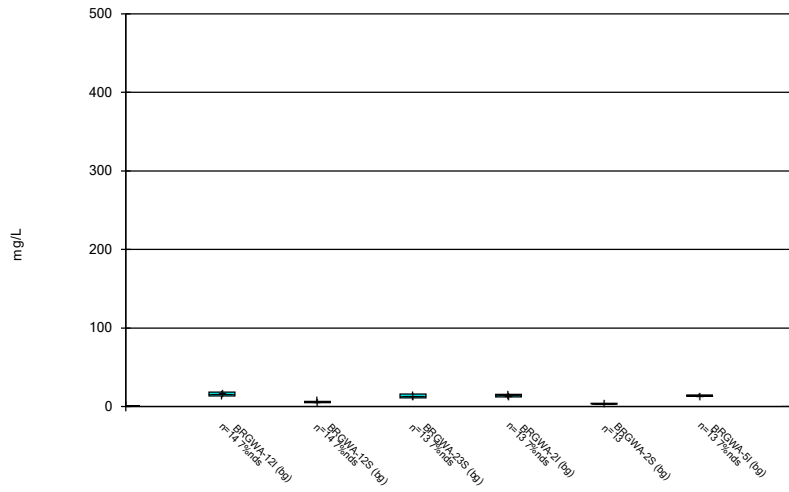
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Box & Whiskers Plot



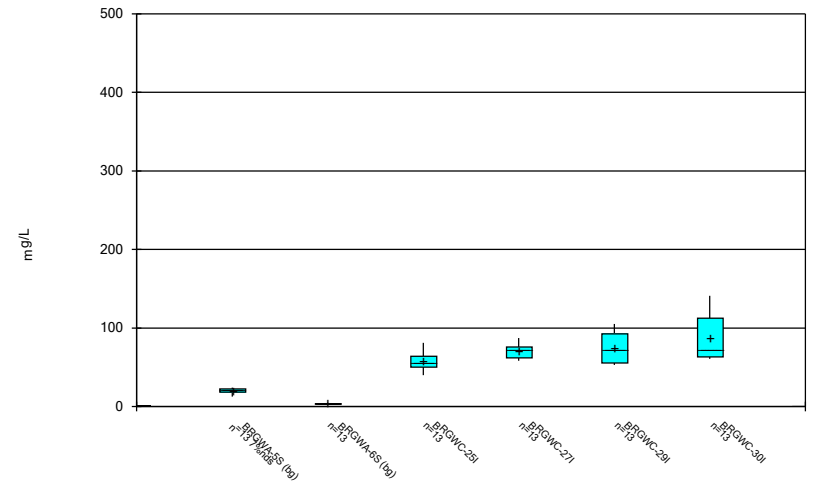
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Box & Whiskers Plot



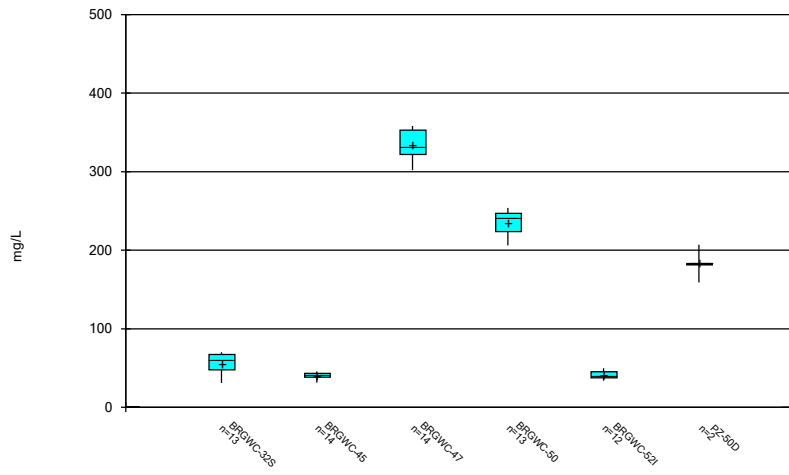
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



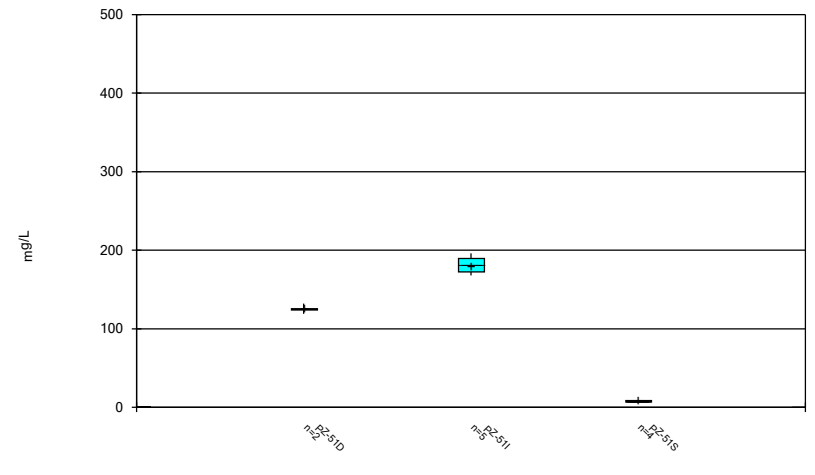
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



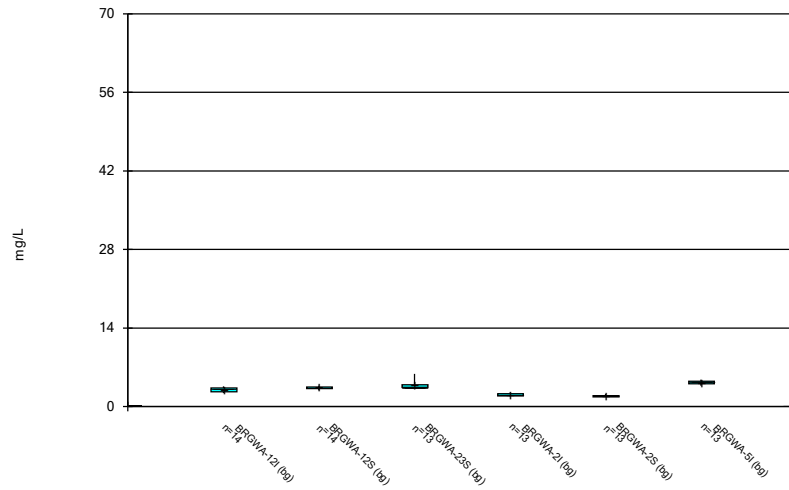
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Box & Whiskers Plot



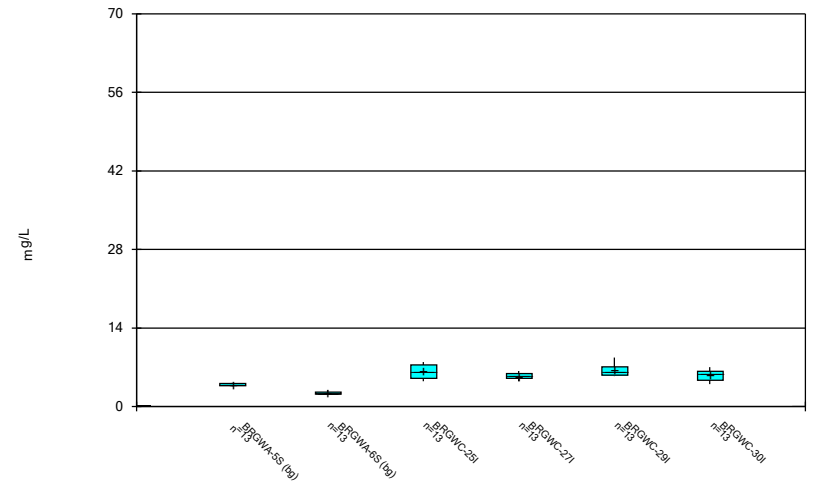
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### Box & Whiskers Plot



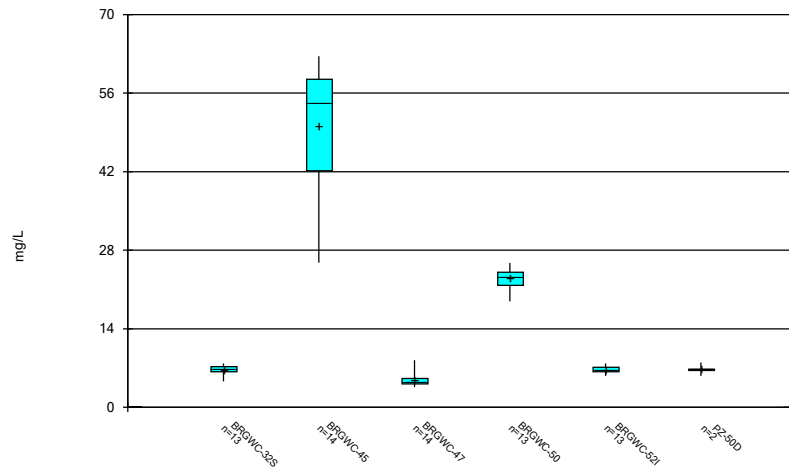
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



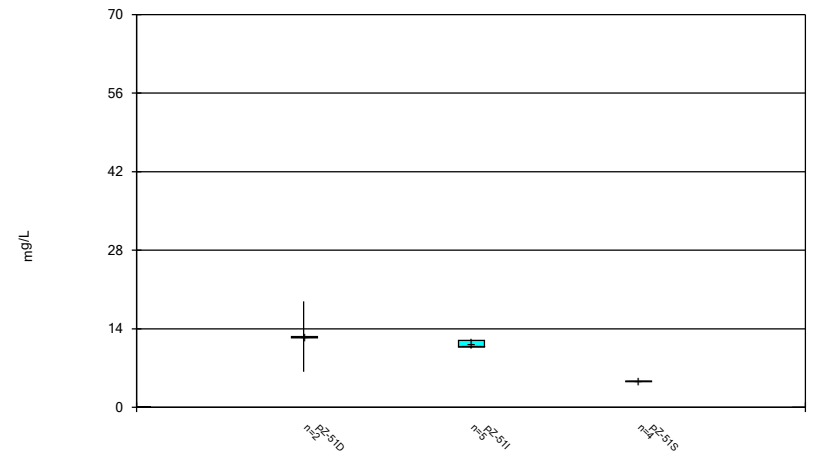
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



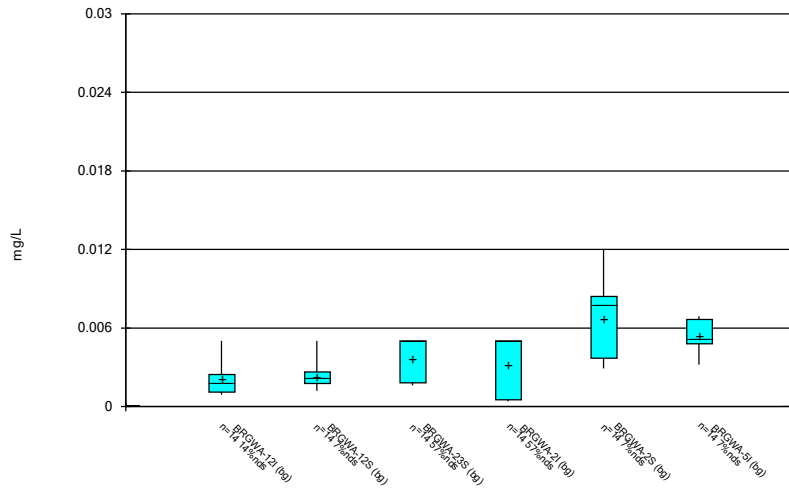
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### Box & Whiskers Plot



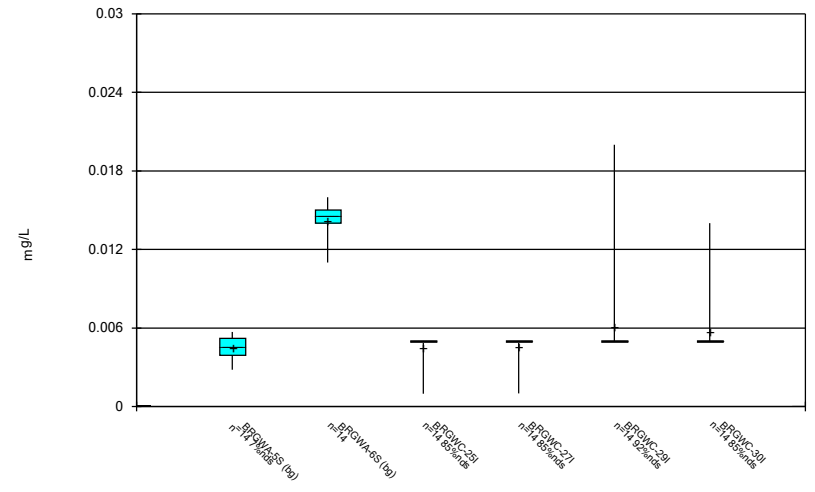
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Box & Whiskers Plot



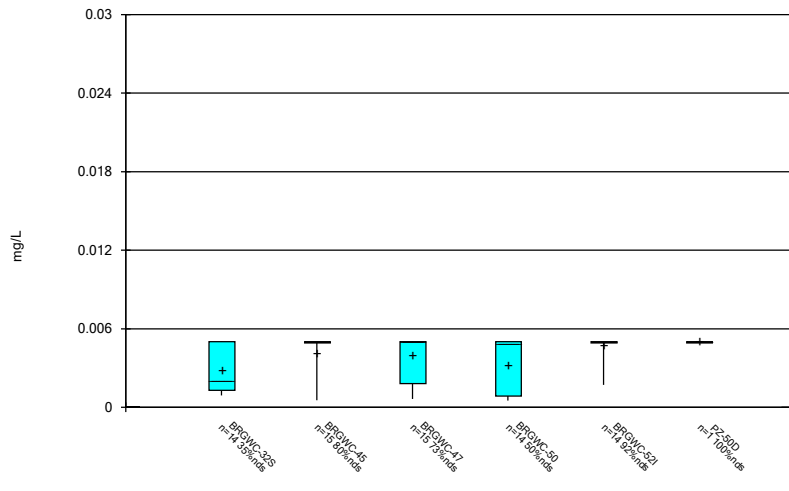
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Box & Whiskers Plot



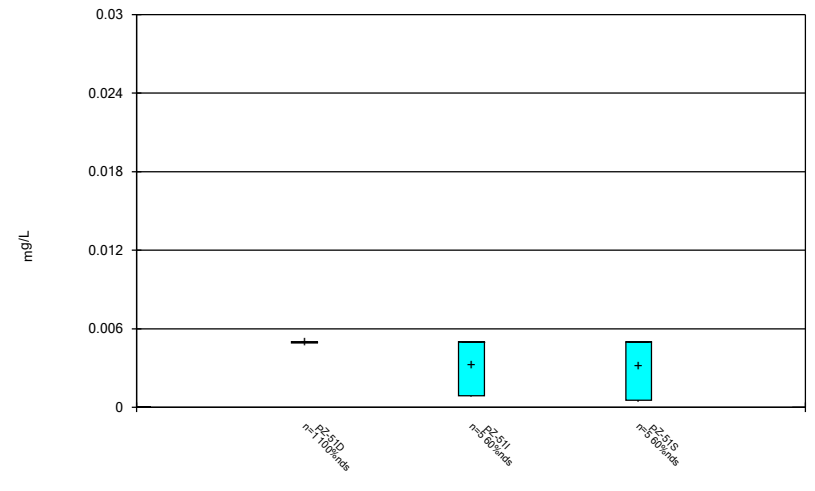
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Box & Whiskers Plot



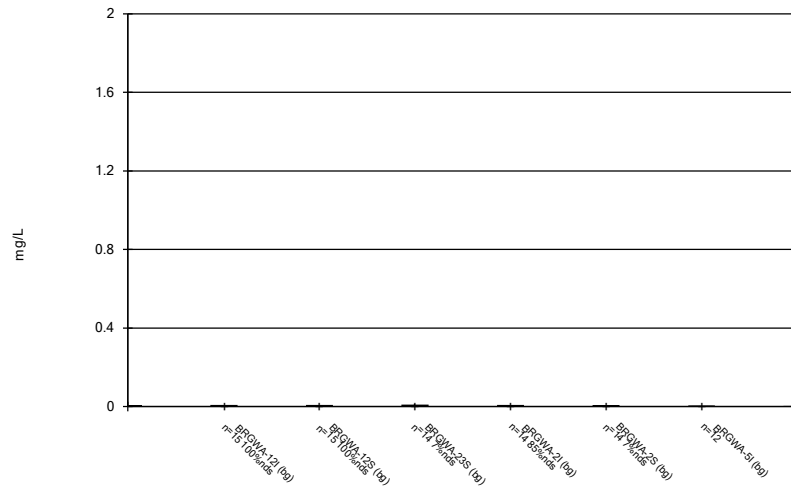
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Box & Whiskers Plot



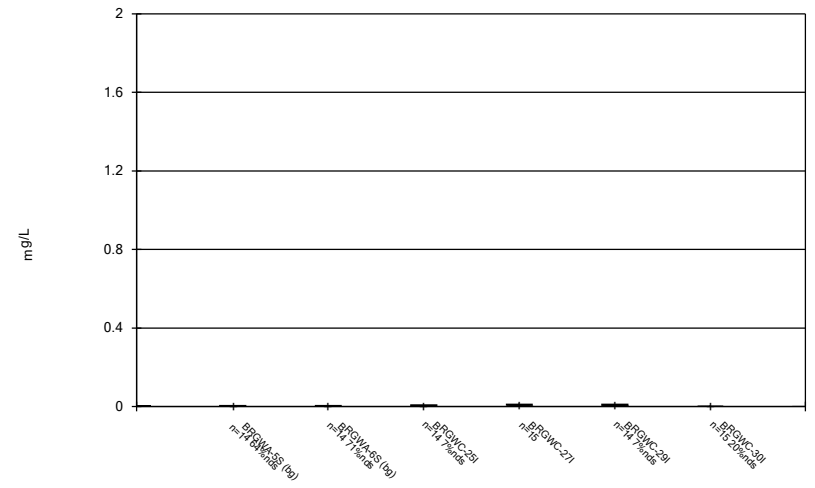
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### Box & Whiskers Plot



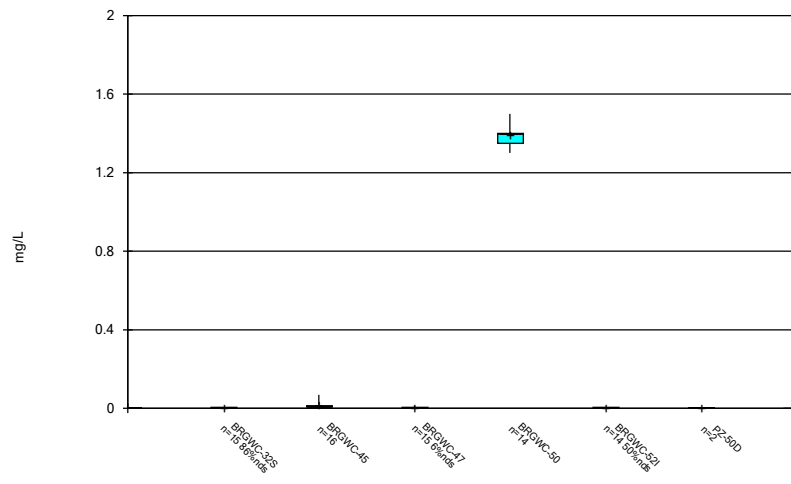
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



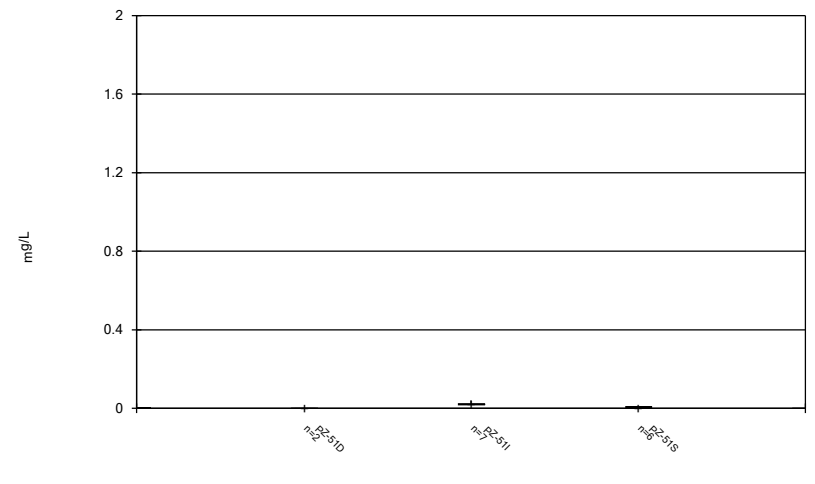
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



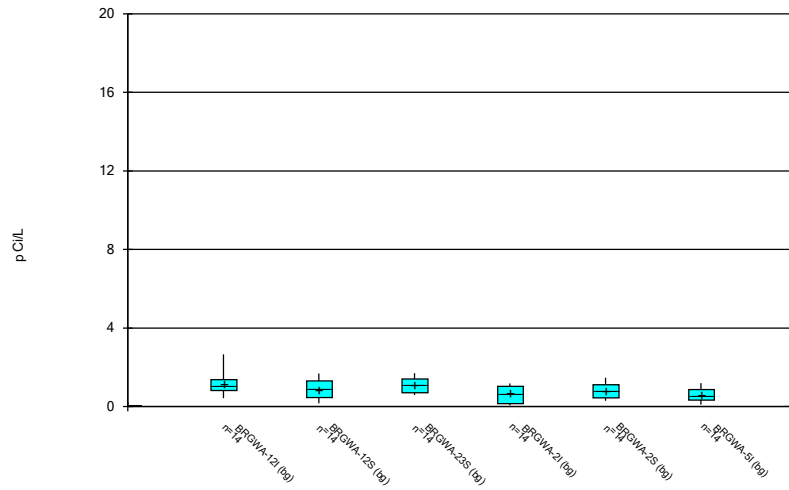
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



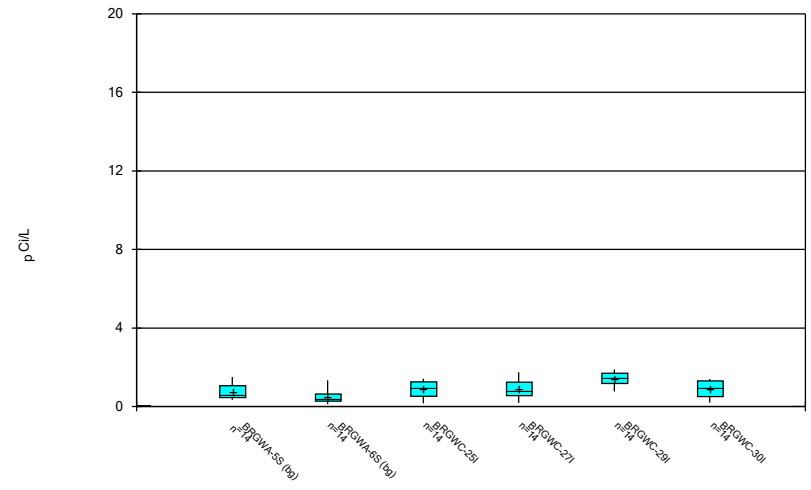
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Box & Whiskers Plot



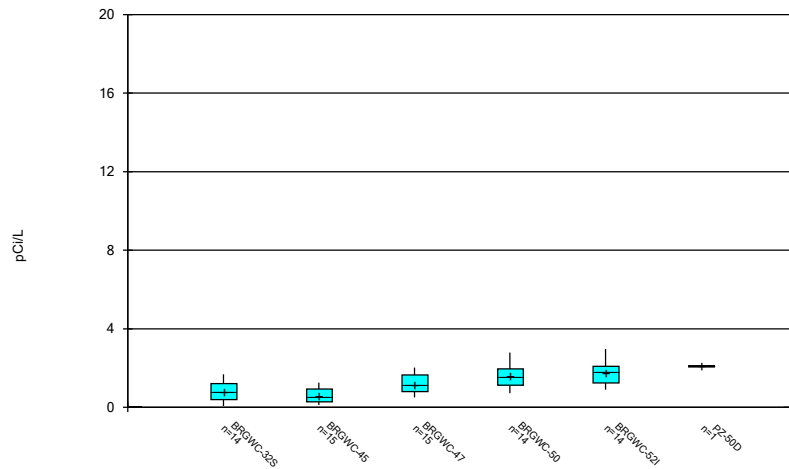
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



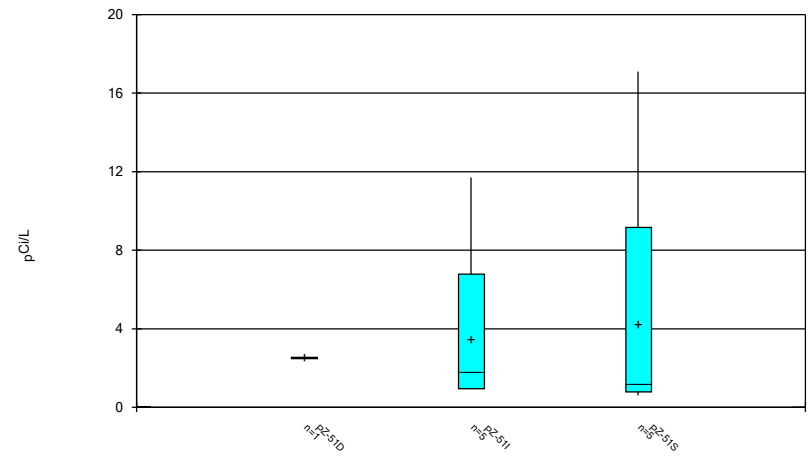
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Box & Whiskers Plot



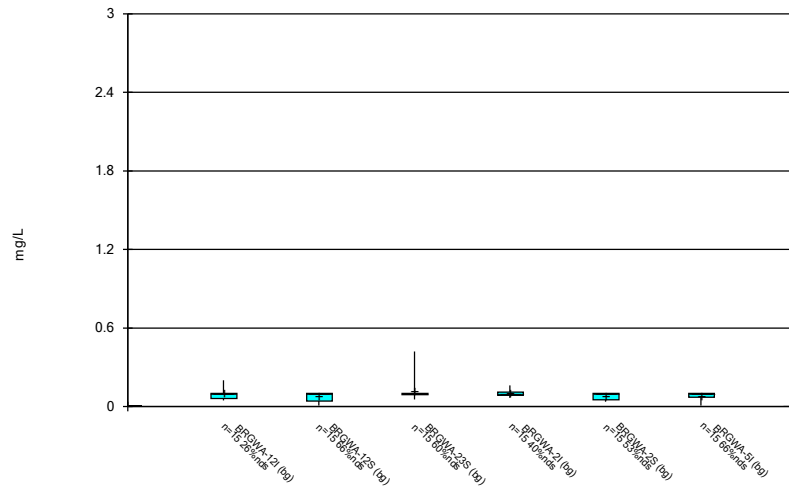
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



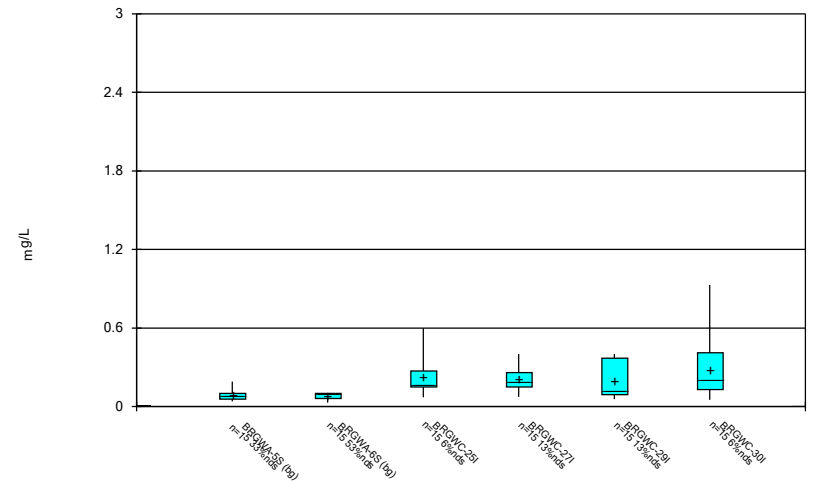
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Box & Whiskers Plot



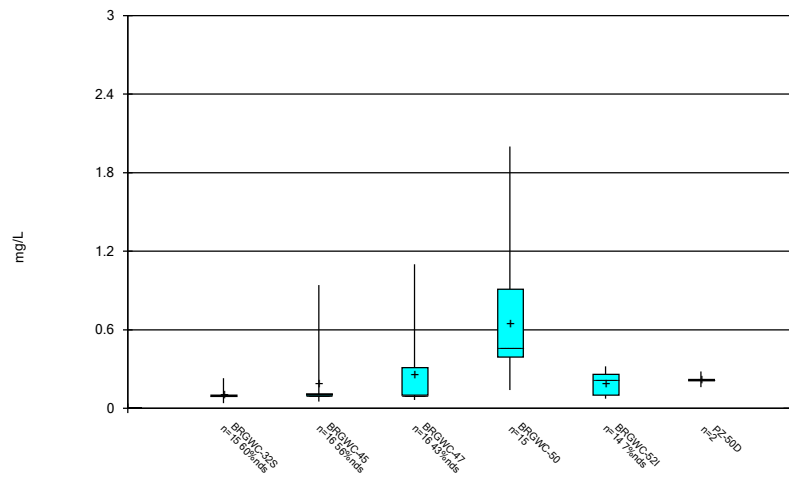
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 Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



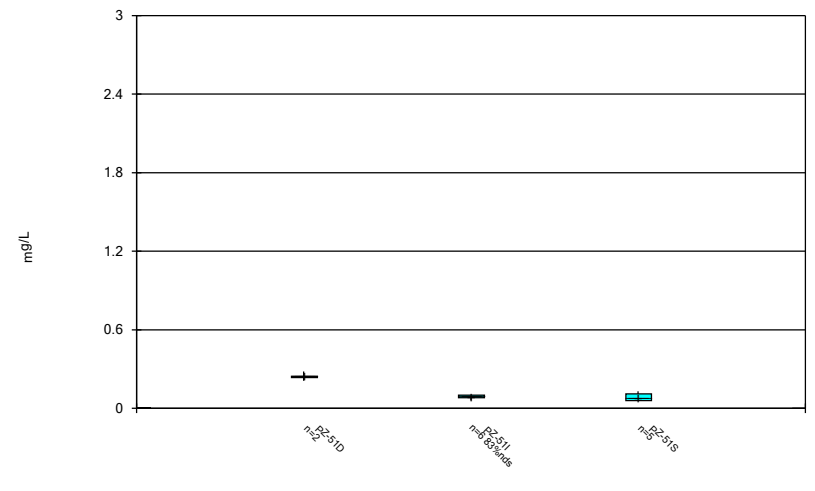
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Box & Whiskers Plot



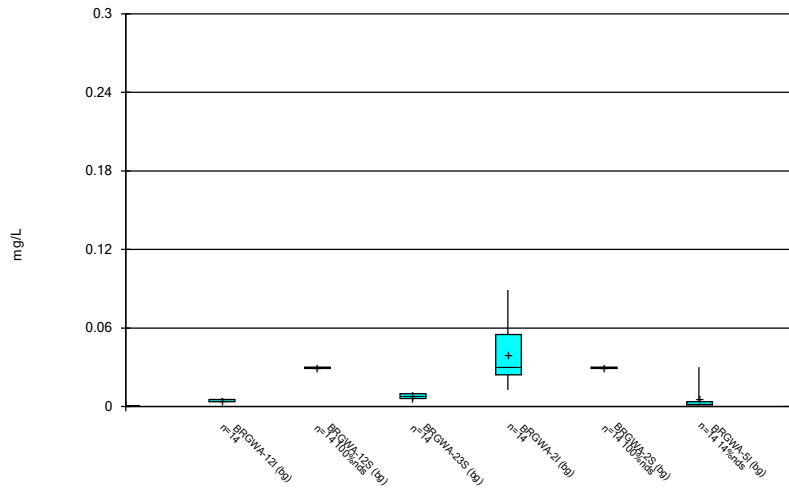
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Box & Whiskers Plot



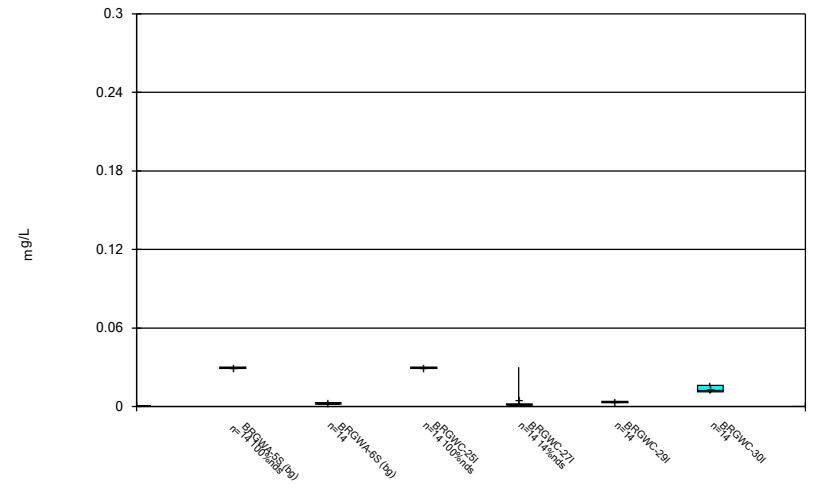
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Box & Whiskers Plot



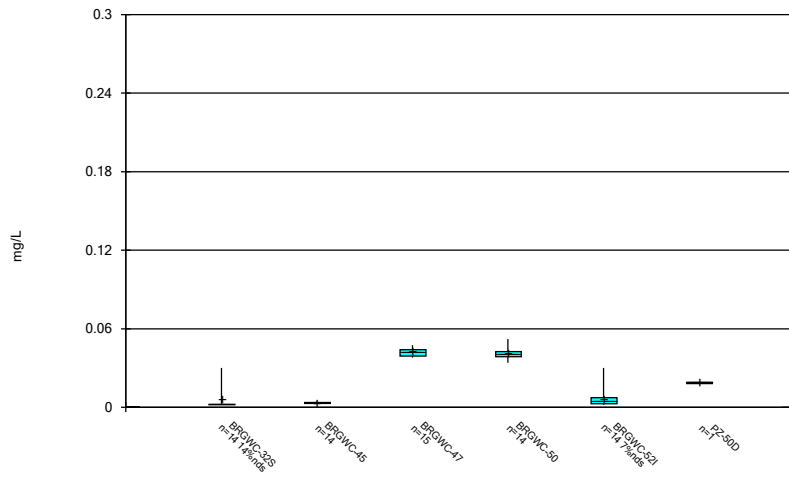
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Box & Whiskers Plot



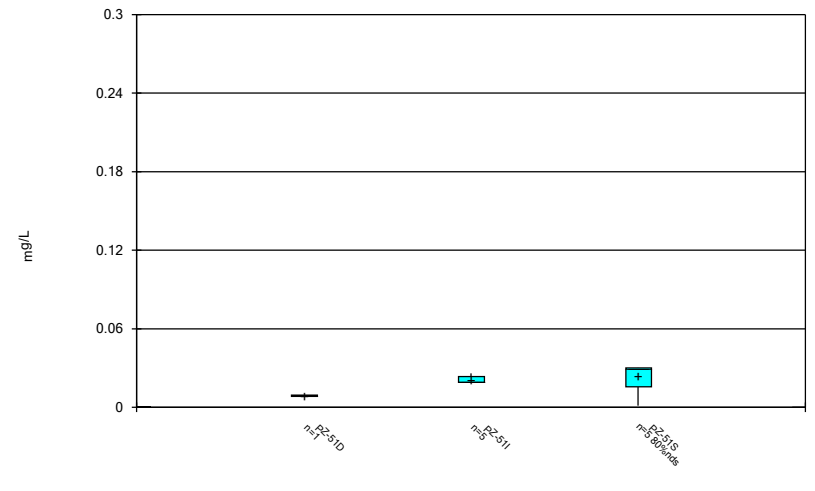
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Box & Whiskers Plot



Constituent: Lithium Analysis Run 4/21/2021 2:29 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

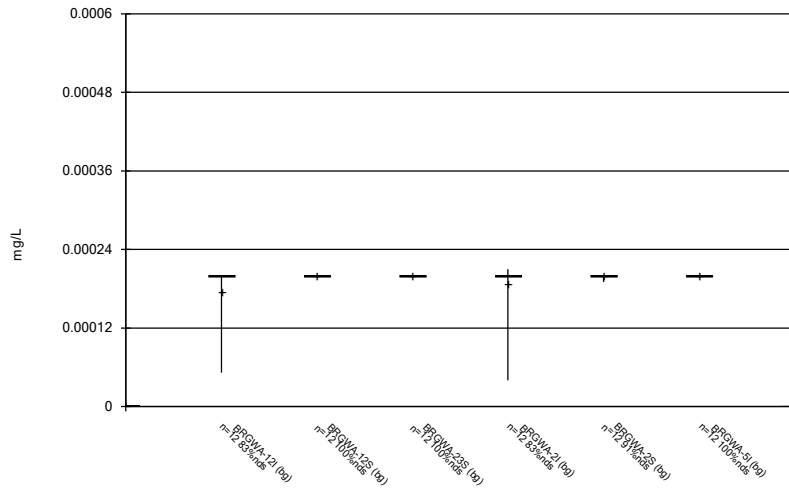
Box & Whiskers Plot



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Plant Branch Client: Southern Company Data: Plant Branch AP

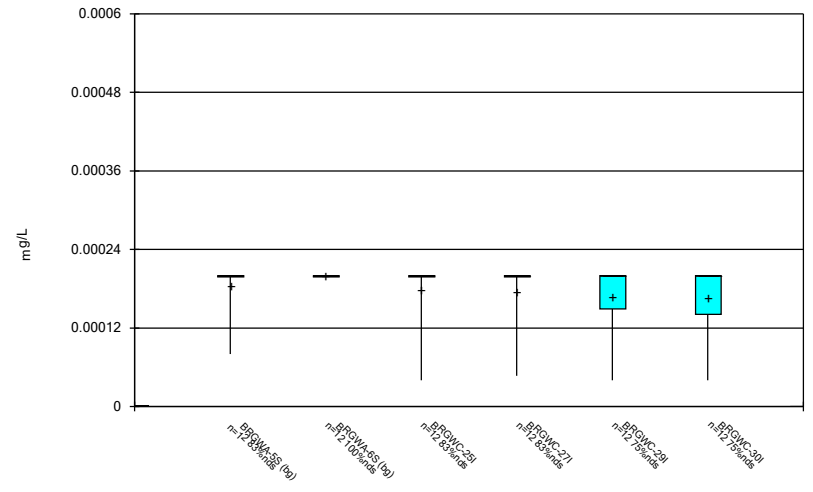


### Box & Whiskers Plot



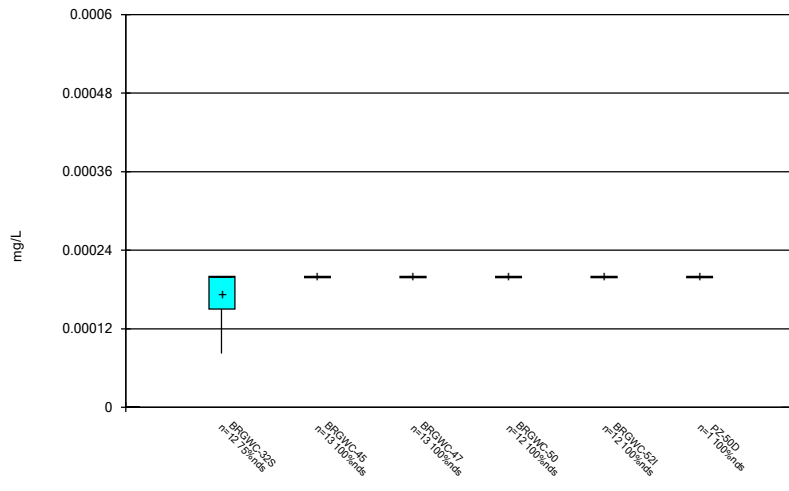
Constituent: Mercury Analysis Run 4/21/2021 2:29 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



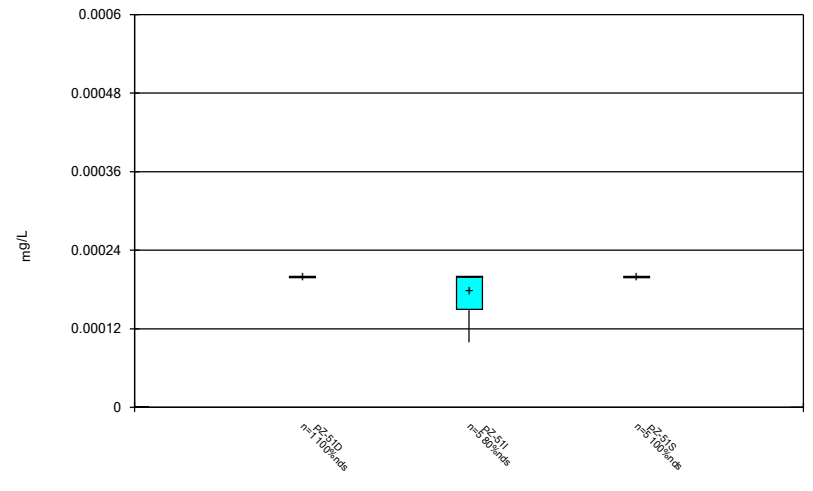
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### Box & Whiskers Plot



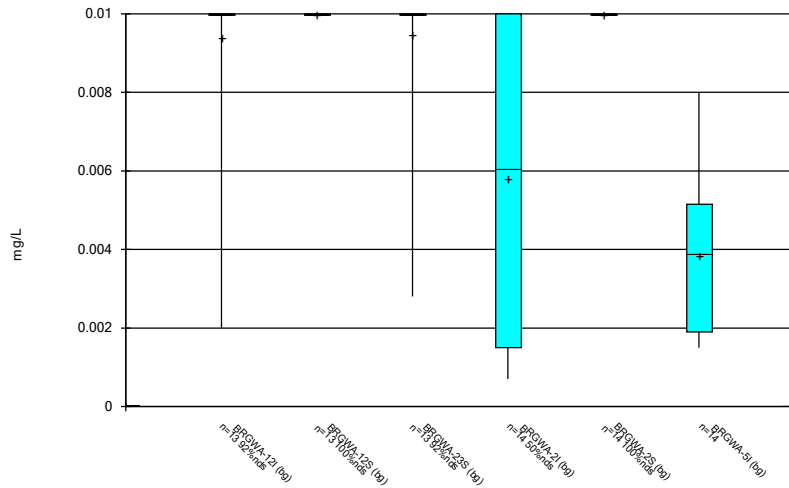
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



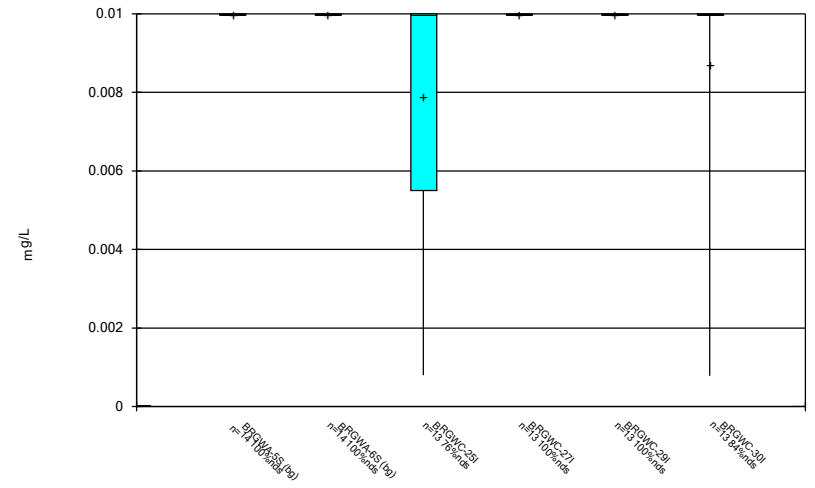
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Box & Whiskers Plot



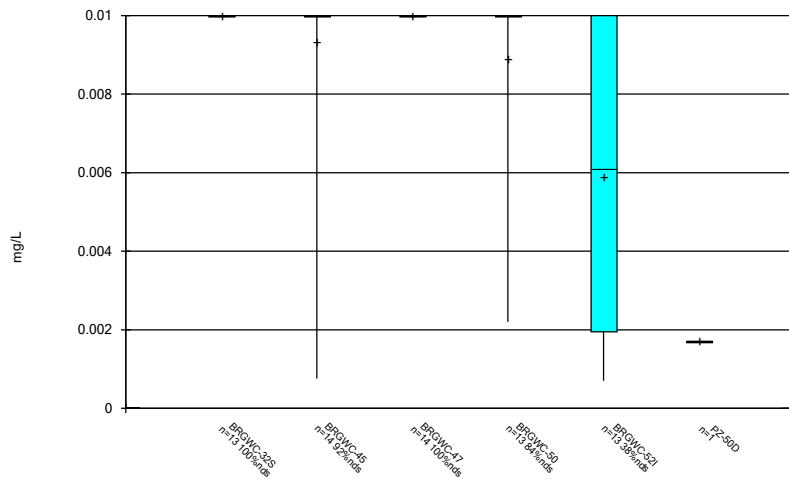
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Box & Whiskers Plot



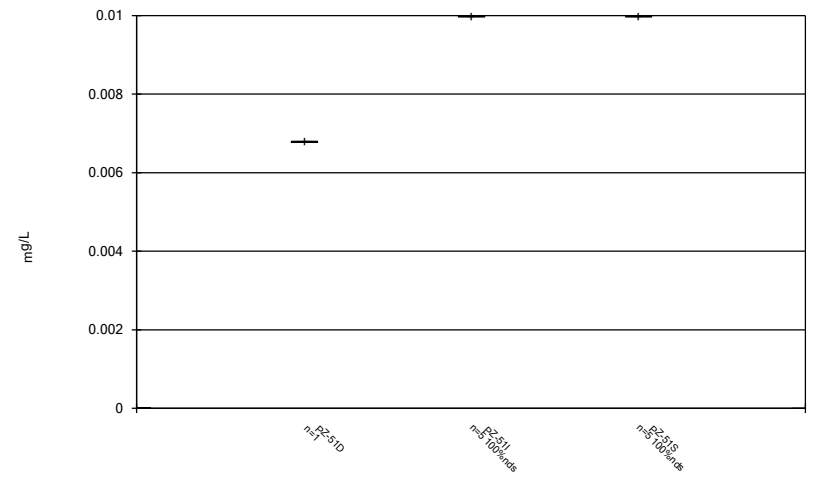
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



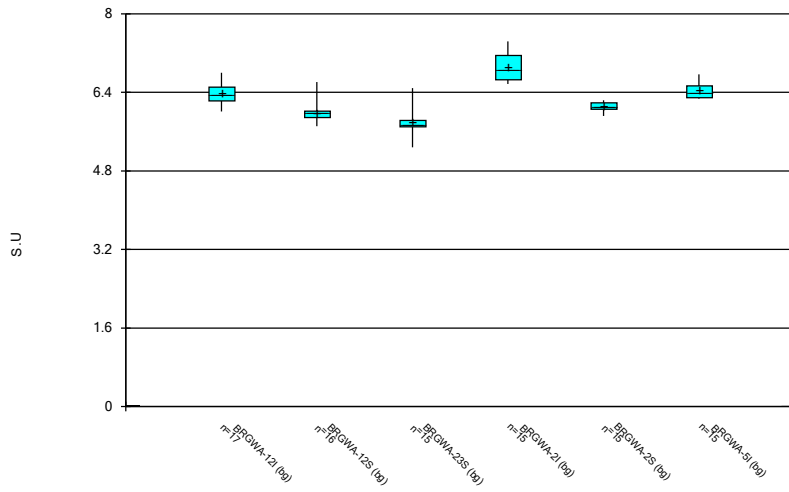
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Box & Whiskers Plot



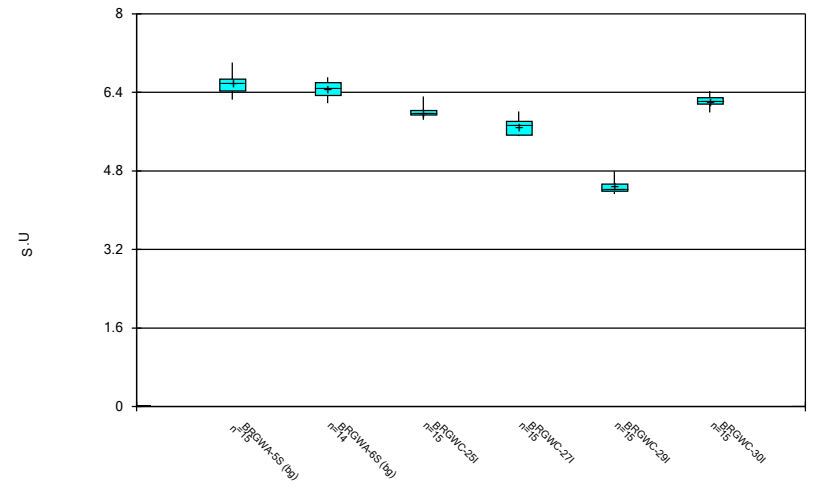
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



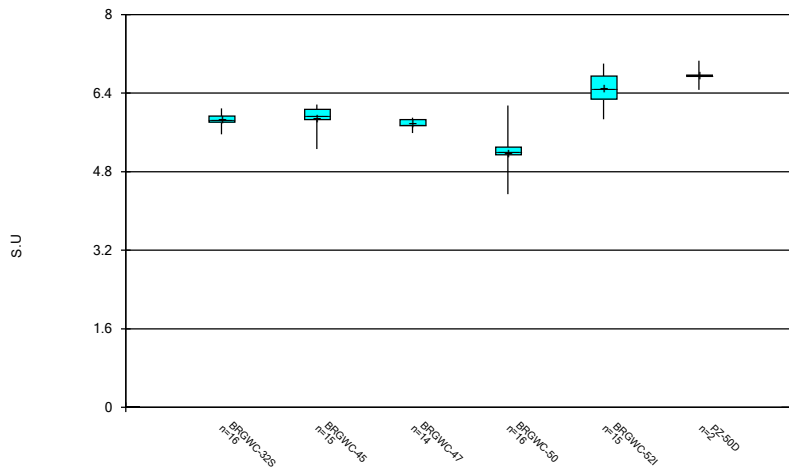
Constituent: pH, Field Analysis Run 4/21/2021 2:29 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



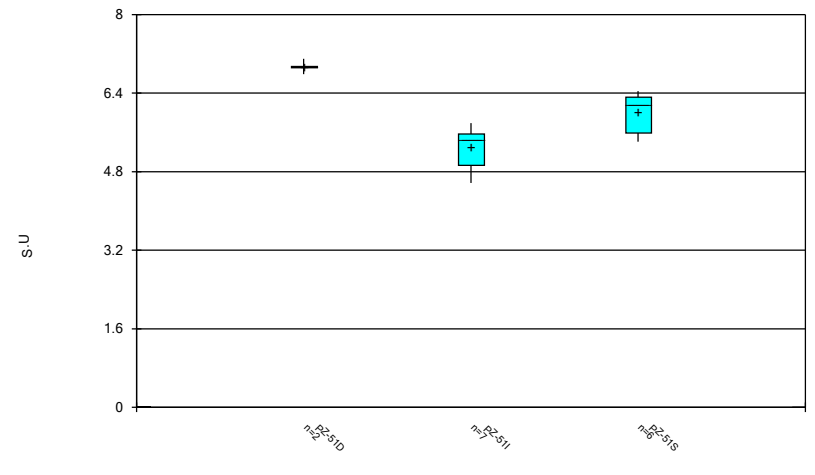
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Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



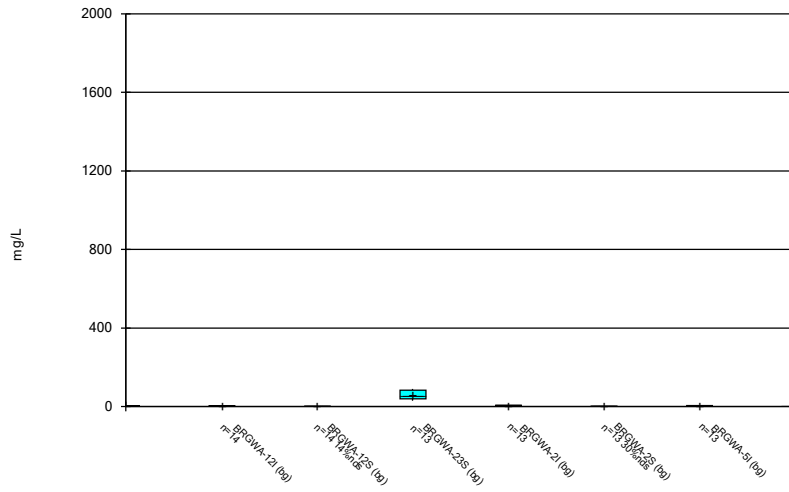
Constituent: pH, Field Analysis Run 4/21/2021 2:29 PM  
Plant Branch Client: Southern Company Data: Plant Branch AP

Box & Whiskers Plot



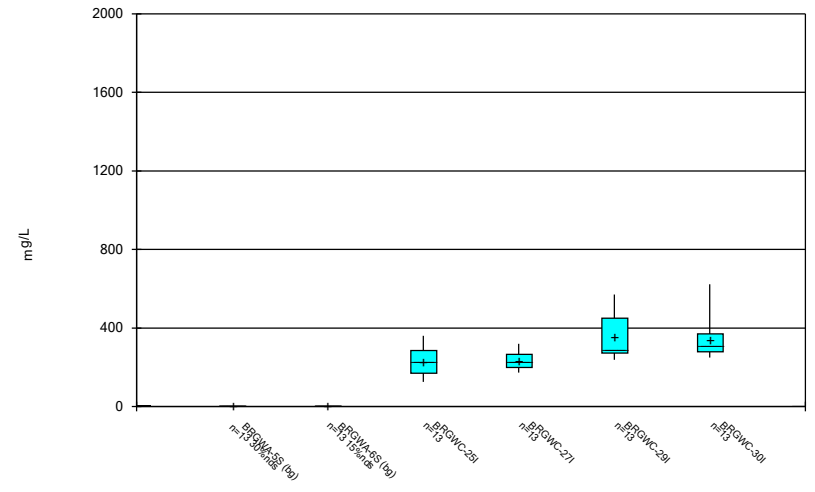
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



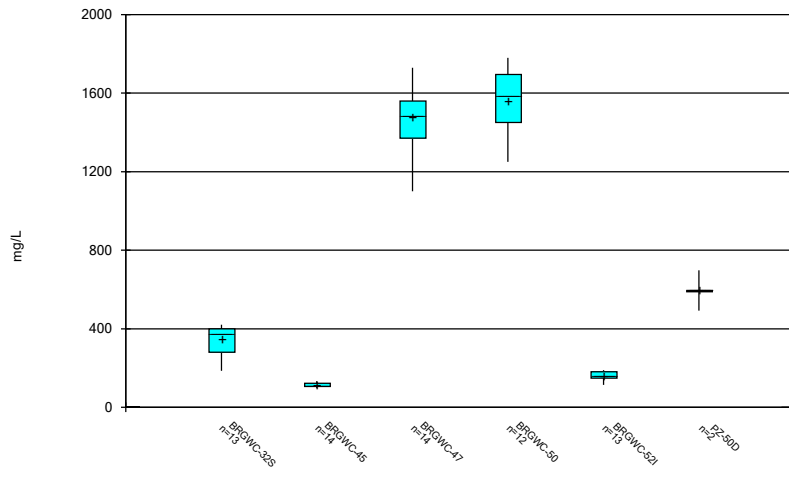
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:30 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



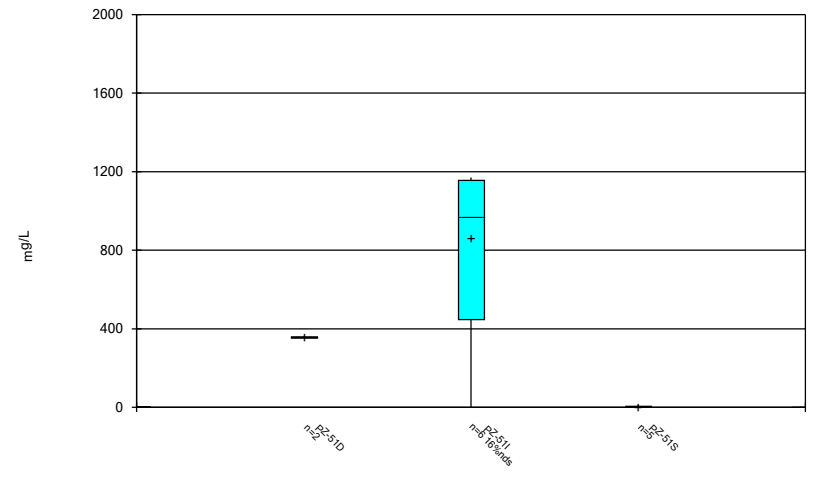
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### Box & Whiskers Plot



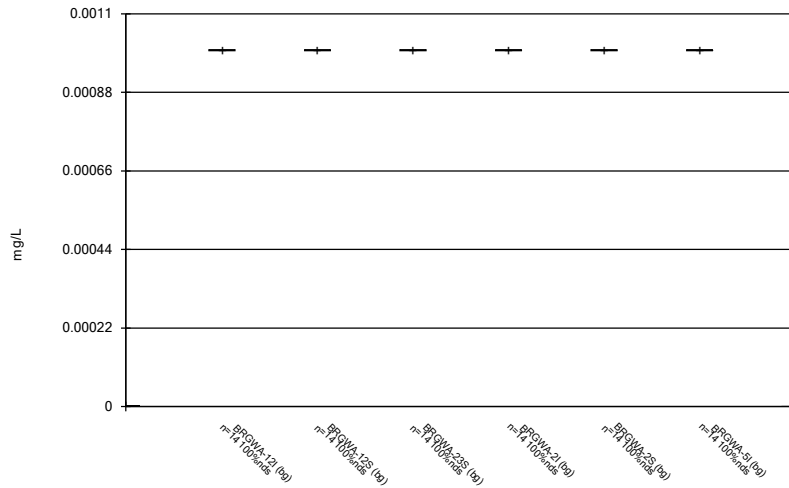
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



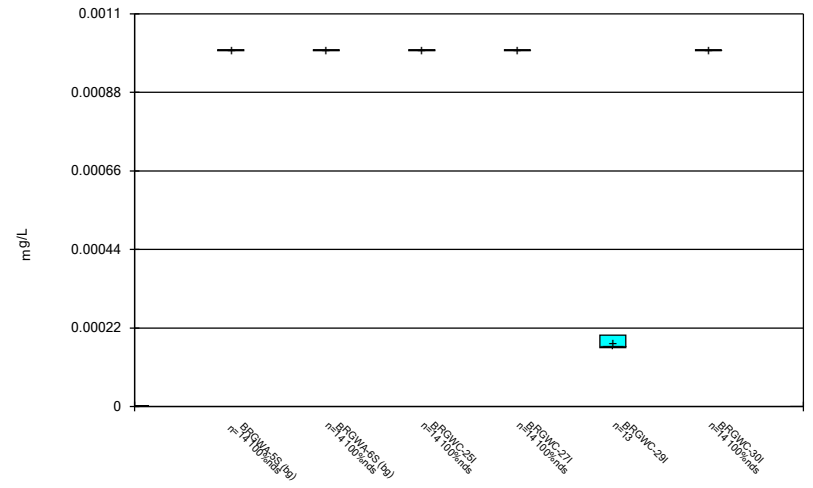
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



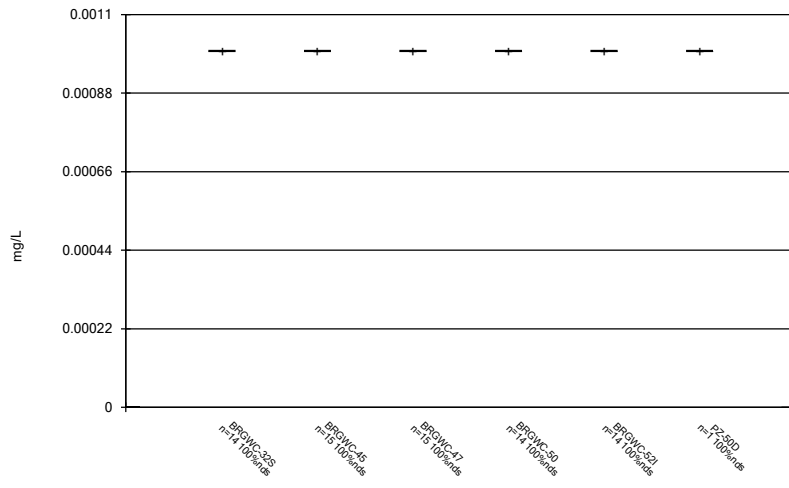
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



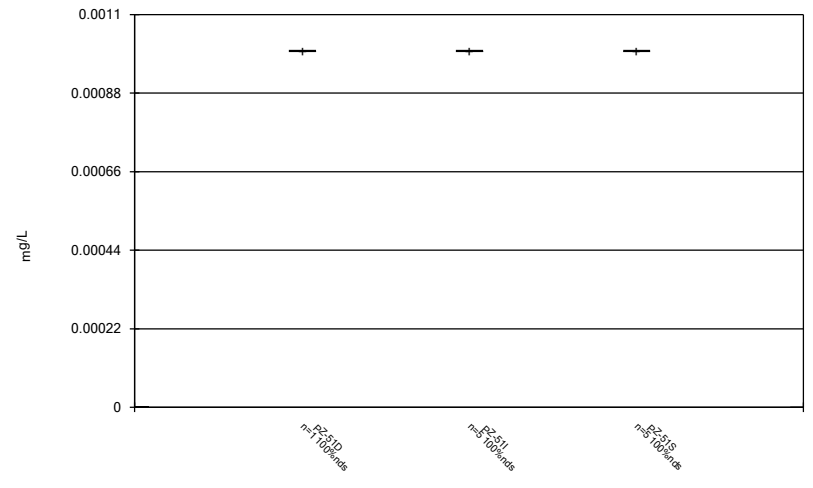
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



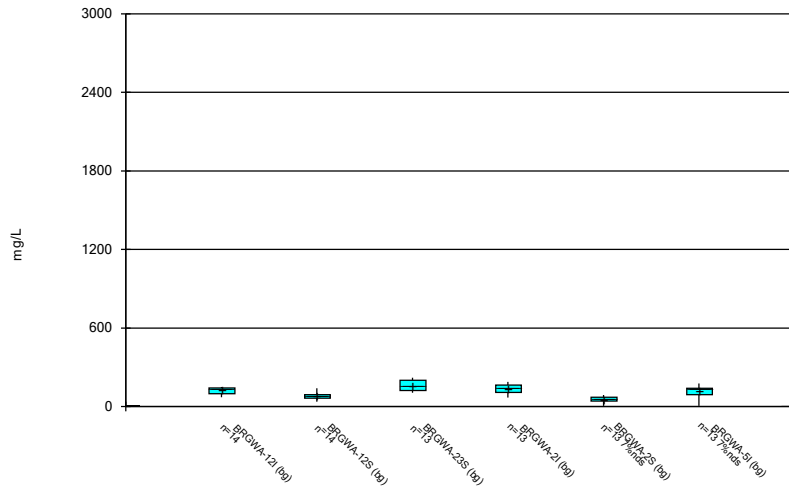
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



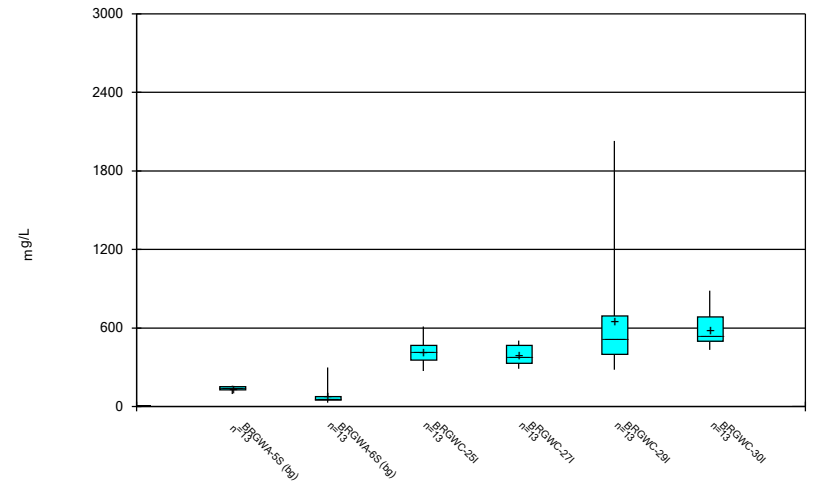
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 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



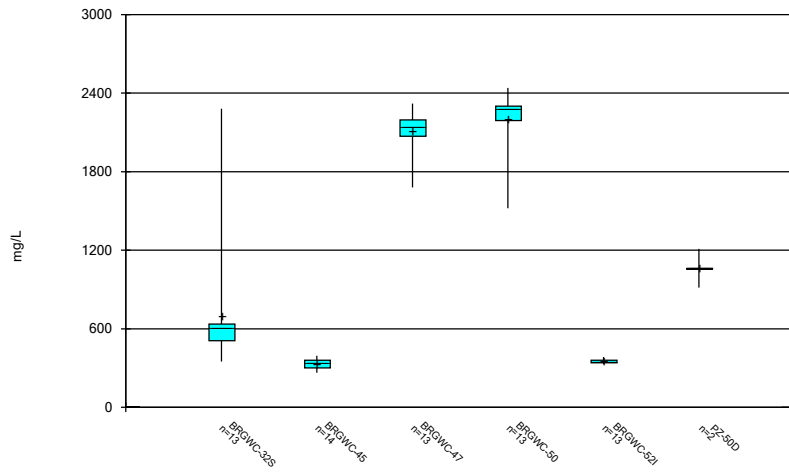
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:30 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



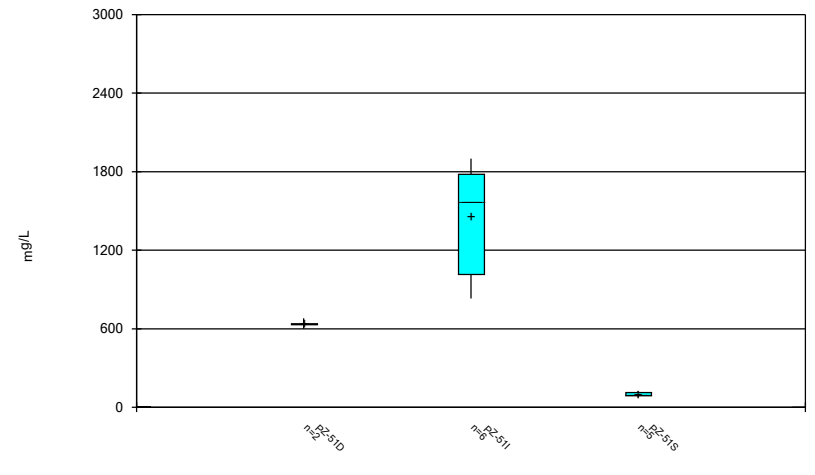
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:30 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:30 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:30 PM  
 Plant Branch Client: Southern Company Data: Plant Branch AP

FIGURE C.

# Outlier Summary

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:18 PM

Date	BRGWC-521 Calcium (mg/L)	BRGWA-51 Cobalt (mg/L)	BRGWC-521 Fluoride (mg/L)	BRGWC-291 Lead (mg/L)	BRGWC-45 Lithium (mg/L)	BRGWC-50 Sulfate as SO4 (mg/L)	BRGWC-291 Thallium (mg/L)	BRGWC-47 Total Dissolved Solids [TDS] (mg/L)
9/8/2016						<0.001 (o)		
11/16/2016	<0.01 (o)							
2/13/2018	<0.01 (o)							
2/14/2018			<0.005 (o)					
6/27/2018							31 (OX)	
7/31/2018				<0.25 (o)				
8/10/2018	410 (O)		1.6 (O)					
1/16/2019					589 (O)			



FIGURE D.

# Appendix III - Interwell Prediction Limits - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:36 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	3/2/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	3/3/2021	0.91	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	3/3/2021	1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	3/3/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	3/4/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	3/2/2021	0.58	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	3/4/2021	0.31	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	3/4/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	3/2/2021	44.1	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	3/3/2021	58.2	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	3/3/2021	73.3	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	3/3/2021	122	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	3/4/2021	35.7	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	3/2/2021	33.9	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	3/2/2021	353	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	3/4/2021	214	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	3/4/2021	47.5	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.8	n/a	3/2/2021	25.8	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.8	n/a	3/4/2021	18.9	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	3/4/2021	0.6	Yes	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
pH, Field (S.U)	BRGWC-29I	7.067	5.59	3/3/2021	4.46	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.067	5.59	3/4/2021	4.34	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	3/2/2021	139	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	3/3/2021	172	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	3/3/2021	341	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	3/3/2021	371	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	3/4/2021	185	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	3/2/2021	98.3	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	3/2/2021	1360	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	3/4/2021	1250	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	3/4/2021	114	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	299	n/a	3/3/2021	515	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	3/3/2021	690	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	3/4/2021	350	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	3/2/2021	1680	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	3/4/2021	1520	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	3/4/2021	383	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2

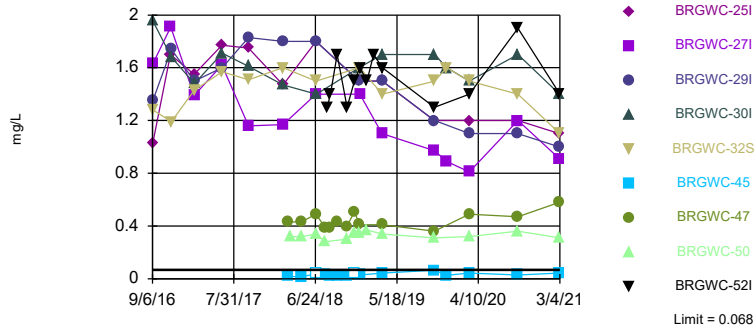
# Appendix III - Interwell Prediction Limits - All Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:36 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	BRGWC-25I	0.068	n/a	3/2/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-27I	0.068	n/a	3/3/2021	0.91	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-29I	0.068	n/a	3/3/2021	1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-30I	0.068	n/a	3/3/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-32S	0.068	n/a	3/4/2021	1.1	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-45	0.068	n/a	3/2/2021	0.044	No	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-47	0.068	n/a	3/2/2021	0.58	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-50	0.068	n/a	3/4/2021	0.31	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Boron (mg/L)	BRGWC-52I	0.068	n/a	3/4/2021	1.4	Yes	104	n/a	n/a	50	n/a	n/a	0.000181	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-25I	24	n/a	3/2/2021	44.1	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-27I	24	n/a	3/3/2021	58.2	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-29I	24	n/a	3/3/2021	73.3	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-30I	24	n/a	3/3/2021	122	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-32S	24	n/a	3/4/2021	35.7	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-45	24	n/a	3/2/2021	33.9	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-47	24	n/a	3/2/2021	353	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-50	24	n/a	3/4/2021	214	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Calcium (mg/L)	BRGWC-52I	24	n/a	3/4/2021	47.5	Yes	106	n/a	n/a	5.66	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-25I	5.8	n/a	3/2/2021	4.5	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-27I	5.8	n/a	3/3/2021	4.5	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-29I	5.8	n/a	3/3/2021	5.6	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-30I	5.8	n/a	3/3/2021	4	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-32S	5.8	n/a	3/4/2021	4.6	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-45	5.8	n/a	3/2/2021	25.8	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-47	5.8	n/a	3/2/2021	4.8	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-50	5.8	n/a	3/4/2021	18.9	Yes	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	BRGWC-52I	5.8	n/a	3/4/2021	5.6	No	106	n/a	n/a	0	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-25I	0.42	n/a	3/2/2021	0.15	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-27I	0.42	n/a	3/3/2021	0.24	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-29I	0.42	n/a	3/3/2021	0.13	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-30I	0.42	n/a	3/3/2021	0.13	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-32S	0.42	n/a	3/4/2021	0.1ND	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-45	0.42	n/a	3/2/2021	0.067J	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-47	0.42	n/a	3/2/2021	0.1ND	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-50	0.42	n/a	3/4/2021	0.6	Yes	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
Fluoride (mg/L)	BRGWC-52I	0.42	n/a	3/4/2021	0.28	No	120	n/a	n/a	50	n/a	n/a	0.0001347	NP Inter (normality) 1 of 2
pH, Field (S.U)	BRGWC-25I	7.067	5.59	3/2/2021	6.1	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-27I	7.067	5.59	3/3/2021	5.9	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-29I	7.067	5.59	3/3/2021	4.46	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-30I	7.067	5.59	3/3/2021	6.29	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-32S	7.067	5.59	3/4/2021	5.98	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-45	7.067	5.59	3/2/2021	6.17	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-47	7.067	5.59	3/2/2021	5.59	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-50	7.067	5.59	3/4/2021	4.34	Yes	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
pH, Field (S.U)	BRGWC-52I	7.067	5.59	3/4/2021	5.87	No	122	6.329	0.3829	0	None	No	0.0004179	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-25I	89	n/a	3/2/2021	139	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-27I	89	n/a	3/3/2021	172	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-29I	89	n/a	3/3/2021	341	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-30I	89	n/a	3/3/2021	371	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-32S	89	n/a	3/4/2021	185	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-45	89	n/a	3/2/2021	98.3	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-47	89	n/a	3/2/2021	1360	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-50	89	n/a	3/4/2021	1250	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	BRGWC-52I	89	n/a	3/4/2021	114	Yes	106	n/a	n/a	11.32	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-25I	299	n/a	3/2/2021	280	No	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-27I	299	n/a	3/3/2021	288	No	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	299	n/a	3/3/2021	515	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	299	n/a	3/3/2021	690	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	299	n/a	3/4/2021	350	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-45	299	n/a	3/2/2021	264	No	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	299	n/a	3/2/2021	1680	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	299	n/a	3/4/2021	1520	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	299	n/a	3/4/2021	383	Yes	106	n/a	n/a	1.887	n/a	n/a	0.0001752	NP Inter (normality) 1 of 2

Exceeds Limit: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I

Prediction Limit  
Interwell Non-parametric

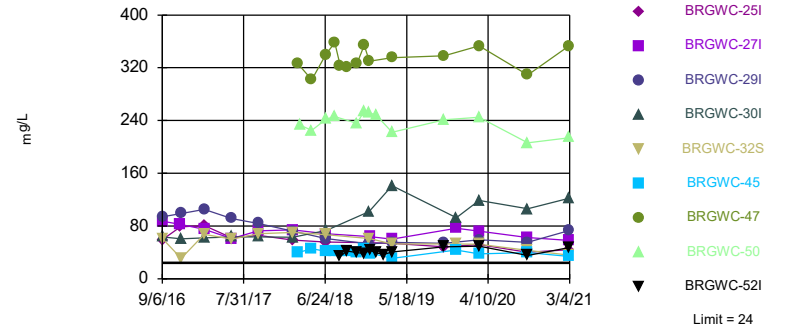


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 104 background values. 50% NDs. Annual per-constituent alpha = 0.003253. Individual comparison alpha = 0.000181 (1 of 2). Comparing 9 points to limit.

Constituent: Boron Analysis Run 4/21/2021 2:34 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50,...

Prediction Limit  
Interwell Non-parametric

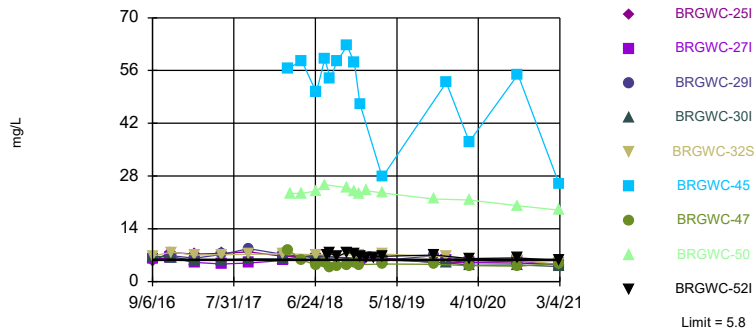


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 106 background values. 5.66% NDs. Annual per-constituent alpha = 0.003149. Individual comparison alpha = 0.0001752 (1 of 2). Comparing 9 points to limit.

Constituent: Calcium Analysis Run 4/21/2021 2:34 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-45, BRGWC-50

Prediction Limit  
Interwell Non-parametric

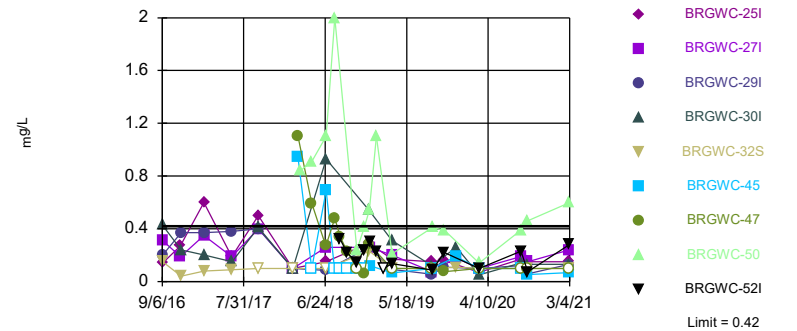


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 106 background values. Annual per-constituent alpha = 0.003149. Individual comparison alpha = 0.0001752 (1 of 2). Comparing 9 points to limit.

Constituent: Chloride, Total Analysis Run 4/21/2021 2:35 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-50

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 120 background values. 50% NDs. Annual per-constituent alpha = 0.002422. Individual comparison alpha = 0.0001347 (1 of 2). Comparing 9 points to limit.

Constituent: Fluoride Analysis Run 4/21/2021 2:35 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-12I (bg)	BRGWA-6S (bg)	BRGWA-12S (bg)	BRGWC-30I	BRGWA-23S (bg)
8/31/2016	<0.04	<0.04	<0.04	0.0072 (J)					
9/1/2016					0.0093 (J)	<0.04	<0.04		
9/6/2016								1.96	0.0362 (J)
9/8/2016									
11/15/2016	0.0085 (J)					0.0123 (J)			
11/16/2016		0.0187 (J)	0.0109 (J)	0.0117 (J)	0.0127 (J)		0.0081 (J)		
11/17/2016									0.0617
11/18/2016									
11/21/2016								1.68	
2/20/2017	0.0093 (J)	0.0066 (J)					0.0157 (J)		
2/21/2017			<0.04	0.0088 (J)	0.0071 (J)		<0.04		0.0245 (J)
2/22/2017								1.48	
6/12/2017	<0.04	<0.04		0.0133 (J)		<0.04			
6/13/2017			<0.04				<0.04		<0.04
6/14/2017					0.0078 (J)			1.71	
9/26/2017	<0.04	<0.04	<0.04	0.0093 (J)	<0.04	<0.04	<0.04		<0.04
9/27/2017								1.61	
2/13/2018	<0.04	<0.04	<0.04	0.0141 (J)		<0.04			
2/14/2018					0.0068 (J)		<0.04	1.47	0.0314 (J)
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	0.0056 (J)	0.0042 (J)	<0.04	0.012 (J)	0.008 (J)	0.0041 (J)	<0.04		0.062
6/27/2018									
6/28/2018								1.4	
7/31/2018									
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	0.0062 (J)	<0.04	<0.04	0.0086 (J)	0.0083 (J)	<0.04	0.0053 (J)	1.6	0.055
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	<0.04	<0.04	<0.04	0.00565 (JD)	0.008 (J)	<0.04	<0.04		0.068
3/20/2019								1.7	
10/15/2019	0.006 (J)	<0.04	<0.04	0.0067 (J)	0.006 (J)	0.01 (J)	<0.04		0.022 (J)
10/16/2019									
10/17/2019								1.7	
12/3/2019									
12/4/2019								1.6	
3/3/2020	<0.04	<0.04	<0.04	0.0082 (J)	0.01 (J)	<0.04	0.0065 (J)		
3/4/2020									0.044 (J)
3/5/2020								1.5	
9/15/2020	<0.04	<0.04	<0.04	<0.04	0.0071 (J)	<0.04	<0.04		0.033 (J)
9/16/2020								1.7	
9/17/2020									
3/1/2021				<0.04		<0.04			





# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-29I	BRGWC-27I	BRGWC-25I	BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	BRGWC-52I
3/2/2021			1.1		0.044	0.58		
3/3/2021	1	0.91						
3/4/2021				1.1			0.31	1.4



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-6S (bg)	BRGWA-12S (bg)	BRGWA-12I (bg)	BRGWA-23S (bg)	BRGWC-30I
8/31/2016	19.6	13.5	4.09	12.6					
9/1/2016					3.3	4.61	8.98		
9/6/2016								12.8	63.3
9/8/2016									
11/15/2016	21.7				3.44				
11/16/2016		14.9	4.25	12.1		4.17	15.4		
11/17/2016								19.2	
11/18/2016									
11/21/2016									60.7
2/20/2017	21.1	13.9			3.52				
2/21/2017			4.02	11.4		5	17.4	15.1	
2/22/2017									62.1
6/12/2017	21.5	13.7		9.34	3.11				
6/13/2017			3.84			4.98		10.2	
6/14/2017							18.1		63.5
9/26/2017	24	14.4	3.31	14.3	3.15	4.49	19.3	15	
9/27/2017									63.5
2/13/2018	<25	<25	3.94	<25	3.65				
2/14/2018						<25	<25	<25	62.8
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	23.5 (J)	13.5 (J)	3.6	16 (J)	3.3	6.4	15.5 (J)	18.5 (J)	
6/27/2018									
6/28/2018									73.3
7/31/2018						6.1	18.2 (J)		
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	19.8 (J)	16.4 (J)	3.8	14.5 (J)	3.5	5.5	18.7 (J)	16.8 (J)	102
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	21.4 (J)	12.3 (J)	3.9	14.3 (JD)	3.6	5.9	15.9 (J)	13.5 (J)	
3/20/2019									141
10/15/2019	20	14.4	3.7	15.1	3.5	6.2	15.9	8.6	
10/16/2019									
12/3/2019									
12/4/2019									92.6
3/3/2020	23.2	14.9	4	20	5	6.8	19.4		
3/4/2020								11.5	
3/5/2020									119
9/15/2020	16.8	12.7	3.9	14.1	3.7	5.7	14.5	10.7	
9/16/2020									106
9/17/2020									
3/1/2021				15.4	4.2				
3/2/2021	16.8	13.2	4			5.4	11.7	11.6	



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-32S	BRGWC-29I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	59.4	60.5	93.9	87.2				
11/15/2016								
11/16/2016								
11/17/2016	78.4							
11/18/2016				82.4				
11/21/2016		31.1	99.1					
2/20/2017								
2/21/2017	80.9			75.1				
2/22/2017		67.3	105					
6/12/2017								
6/13/2017	62			61				
6/14/2017		60.2	91.3					
9/26/2017								
9/27/2017	65.8	68.4	84	72.6				
2/13/2018								
2/14/2018	58.8	70.2	72.1	74.1				
3/6/2018					326	39.5		
3/15/2018							233	
5/1/2018					302 (D)	45.5	225	
6/26/2018	55.5							
6/27/2018		67.1	61.1	68.2	340			
6/28/2018						41.9	242	
7/31/2018						41.5		
8/1/2018					358		246	
8/10/2018								410 (O)
8/23/2018					323	42.3		33.9
9/19/2018					321	41.9		42.3
10/29/2018					326	40.8	236	39.8
11/28/2018					354	45.1	254	38.2
12/18/2018	54.7		52.9					
12/19/2018		61.2			330		252	
12/20/2018				63.9		39		43.2
1/16/2019							248	
1/17/2019								39.4
2/13/2019								36.9
3/19/2019				60.2	335			
3/20/2019	53.95 (D)	52.8	55.4			31.2	222	40.85 (D)
10/15/2019	48.3							
10/16/2019			54		338		241	48.4
12/3/2019						43.7		
12/4/2019		52.7		76.8				
3/3/2020								
3/4/2020	52		59.3	72.3	353		245	49.5
3/5/2020		52.1				37.9		
9/15/2020	40.1		55.1					
9/16/2020		43.1		62.5	309	39.7		
9/17/2020							206	35.4
3/1/2021								
3/2/2021	44.1				353	33.9		

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-25I	BRGWC-32S	BRGWC-29I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
3/3/2021			73.3	58.2				
3/4/2021		35.7					214	47.5

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-2I (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-12I (bg)	BRGWA-12S (bg)	BRGWA-6S (bg)	BRGWC-30I	BRGWA-23S (bg)
8/31/2016	3.6	2.3	4.4	2					
9/1/2016					3.3	3.5	2.5		
9/6/2016								6.7	5.8
9/8/2016									
11/15/2016	4						2.3		
11/16/2016		2	4.4	1.8	3.6	3.6			
11/17/2016									4.3
11/18/2016									
11/21/2016								6.5	
2/20/2017	3.9		4.8				2.4		
2/21/2017		2		1.8	3.2	3.2			3.5
2/22/2017								5.6	
6/12/2017	3.8	2.1	4.2				2.2		
6/13/2017				1.7		3.3			3.2
6/14/2017					3.1			5.7	
9/26/2017	4.1	2	4.4	1.8	3.3	3.3	2.3		3.5
9/27/2017								6	
2/13/2018	4.1	2.1	4.7	1.7			2.3		
2/14/2018					3.1	3.5		5.9	3.8
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	4.1	2.4	4.5	2.2	3.4	3.4	2.6		3.8
6/27/2018									
6/28/2018								7 (J-X)	
7/31/2018					2.6	2.9			
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	3.8	1.8	4.5	1.9	2.8	2.9	2.3	5.8	3.9
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	4.2	2.45 (D)	4.5	2	3.2	3.5	2.6		3.8
3/20/2019								5.8	
10/15/2019	3.7	2.2	4.2	1.9	3.1	3.4	2.4		3.5
10/16/2019									
12/3/2019									
12/4/2019								5	
3/3/2020	3.6	1.9	3.9	1.9	2.6	3.2	2.9		
3/4/2020									3.3
3/5/2020								4.3	
9/15/2020	3.7	1.9	3.7	1.7	2.4	3.5	2.3		3.1
9/16/2020								4.4	
9/17/2020									
3/1/2021		1.8					2.1		
3/2/2021	3.7		3.8	1.7	2.6	3.7			3.5



# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	6.4	6.8	5.5	6				
11/15/2016								
11/16/2016								
11/17/2016			7.7					
11/18/2016				6.3				
11/21/2016	6.9	7.8						
2/20/2017								
2/21/2017			7.3	5.1				
2/22/2017	6.2	7						
6/12/2017								
6/13/2017			7.5	4.7				
6/14/2017	7.2	7.1						
9/26/2017								
9/27/2017	8.7	7.2	7.9	4.9				
2/13/2018								
2/14/2018	7.2	7.4	6.7	5.6				
3/6/2018					8.4	56.6		
3/15/2018							23.3	
5/1/2018					5.7 (D)	58.5	23.4	
6/26/2018			6.7					
6/27/2018	6.3	7.1		5.9	4.4			
6/28/2018						50.2 (J-X)	24 (J-X)	
7/31/2018						59		
8/1/2018					5.2		25.7	
8/10/2018								6.9
8/23/2018					3.6	54		7.5
9/19/2018					4.1	58.4		6.6
10/29/2018					4.3	62.6	24.9	7.8
11/28/2018					5.1	58.1	24	7.2
12/18/2018	5.4		6.2					
12/19/2018		7 (J-X)			4.5 (J-X)		23.3 (J-X)	
12/20/2018				5.6 (J-X)		47.2 (J-X)		6.6 (J-X)
1/16/2019							24.1	
1/17/2019								6.4
2/13/2019								6.5
3/19/2019				5.8	4.7			
3/20/2019	5.6	7.3	6.3 (D)			27.7	23.5	6.7 (D)
10/15/2019			5					
10/16/2019	6.9				4.6		21.9	7
12/3/2019						52.8		
12/4/2019		6.6		5.6				
3/3/2020								
3/4/2020	5.8		5	5.1	4.2		21.6	6.1
3/5/2020		6				37.1		
9/15/2020	5.5		4.9					
9/16/2020		5.6		5.4	4.1	54.9		
9/17/2020							20.1	6.3
3/1/2021								
3/2/2021			4.5		4.8	25.8		

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
3/3/2021	5.6			4.5				
3/4/2021		4.6					18.9	5.6







# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	0.31	0.2 (J)	0.15 (J)	0.14 (J)				
11/15/2016								
11/16/2016								
11/17/2016				0.27 (J)				
11/18/2016	0.19 (J)							
11/21/2016		0.37	0.04 (J)					
2/20/2017								
2/21/2017	0.35			0.6				
2/22/2017		0.37	0.08 (J)					
6/12/2017								
6/13/2017	0.19 (J)			0.19 (J)				
6/14/2017		0.38	0.09 (J)					
9/26/2017								
9/27/2017	0.4	0.4	<0.1	0.5				
2/13/2018								
2/14/2018	<0.1	<0.1	<0.1	<0.1				
3/6/2018					1.1	0.94		
3/15/2018							0.84 (JX)	
5/1/2018					0.595 (D)	<0.1	0.91	
6/26/2018				0.15 (J)				
6/27/2018	0.26 (J)	0.085 (J)	<0.1		0.27 (J)			
6/28/2018						0.69 (J+X)	1.1 (J+X)	
7/31/2018						<0.1		
8/1/2018					0.48		2	
8/10/2018								1.6 (O)
8/23/2018					0.34	<0.1		0.32
9/19/2018					0.23 (J)	<0.1		0.22 (J)
10/29/2018					<0.1	<0.1	0.24 (J)	0.14 (J)
11/28/2018					0.063 (J)	<0.1	0.41	0.24 (J)
12/18/2018		0.26 (J)		0.29 (J)				
12/19/2018			0.23 (J)		0.28 (J)		0.54	
12/20/2018	0.26 (J)					0.12 (J)		0.3
1/16/2019							1.1	
1/17/2019								0.23 (J)
2/13/2019								<0.1
3/19/2019	0.2 (J)				<0.1			
3/20/2019		0.091 (J)	<0.1	0.17 (JD)		0.066 (J)	0.21 (J)	0.135 (JD)
8/27/2019			<0.1	0.15 (J)				
8/28/2019	0.074 (J)	0.055 (J)			<0.1	<0.1		
8/29/2019							0.41	0.087 (J)
10/15/2019				0.16 (J)				
10/16/2019		0.11 (J)			0.076 (J)		0.39	0.22 (J)
12/3/2019						0.19 (J)		
12/4/2019	0.18 (J)		0.11 (J)					
3/3/2020								
3/4/2020	<0.1	<0.1		0.07 (J)	<0.1		0.14 (J)	0.1 (J)
3/5/2020			<0.1			<0.1		
8/18/2020								
8/19/2020	0.19	0.12	<0.1	0.17				

# Prediction Limit

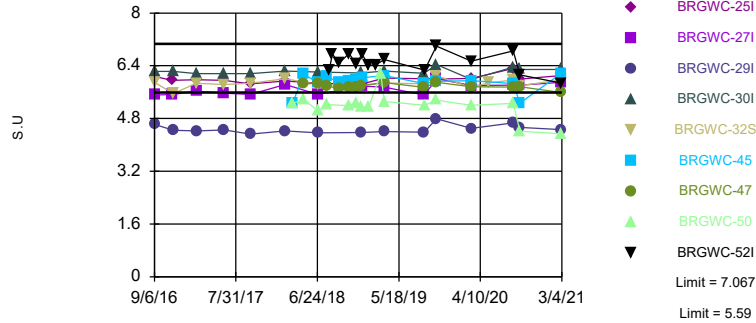
Constituent: Fluoride (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-27I	BRGWC-29I	BRGWC-32S	BRGWC-25I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/20/2020					<0.1	<0.1	0.39	0.23
9/15/2020		0.057 (J)		0.15				
9/16/2020	0.15		<0.1		<0.1	0.052 (J)		
9/17/2020							0.46	0.074 (J)
3/1/2021								
3/2/2021				0.15	<0.1	0.067 (J)		
3/3/2021	0.24	0.13						
3/4/2021			<0.1				0.6	0.28

Exceeds Limits: BRGWC-29I, BRGWC-50

### Prediction Limit Interwell Parametric

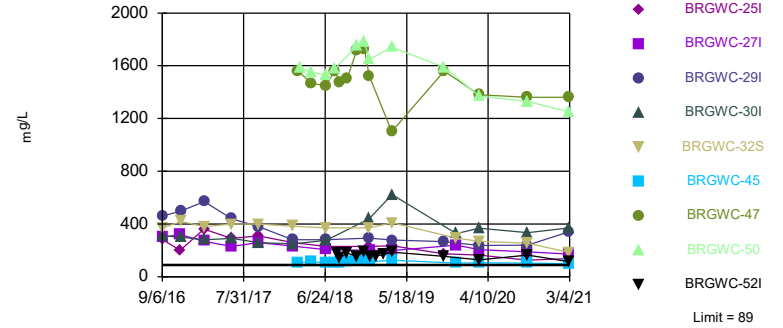


Background Data Summary: Mean=6.329, Std. Dev.=0.3829, n=122. Normality test: Chi Squared @alpha = 0.01, calculated = 3.574, critical = 14.07. Kappa = 1.93 (c=7, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004179. Comparing 9 points to limit.

Constituent: pH, Field Analysis Run 4/21/2021 2:35 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-25I, BRGWC-27I, BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-45, BRGWC-47, BRGWC-50,...

### Prediction Limit Interwell Non-parametric

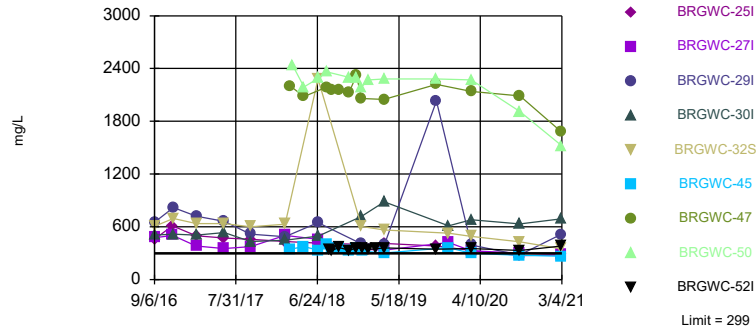


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 106 background values. 11.32% NDs. Annual per-constituent alpha = 0.003149. Individual comparison alpha = 0.0001752 (1 of 2). Comparing 9 points to limit.

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:35 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

Exceeds Limit: BRGWC-29I, BRGWC-30I, BRGWC-32S, BRGWC-47, BRGWC-50, BRGWC-52I

### Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 106 background values. 1.887% NDs. Annual per-constituent alpha = 0.003149. Individual comparison alpha = 0.0001752 (1 of 2). Comparing 9 points to limit.

Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:35 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP





# Prediction Limit

Constituent: pH, Field (S.U) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-32S	BRGWC-29I	BRGWC-25I	BRGWC-27I	BRGWC-45	BRGWC-50	BRGWC-47	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	5.89	4.62	6.07	5.51				
11/15/2016								
11/16/2016			5.96					
11/17/2016								
11/18/2016				5.53				
11/21/2016	5.56	4.44						
2/20/2017								
2/21/2017			5.98	5.63				
2/22/2017	5.87	4.42						
6/12/2017								
6/13/2017			5.96	5.57				
6/14/2017	5.83	4.45						
9/26/2017								
9/27/2017	5.87	4.33	5.85	5.53				
2/13/2018								
2/14/2018	6.01	4.42	5.94	5.83				
3/15/2018					5.26	5.26		
5/1/2018					6.14	5.38	5.85	
6/26/2018			5.87					
6/27/2018	5.83	4.37		5.53			5.87	
6/28/2018					5.88	5.03		
7/31/2018					6.07			
8/1/2018						5.22	5.79	
8/10/2018								6.28
8/23/2018								6.75
9/19/2018					5.9		5.71	6.48
10/29/2018					5.93	5.19	5.76	6.77
11/28/2018					5.99	5.28	5.74	6.44
12/18/2018		4.38	5.84					
12/19/2018	5.79					5.15	5.8	
12/20/2018				5.78	6.04			6.75
1/16/2019						5.14		
1/17/2019								6.41
2/13/2019								6.42
3/6/2019						6.15		
3/19/2019				5.75			5.89	
3/20/2019	5.88	4.4	6.03		6.1	5.32		6.59
8/27/2019	5.85		6.01					
8/28/2019		4.39		5.51	5.86		5.74	
8/29/2019						5.2		6.27
10/15/2019			6					
10/16/2019		4.79				5.36	5.9	7
10/17/2019	6.09			6.01 (D)	5.93			
3/3/2020								
3/4/2020		4.5	6.02	5.8		5.2	5.76	6.54
3/5/2020	5.74				5.95			
5/12/2020	5.88							
8/18/2020								
8/19/2020	5.97	4.67	6.32	5.81				



# Prediction Limit

Constituent: pH, Field (S.U) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-32S	BRGWC-29I	BRGWC-25I	BRGWC-27I	BRGWC-45	BRGWC-50	BRGWC-47	BRGWC-52I
8/20/2020					5.86	5.26	5.75	6.85
9/15/2020		4.53	6					
9/16/2020	5.79			5.81	5.27		5.76	
9/17/2020						4.41		6.12
3/1/2021								
3/2/2021			6.1		6.17		5.59	
3/3/2021		4.46		5.9				
3/4/2021	5.98					4.34		5.87

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-6S (bg)	BRGWA-12S (bg)	BRGWA-12I (bg)	BRGWA-23S (bg)	BRGWC-30I
8/31/2016	0.81 (J)	2.7	0.38 (J)	7.5					
9/1/2016					0.6 (J)	1.7	2.7		
9/6/2016								38	310
9/8/2016									
11/15/2016	<1 (J)				0.68 (J)				
11/16/2016		3.4	<1 (J)	6.6		1.2	3.6		
11/17/2016								84	
11/18/2016									
11/21/2016									300
2/20/2017	1 (B-01)	3.9 (B-01)			0.98 (J)				
2/21/2017			1.5	6.1		1.1	3	39	
2/22/2017									280
6/12/2017	0.94 (J)	3.7		5	0.54 (J)				
6/13/2017			0.67 (J)			1.1		35	
6/14/2017							2.6		290
9/26/2017	0.92 (J)	4.1	0.62 (J)	5.4	0.53 (J)	1.3	2.5	89	
9/27/2017									260
2/13/2018	<1	6.6	<1	4.7 (J)	<1				
2/14/2018						<1	2.1 (J)	82.2	250
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	0.91 (J)	3.5	0.69 (J)	6.2	0.54 (J)	0.84 (J)	2	84.2	
6/27/2018									
6/28/2018									276
7/31/2018						0.63 (J)	1.9		
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	0.68 (J)	4.3	0.72 (J)	5.9	0.39 (J)	0.66 (J)	2.1	83.4	440
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	0.74 (J)	3	0.78 (J)	6 (D)	0.68 (J)	0.75 (J)	2.2	65	
3/20/2019									623
10/15/2019	0.68 (J)	3.8	0.47 (J)	5.2	0.48 (J)	0.61 (J)	1.9	30	
10/16/2019									
12/3/2019									
12/4/2019									327
3/3/2020	0.71 (J)	2.8	0.93 (J)	7.1	2.5	0.51 (J)	1.8		
3/4/2020								38.6	
3/5/2020									369
9/15/2020	<1	1.7	<1	5.9	<1	<1	1.7	41.5	
9/16/2020									334
9/17/2020									
3/1/2021				4.7	0.74 (J)				
3/2/2021	<1	2.2	<1			0.51 (J)	1.7	54	



# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-32S	BRGWC-29I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	280	370	460	300				
11/15/2016								
11/16/2016								
11/17/2016	200							
11/18/2016				320				
11/21/2016		420	500					
2/20/2017								
2/21/2017	360			270				
2/22/2017		380	570					
6/12/2017								
6/13/2017	290			230				
6/14/2017		400	440					
9/26/2017								
9/27/2017	310	400	380	260				
2/13/2018								
2/14/2018	260	383	280	232				
3/6/2018					1560	111		
3/15/2018							1590	
5/1/2018					1465 (D)	112	1550	
6/26/2018	231							
6/27/2018		372	281	205	1450			
6/28/2018						109	1530	
7/31/2018						107		
8/1/2018					1560		1580	
8/10/2018								183
8/23/2018					1470	108		145
9/19/2018					1500	117		178
10/29/2018					1720	127	1750	157
11/28/2018					1730	133	1780	189
12/18/2018	231		293					
12/19/2018		370			1520		1650	
12/20/2018				200		113		150
1/16/2019							589 (O)	
1/17/2019								157
2/13/2019								169
3/19/2019				199	1100			
3/20/2019	235 (D)	409	278			127	1740	186.5 (D)
10/15/2019	174							
10/16/2019			266		1560		1590	155
12/3/2019						105		
12/4/2019		293		241				
3/3/2020								
3/4/2020	165		238	205	1380		1370	129
3/5/2020		269				106		
9/15/2020	126		241					
9/16/2020		255		190	1360	103		
9/17/2020							1330	165
3/1/2021								
3/2/2021	139				1360	98.3		

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-25I	BRGWC-32S	BRGWC-29I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
3/3/2021			341	172				
3/4/2021		185					1250	114

# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:36 PM View: All

Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWA-5S (bg)	BRGWA-5I (bg)	BRGWA-2S (bg)	BRGWA-2I (bg)	BRGWA-6S (bg)	BRGWA-12S (bg)	BRGWA-12I (bg)	BRGWA-23S (bg)	BRGWC-30I
8/31/2016	154	138	88	151					
9/1/2016					299	69	142		
9/6/2016								146	505
9/8/2016									
11/15/2016	123				41				
11/16/2016		77	41	69		100	100		
11/17/2016								211	
11/18/2016									
11/21/2016									515
2/20/2017	158	170			133				
2/21/2017			<10	68		37	71	151	
2/22/2017									504
6/12/2017	142	132		161	61				
6/13/2017			53			84		130	
6/14/2017							140		536
9/26/2017	138	108	45	167	29	68	149	160	
9/27/2017									432
2/13/2018	150	141	63	165	61				
2/14/2018						138	137	194	448
3/6/2018									
3/15/2018									
5/1/2018									
6/26/2018	154	133	71	188	71	90	142	221	
6/27/2018									
6/28/2018									494
7/31/2018						83	133		
8/1/2018									
8/10/2018									
8/23/2018									
9/19/2018									
10/29/2018									
11/28/2018									
12/18/2018	147	138 (X)	78 (X)	145 (X)	70 (X)	85	135	208	715
12/19/2018									
12/20/2018									
1/16/2019									
1/17/2019									
2/13/2019									
3/19/2019	146	130	68	146.5 (D)	72	82 (JX)	132 (JX)	161 (JX)	
3/20/2019									885
10/15/2019	144	175	66	140	63	89	134	124	
10/16/2019									
12/3/2019									
12/4/2019									612
3/3/2020	130	<10	41	155	54	72	115		
3/4/2020								118	
3/5/2020									681
9/15/2020	116	100	69	116	79	60	95	109	
9/16/2020									634
9/17/2020									
3/1/2021				98	39				
3/2/2021	96	80	43			43	93	105	



# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
 Plant Branch Client: Southern Company Data: Plant Branch AP

	BRGWC-25I	BRGWC-32S	BRGWC-29I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
8/31/2016								
9/1/2016								
9/6/2016								
9/8/2016	460	607	654	478				
11/15/2016								
11/16/2016								
11/17/2016	611							
11/18/2016				503				
11/21/2016		695	819					
2/20/2017								
2/21/2017	497			380				
2/22/2017		635	721					
6/12/2017								
6/13/2017	474			354				
6/14/2017		635	661					
9/26/2017								
9/27/2017	457	601	518	376				
2/13/2018								
2/14/2018	431	628	487	503 (JX)				
3/6/2018					2200	346		
3/15/2018							2440	
5/1/2018					2080 (D)	374	2190	
6/26/2018	414							
6/27/2018		2280	648 (X)	458 (X)	31 (OX)			
6/28/2018						333	2290	
7/31/2018						393		
8/1/2018					2190		2360	
8/10/2018								344
8/23/2018					2160	350		333
9/19/2018					2160	353		364
10/29/2018					2130	329	2300	334
11/28/2018					2320	358	2300	357
12/18/2018	401		407					
12/19/2018		605			2060		2190	
12/20/2018				344		322		355
1/16/2019							2270	
1/17/2019								347
2/13/2019								350
3/19/2019				334 (JX)	2050 (JX)			
3/20/2019	410.5 (D)	564	391			302	2280	360 (D)
10/15/2019	380							
10/16/2019			2030		2220		2280	346
12/3/2019						362		
12/4/2019		526		422				
3/3/2020								
3/4/2020	330		391	326	2140		2270	351
3/5/2020		489				297		
9/15/2020	272		281					
9/16/2020		428		301	2090	275		
9/17/2020							1910	329
3/1/2021								
3/2/2021	280				1680	264		



# Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 4/21/2021 2:36 PM View: All  
Plant Branch Client: Southern Company Data: Plant Branch AP

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	BRGWC-25I	BRGWC-32S	BRGWC-29I	BRGWC-27I	BRGWC-47	BRGWC-45	BRGWC-50	BRGWC-52I
3/3/2021			515	288				
3/4/2021		350					1520	383

FIGURE E.

# Trend Test - Significant Results

Plant Branch   Client: Southern Company   Data: Plant Branch AP   Printed 4/21/2021, 2:40 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BRGWC-271	-0.1854	-56	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-251	-6.29	-62	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-291	-11.32	-44	-43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-301	13.38	55	43	Yes	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-121 (bg)	-0.1998	-51	-48	Yes	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-23S (bg)	-0.06606	-56	-53	Yes	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-21 (bg)	-0.1304	-67	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-121 (bg)	-0.2763	-72	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-12S (bg)	-0.1947	-60	-48	Yes	14	14.29	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-251	-42.71	-49	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-271	-25.79	-57	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-291	-58.91	-50	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-32S	-36.1	-44	-43	Yes	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-32S	-56.88	-53	-43	Yes	13	0	n/a	n/a	0.01	NP

# Trend Test - All Results

Plant Branch   Client: Southern Company   Data: Plant Branch AP   Printed 4/21/2021, 2:40 PM

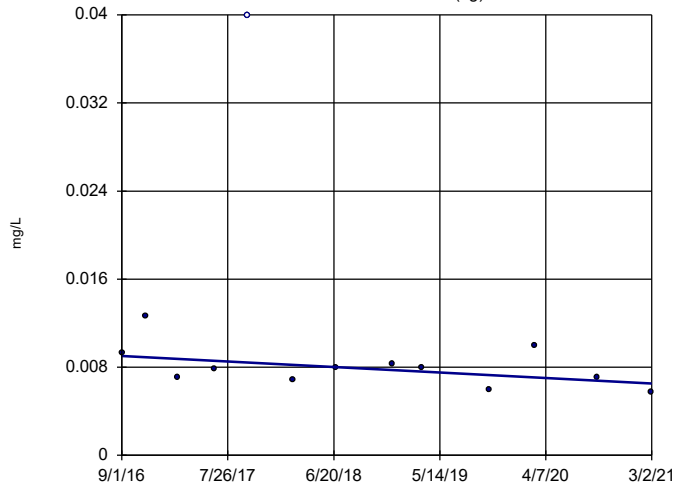
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	BRGWA-12I (bg)	-0.0005546	-24	-43	No	13	7.692	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-12S (bg)	0	-1	-43	No	13	76.92	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-23S (bg)	0.0005601	5	43	No	13	15.38	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2I (bg)	0.001014	9	43	No	13	15.38	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-2S (bg)	0	10	43	No	13	92.31	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5I (bg)	0	2	43	No	13	69.23	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-5S (bg)	0	-5	-43	No	13	53.85	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWA-6S (bg)	0	10	43	No	13	69.23	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-25I	-0.1184	-28	-43	No	13	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>BRGWC-27I</b>	<b>-0.1854</b>	<b>-56</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	BRGWC-29I	-0.1384	-37	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-30I	-0.02635	-22	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-32S	0	0	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-47	0.03097	16	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-50	0.00563	10	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	BRGWC-52I	0.0532	13	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12I (bg)	0.1717	8	48	No	14	7.143	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-12S (bg)	0.3876	29	48	No	14	7.143	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-23S (bg)	-0.9809	-26	-43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2I (bg)	0.9466	37	43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-2S (bg)	-0.02603	-12	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5I (bg)	-0.153	-9	-43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-5S (bg)	-0.4992	-13	-43	No	13	7.692	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWA-6S (bg)	0.1738	42	43	No	13	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-25I</b>	<b>-6.29</b>	<b>-62</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-27I	-4.805	-42	-43	No	13	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BRGWC-29I</b>	<b>-11.32</b>	<b>-44</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>BRGWC-30I</b>	<b>13.38</b>	<b>55</b>	<b>43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	BRGWC-32S	-5.248	-32	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-45	-2.37	-32	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-47	9.202	19	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-50	-4.111	-12	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BRGWC-52I	3.955	18	38	No	12	0	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>BRGWA-12I (bg)</b>	<b>-0.1998</b>	<b>-51</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride, Total (mg/L)	BRGWA-12S (bg)	0	5	48	No	14	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-23S (bg)	-0.1839	-29	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2I (bg)	-0.03735	-18	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-2S (bg)	0	-9	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5I (bg)	-0.1525	-31	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-5S (bg)	-0.03667	-12	-43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWA-6S (bg)	0	0	43	No	13	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-45	-5.582	-37	-48	No	14	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BRGWC-50	-1.792	-38	-43	No	13	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12I (bg)	-0.01658	-33	-53	No	15	26.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-12S (bg)	0	44	53	No	15	66.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-23S (bg)	0	-14	-53	No	15	60	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2I (bg)	-0.002473	-20	-53	No	15	40	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-2S (bg)	0	28	53	No	15	53.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5I (bg)	0	39	53	No	15	66.67	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-5S (bg)	-0.007584	-25	-53	No	15	33.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWA-6S (bg)	0.008561	34	53	No	15	53.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	BRGWC-50	-0.1819	-28	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12I (bg)	-0.07835	-55	-63	No	17	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-12S (bg)	-0.01536	-21	-58	No	16	0	n/a	n/a	0.01	NP
<b>pH, Field (S.U)</b>	<b>BRGWA-23S (bg)</b>	<b>-0.06606</b>	<b>-56</b>	<b>-53</b>	<b>Yes</b>	<b>15</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (S.U)</b>	<b>BRGWA-2I (bg)</b>	<b>-0.1304</b>	<b>-67</b>	<b>-53</b>	<b>Yes</b>	<b>15</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (S.U)	BRGWA-2S (bg)	-0.03108	-36	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5I (bg)	-0.02929	-23	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-5S (bg)	-0.05707	-42	-53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWA-6S (bg)	-0.01346	-6	-48	No	14	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-29I	0.01827	18	53	No	15	0	n/a	n/a	0.01	NP
pH, Field (S.U)	BRGWC-50	-0.08271	-22	-58	No	16	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12I (bg)</b>	<b>-0.2763</b>	<b>-72</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWA-12S (bg)</b>	<b>-0.1947</b>	<b>-60</b>	<b>-48</b>	<b>Yes</b>	<b>14</b>	<b>14.29</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWA-23S (bg)	-1.903	-8	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2I (bg)	-0.2264	-22	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-2S (bg)	0.02052	8	43	No	13	30.77	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-5I (bg)	-0.2884	-18	-43	No	13	0	n/a	n/a	0.01	NP

# Trend Test - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/21/2021, 2:40 PM

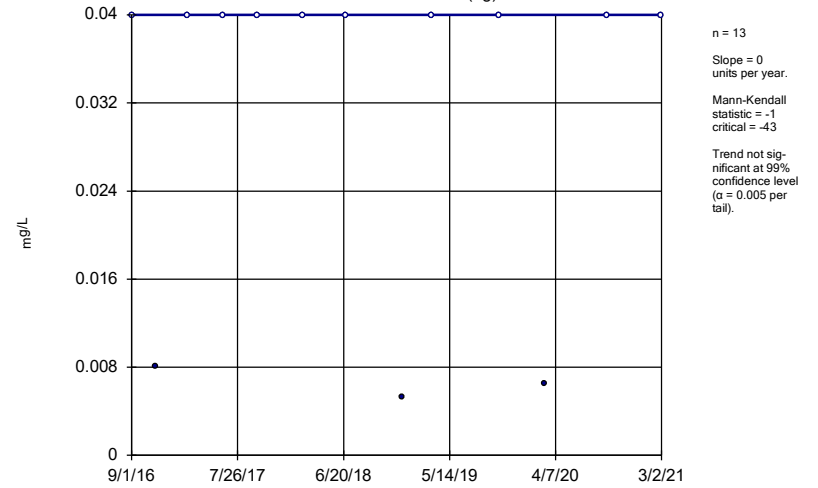
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Sulfate as SO4 (mg/L)	BRGWA-5S (bg)	-0.08299	-31	-43	No	13	30.77	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWA-6S (bg)	-0.01212	-7	-43	No	13	15.38	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-25I</b>	<b>-42.71</b>	<b>-49</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-27I</b>	<b>-25.79</b>	<b>-57</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-29I</b>	<b>-58.91</b>	<b>-50</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWC-30I	16.89	24	43	No	13	0	n/a	n/a	0.01	NP
<b>Sulfate as SO4 (mg/L)</b>	<b>BRGWC-32S</b>	<b>-36.1</b>	<b>-44</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BRGWC-45	-3.157	-24	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-47	-46.1	-21	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-50	-103.9	-19	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BRGWC-52I	-14.67	-21	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12I (bg)	-4.706	-36	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-12S (bg)	-5.776	-19	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-23S (bg)	-13.37	-30	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2I (bg)	-4.318	-10	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-2S (bg)	1.233	5	43	No	13	7.692	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5I (bg)	-8.777	-17	-43	No	13	7.692	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-5S (bg)	-6.157	-35	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWA-6S (bg)	-4.662	-9	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-29I	-83.41	-39	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-30I	43.95	32	43	No	13	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids [TDS] (mg/L)</b>	<b>BRGWC-32S</b>	<b>-56.88</b>	<b>-53</b>	<b>-43</b>	<b>Yes</b>	<b>13</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids [TDS] (mg/L)	BRGWC-47	-60.54	-27	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-50	-132.5	-40	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	BRGWC-52I	6.146	10	43	No	13	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator BRGWA-12I (bg)



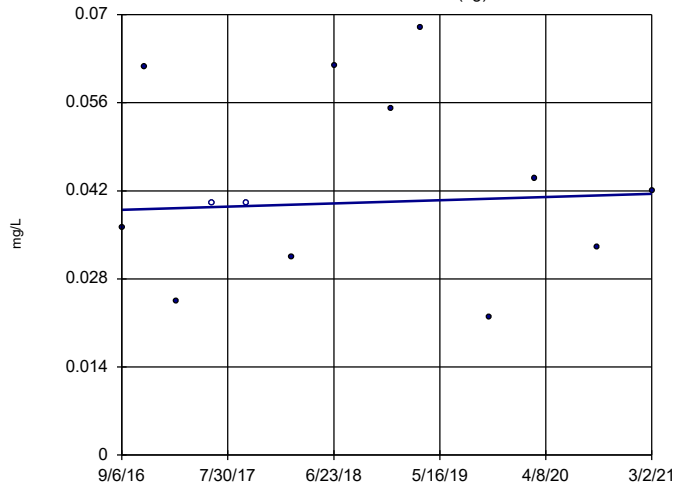
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-12S (bg)



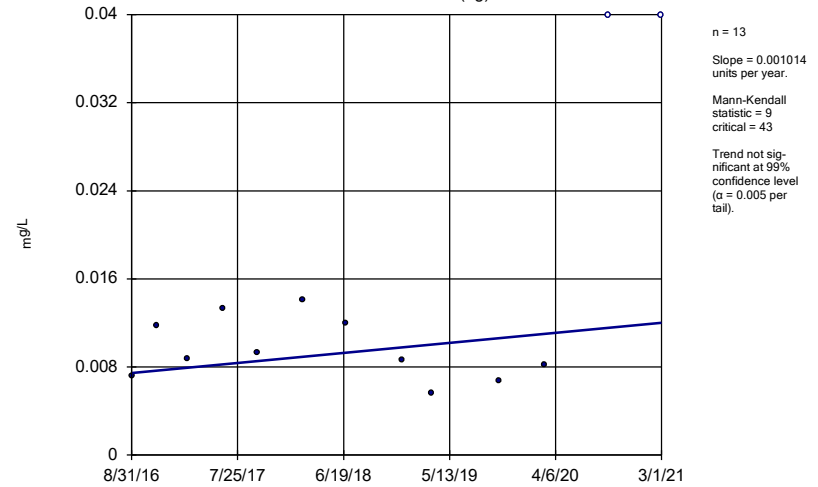
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-23S (bg)

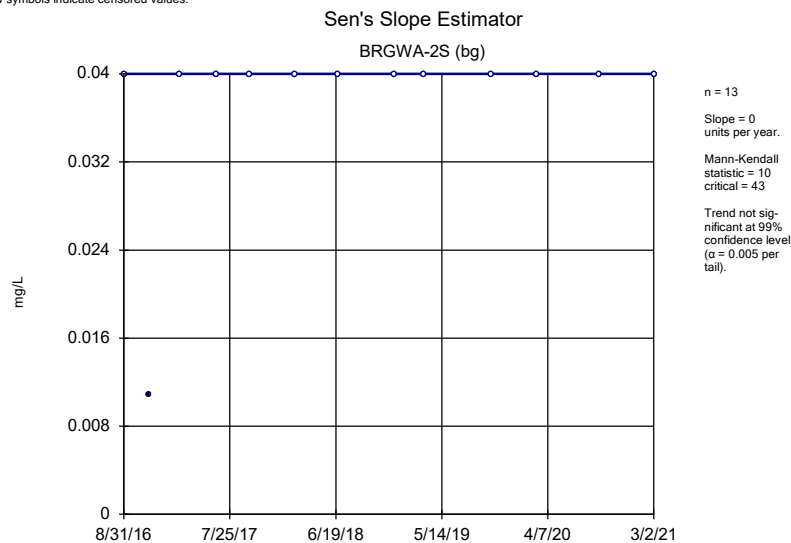


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Plant Branch Client: Southern Company Data: Plant Branch AP

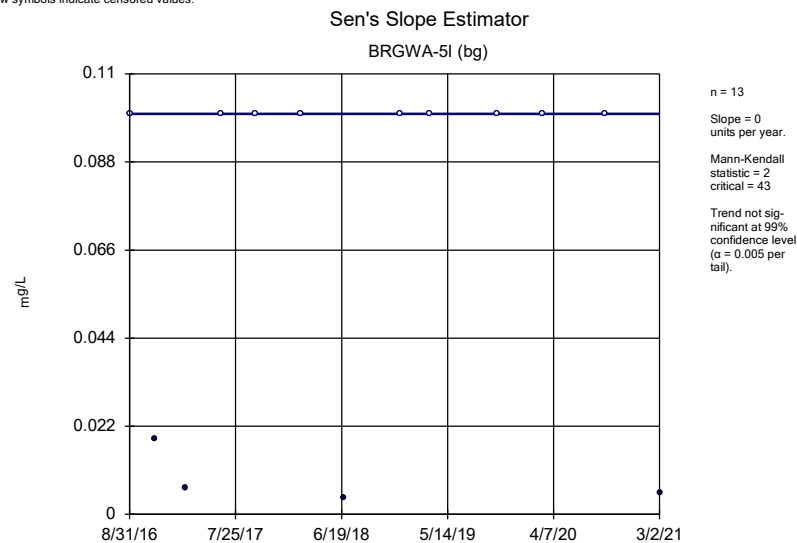
### Sen's Slope Estimator BRGWA-2I (bg)



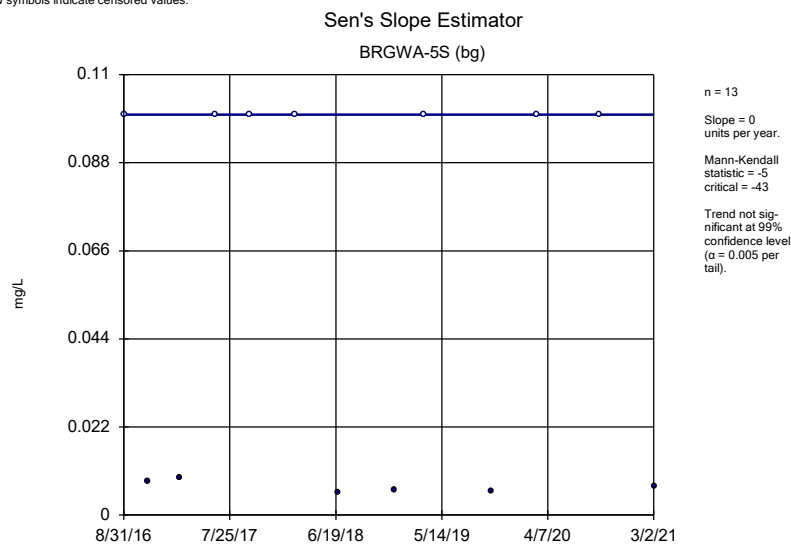
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Plant Branch Client: Southern Company Data: Plant Branch AP



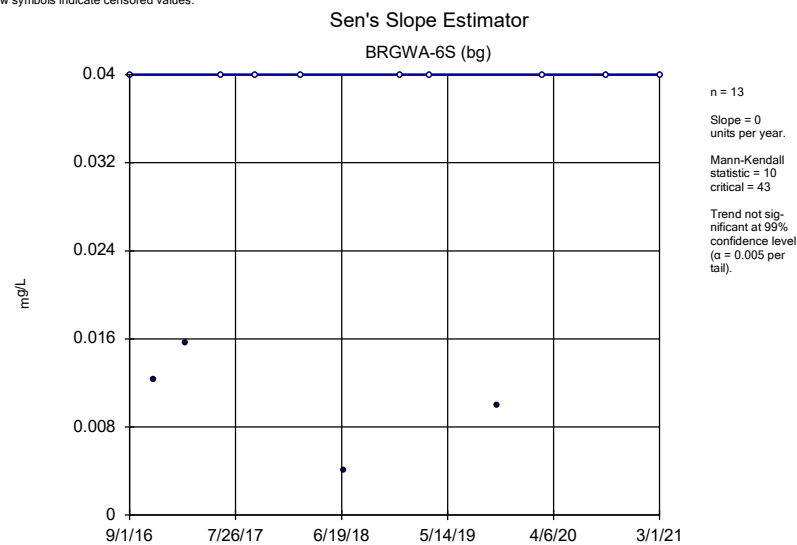
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Plant Branch Client: Southern Company Data: Plant Branch AP



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Plant Branch Client: Southern Company Data: Plant Branch AP

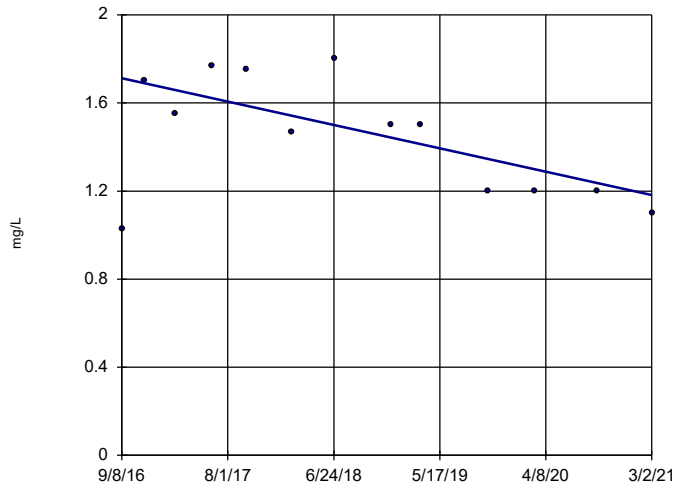


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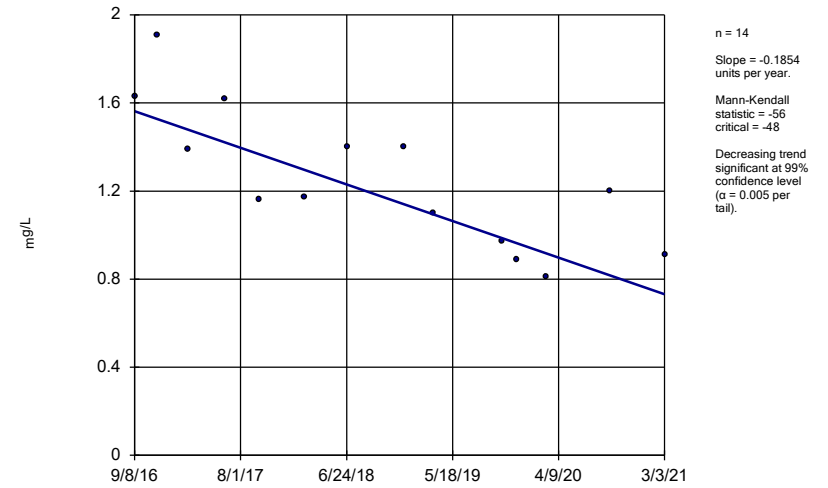
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-25I



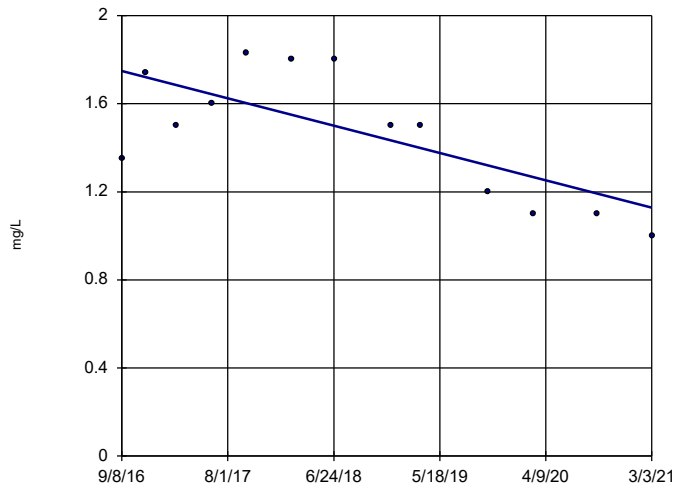
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-27I



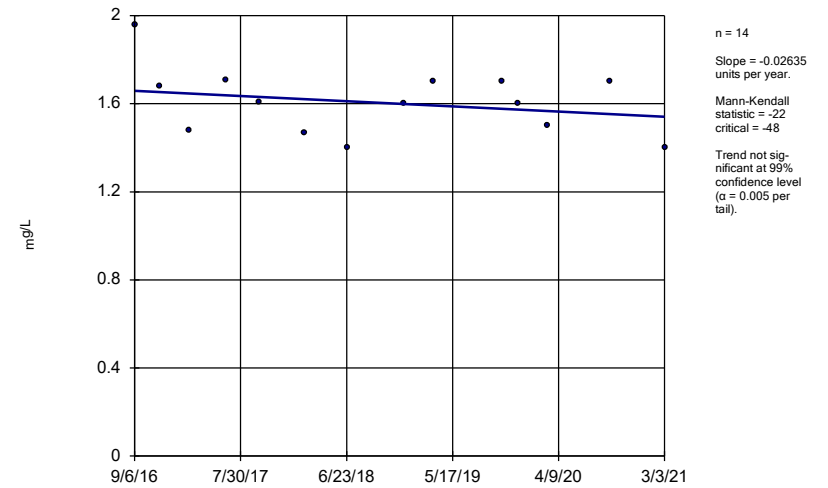
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-29I



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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-30I

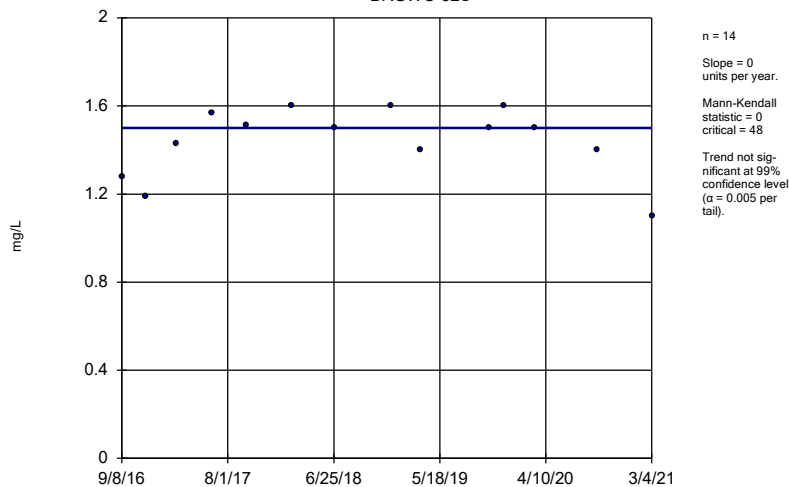


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Plant Branch Client: Southern Company Data: Plant Branch AP



### Sen's Slope Estimator

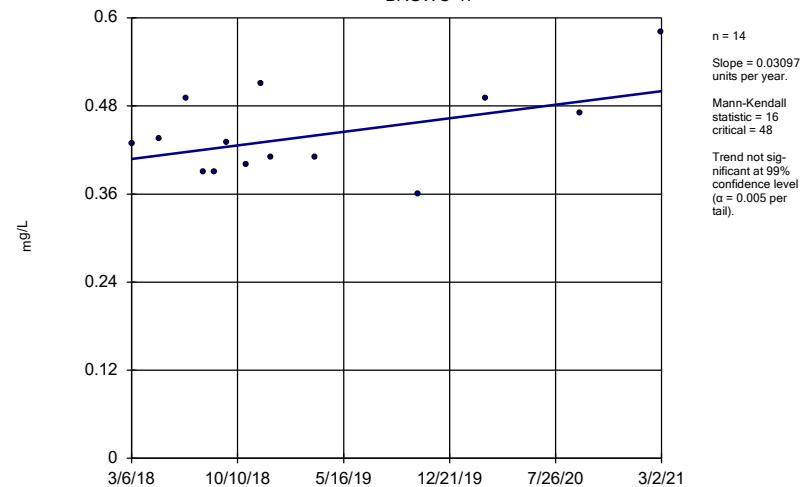
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### Sen's Slope Estimator

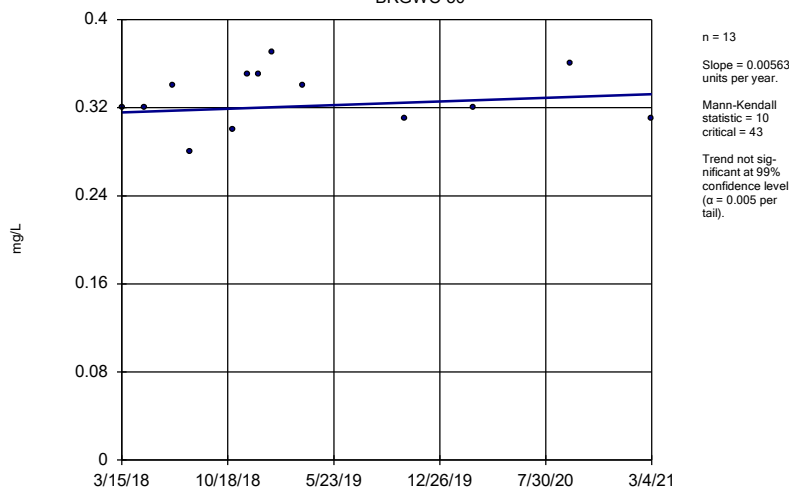
BRGWC-47



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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

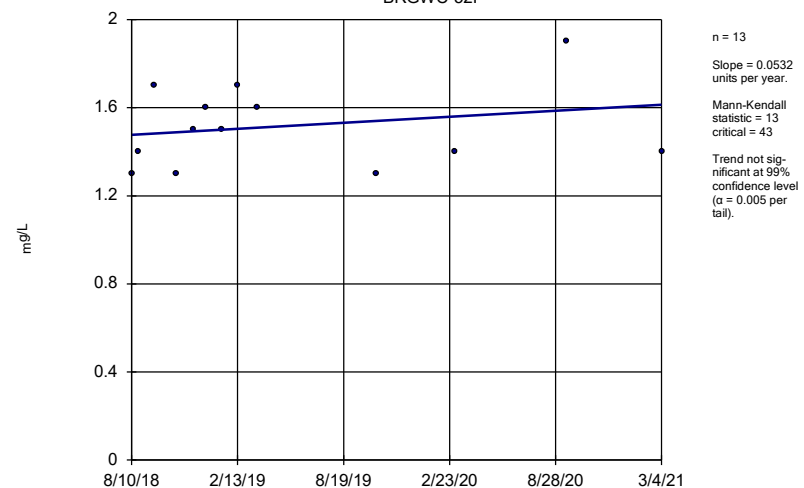
BRGWC-50



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Plant Branch Client: Southern Company Data: Plant Branch AP

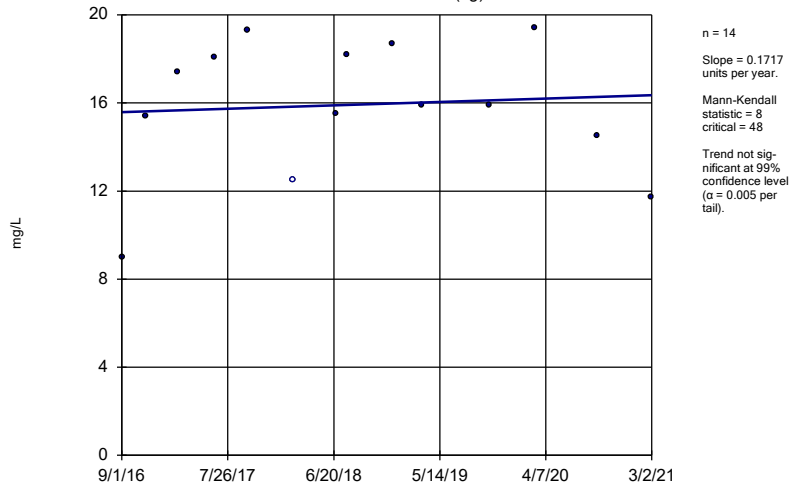
### Sen's Slope Estimator

BRGWC-52I



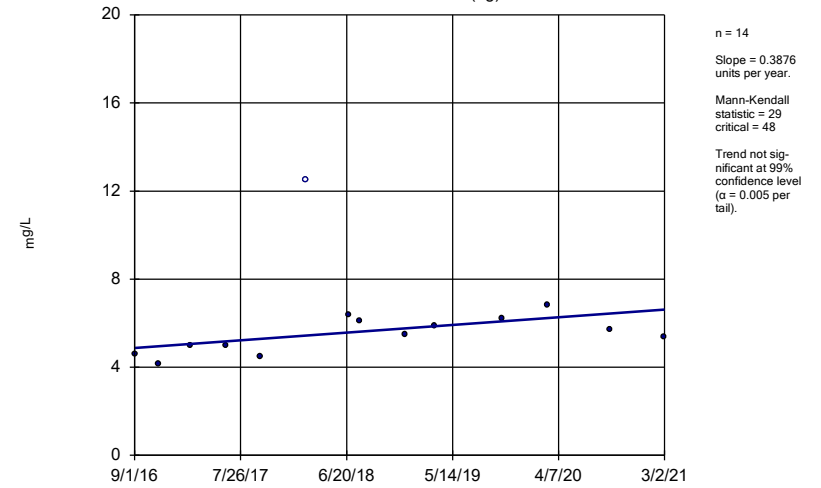
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-12I (bg)



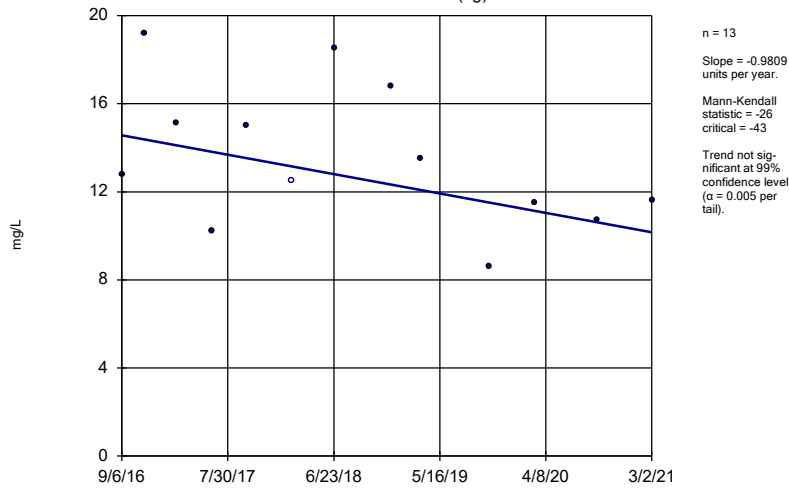
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Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-12S (bg)



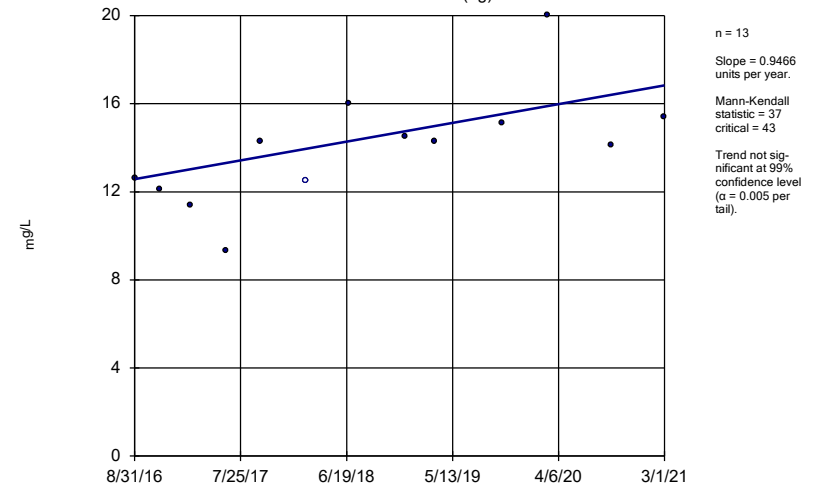
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-23S (bg)



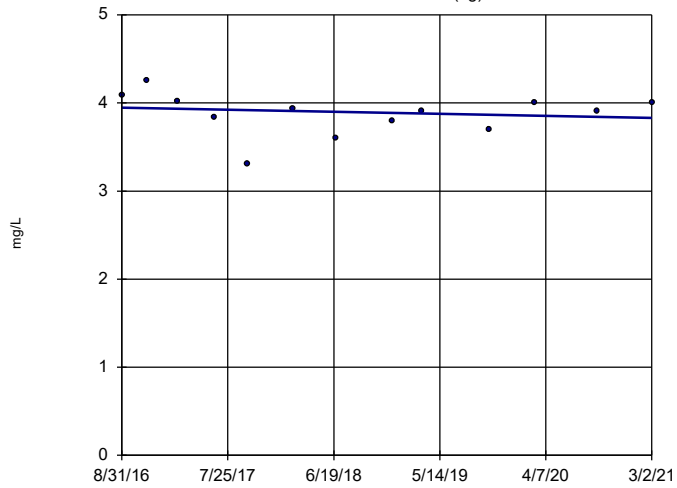
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-2I (bg)



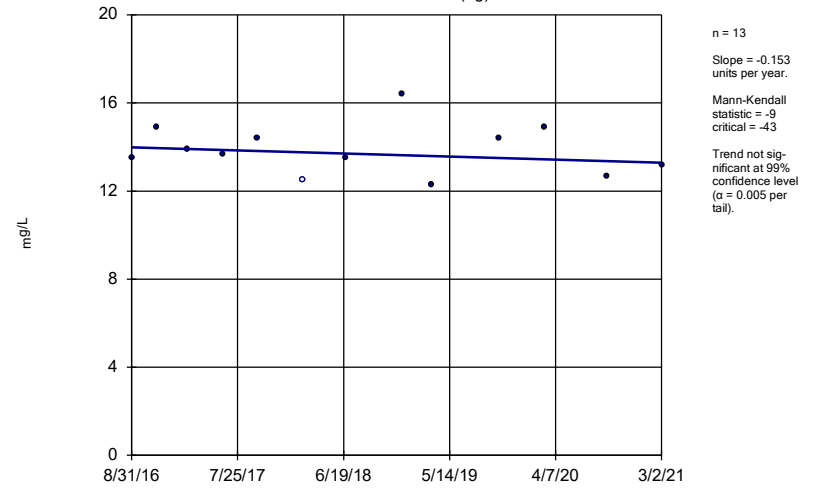
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-2S (bg)



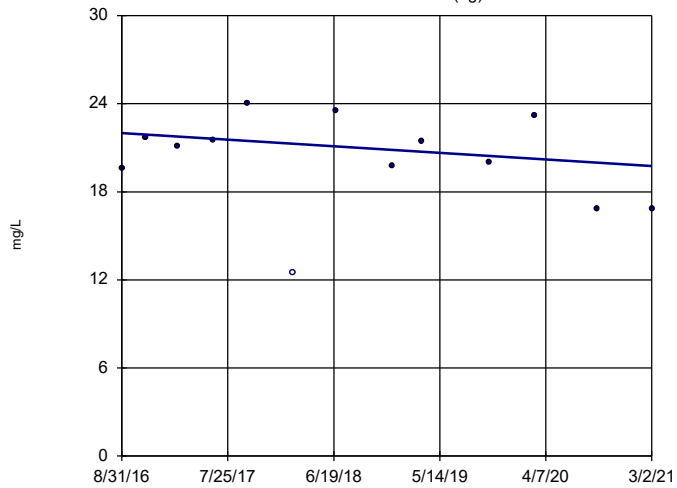
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-5I (bg)



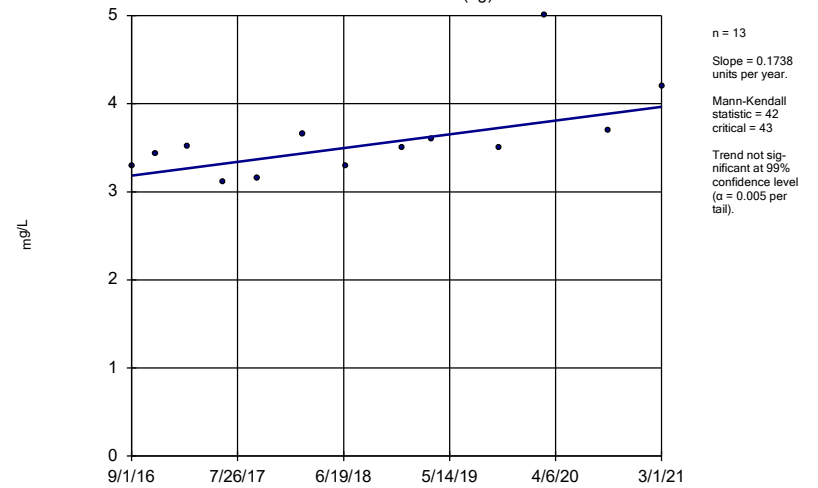
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-5S (bg)



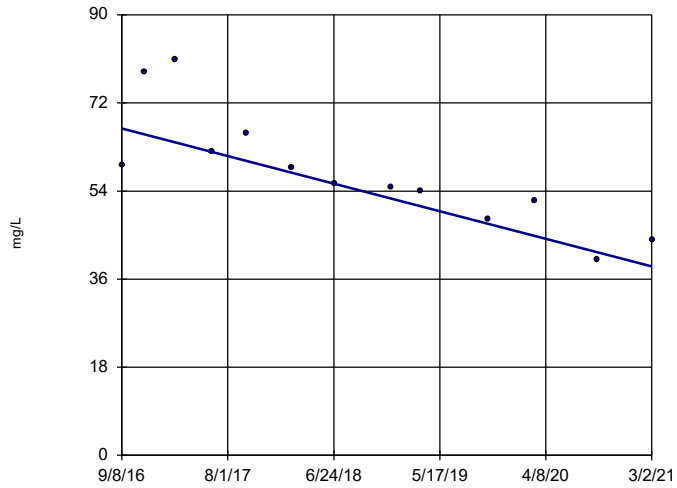
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-6S (bg)



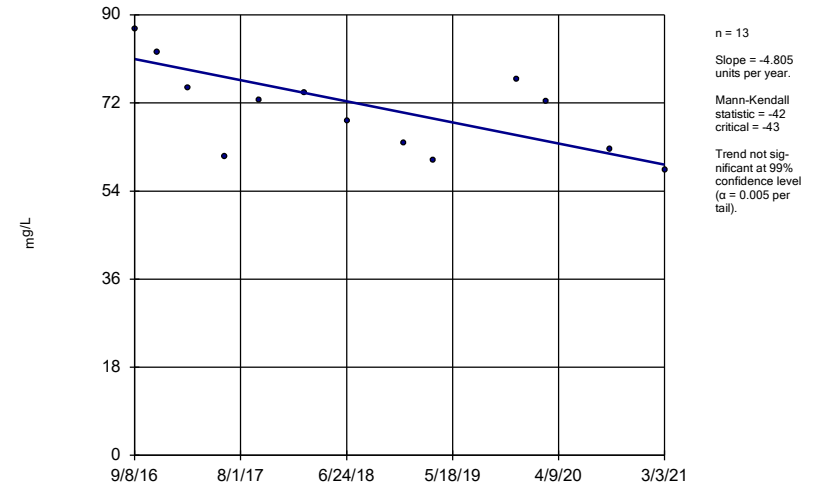
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-25I



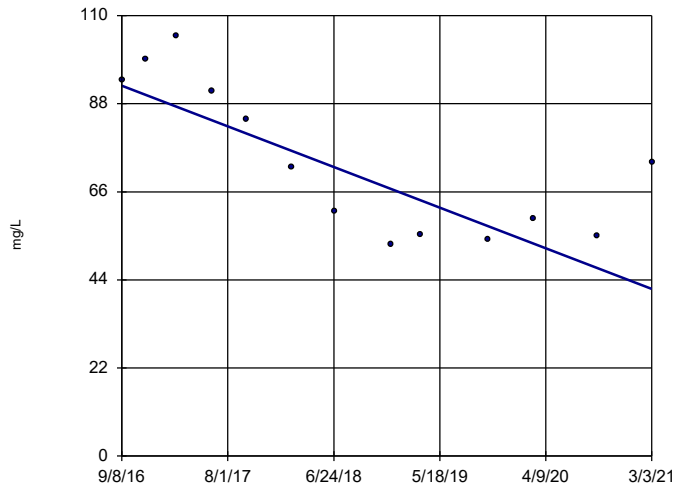
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-27I



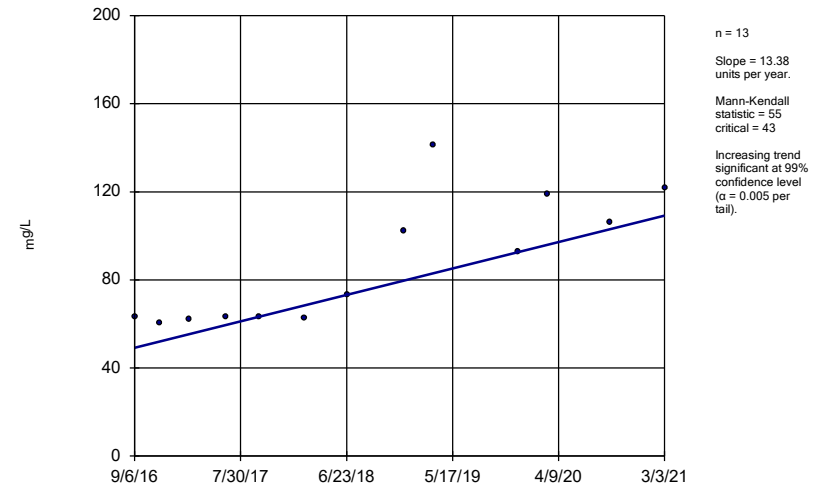
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-29I



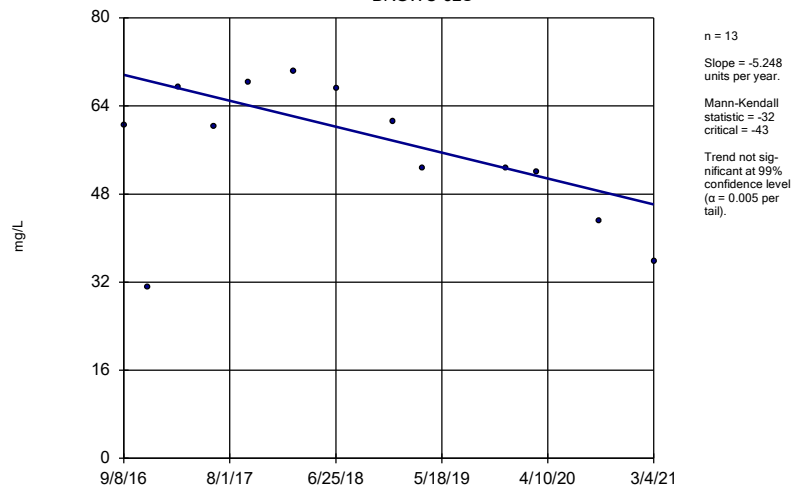
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-30I



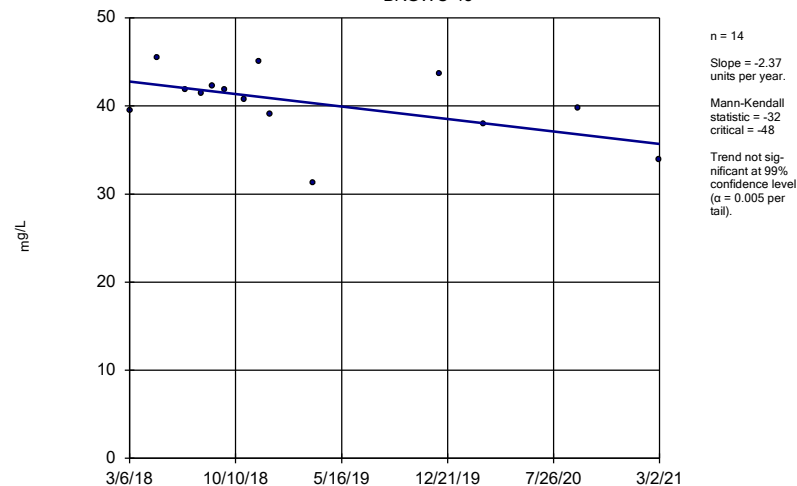
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-32S



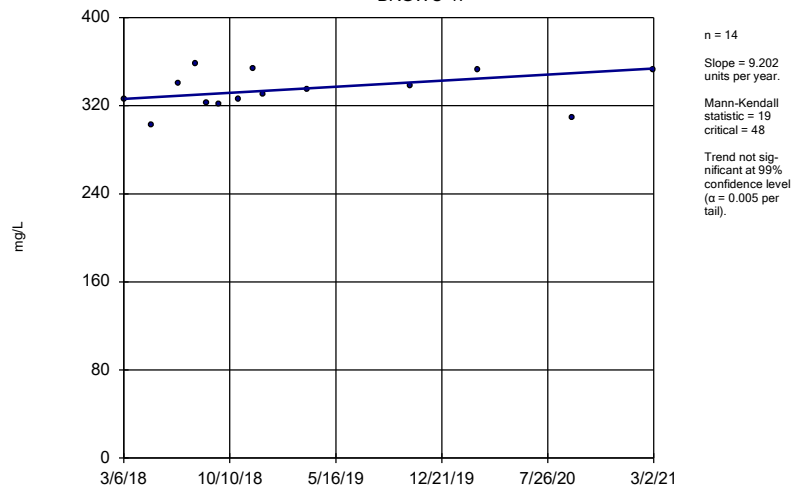
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-45



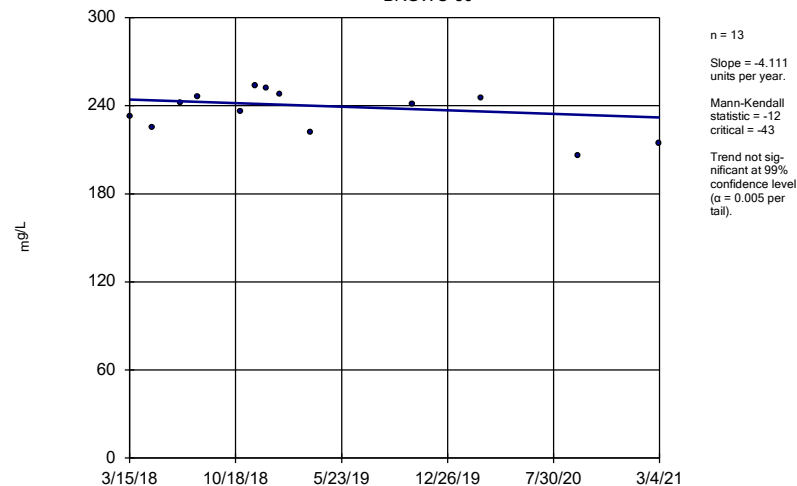
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-47

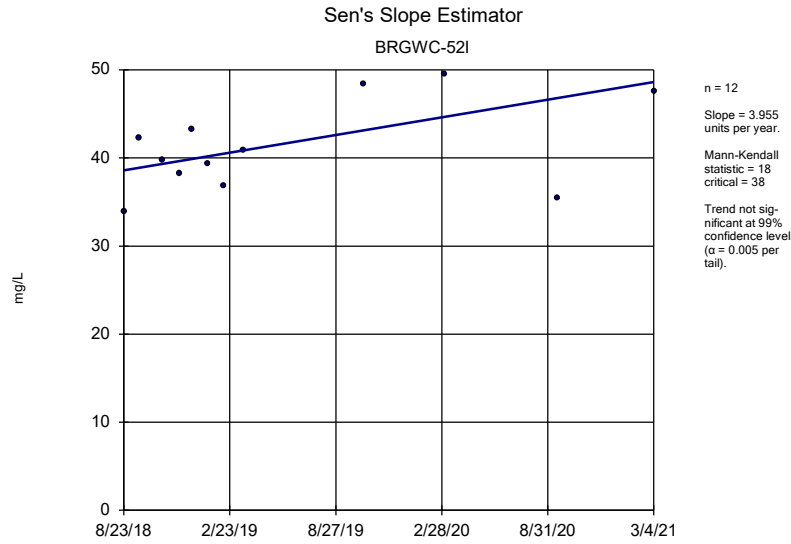


Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

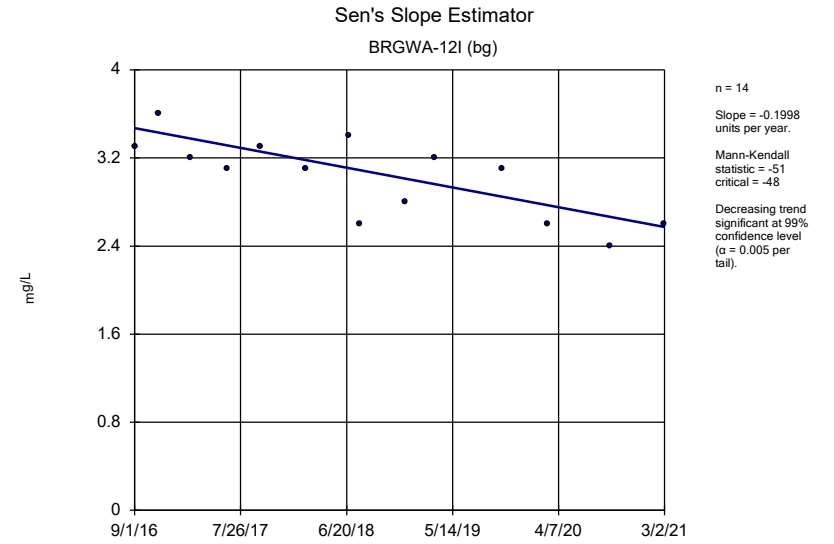
Sen's Slope Estimator  
BRGWC-50



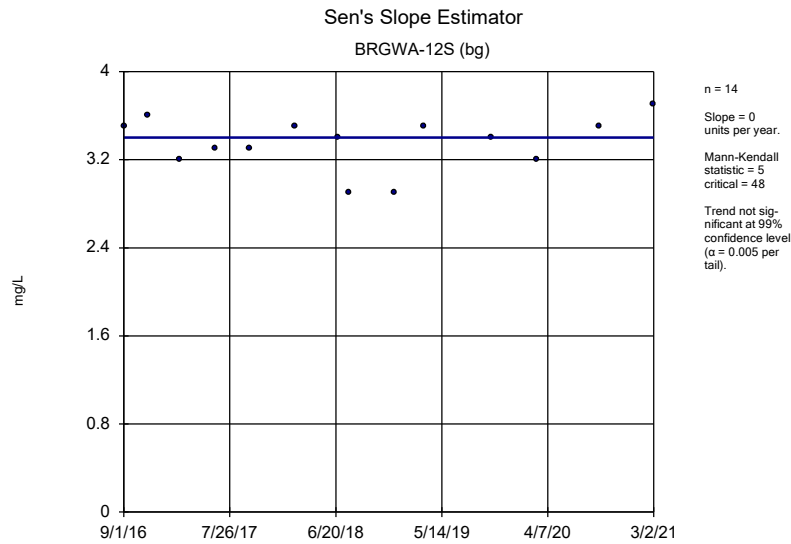
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP



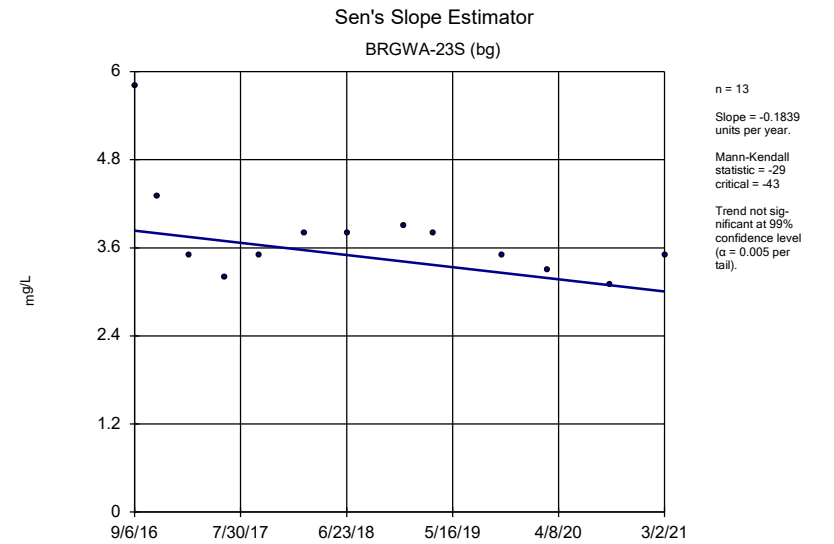
Constituent: Calcium Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP



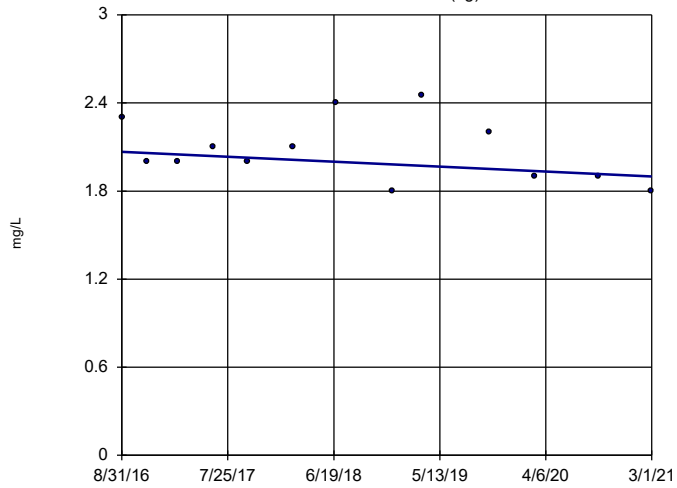
Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP



Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2I (bg)

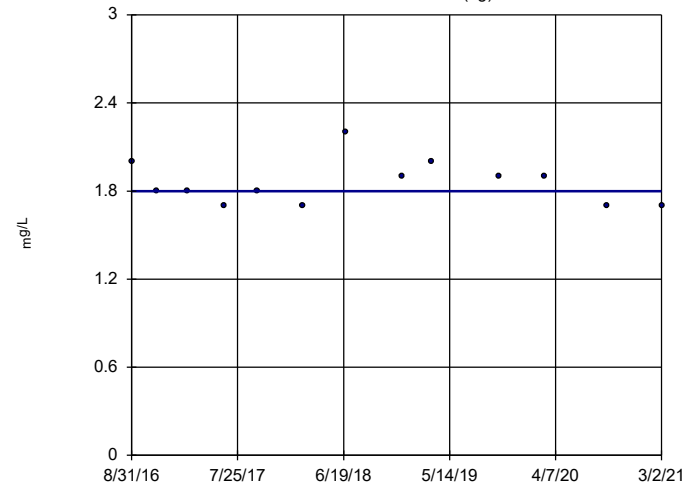


n = 13  
 Slope = -0.03735  
 units per year.  
 Mann-Kendall  
 statistic = -18  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2S (bg)

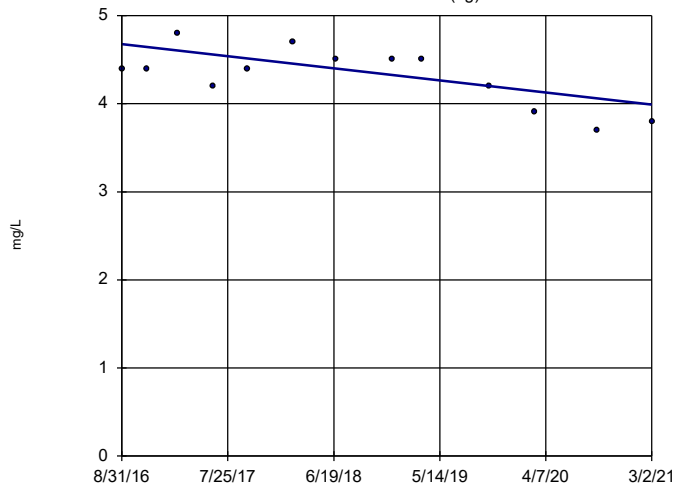


n = 13  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = -9  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)

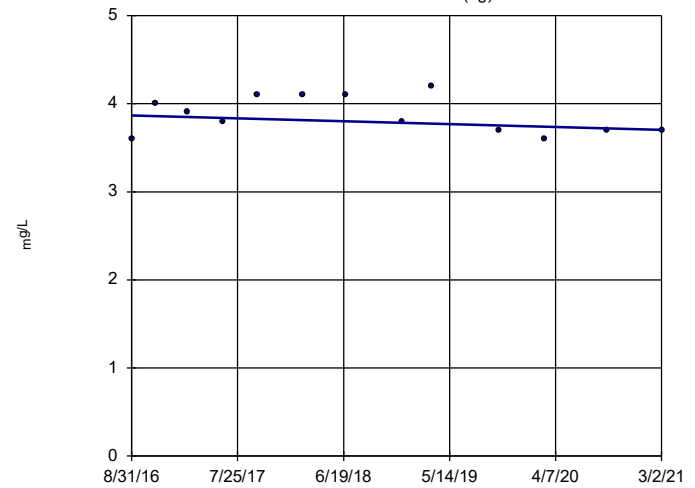


n = 13  
 Slope = -0.1525  
 units per year.  
 Mann-Kendall  
 statistic = -31  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

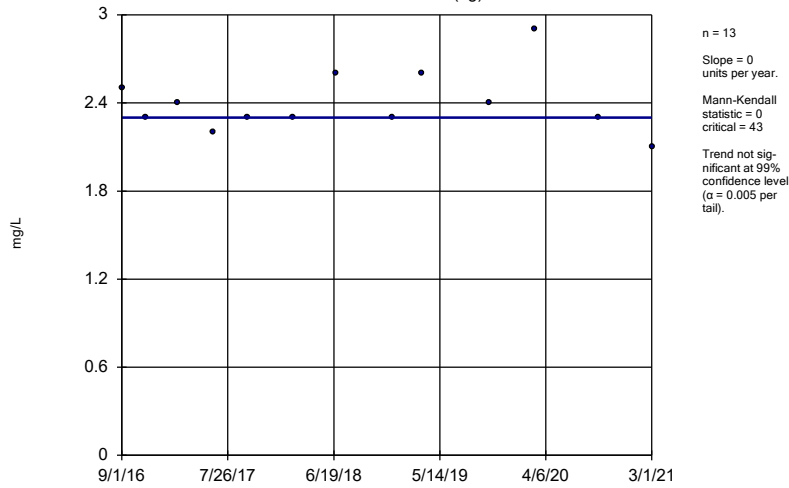
BRGWA-5S (bg)



n = 13  
 Slope = -0.03667  
 units per year.  
 Mann-Kendall  
 statistic = -12  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

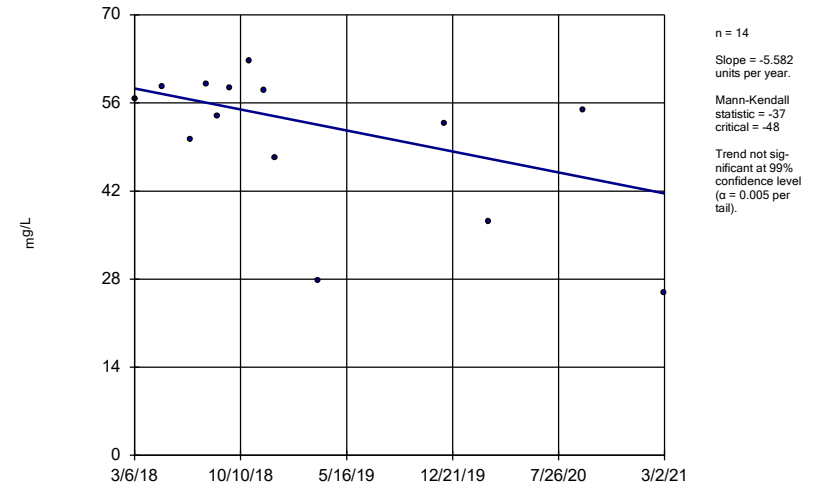
Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-6S (bg)



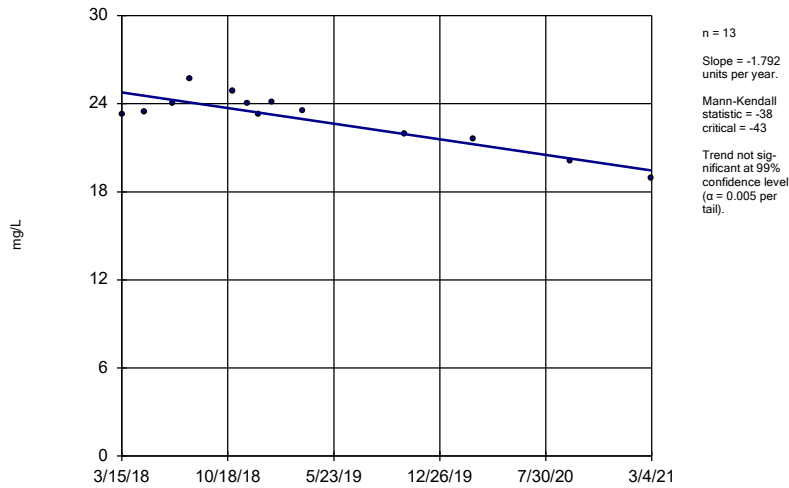
Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-45



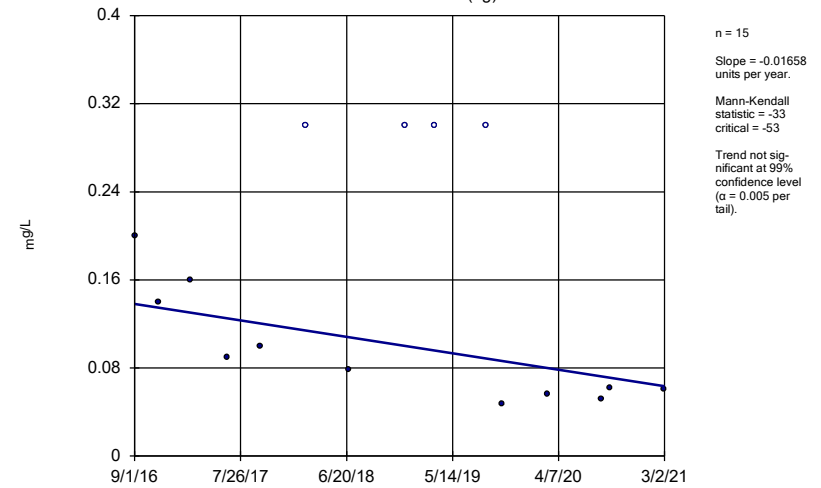
Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWC-50



Constituent: Chloride, Total Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

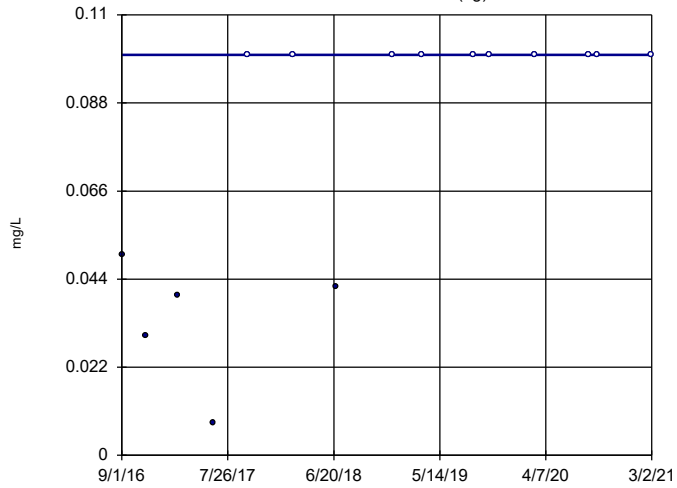
Sen's Slope Estimator  
BRGWA-12I (bg)



Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

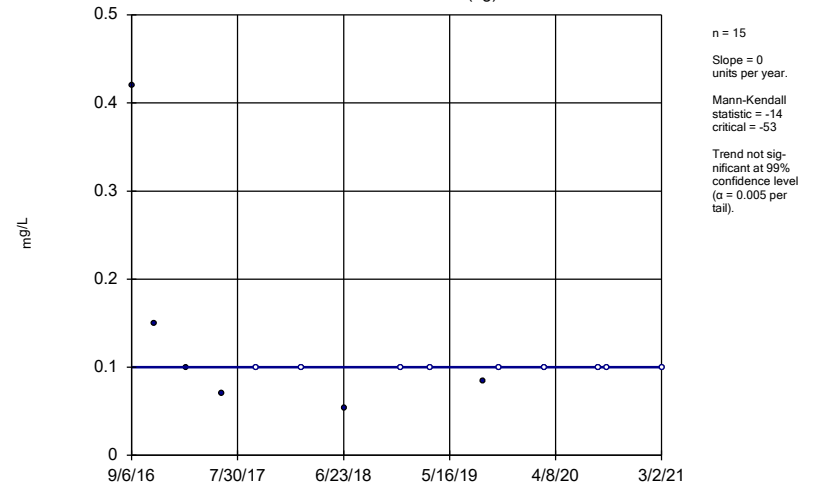


### Sen's Slope Estimator BRGWA-12S (bg)



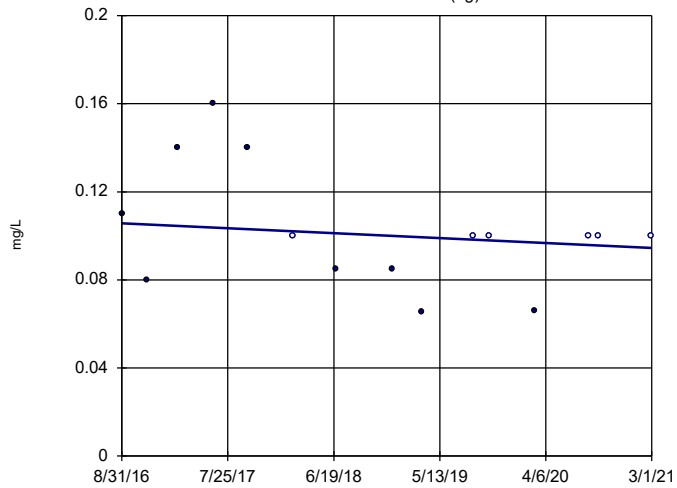
Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-23S (bg)



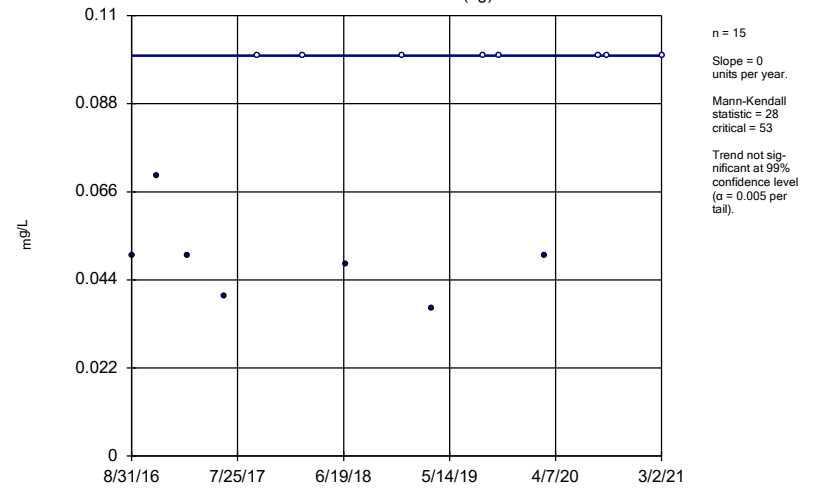
Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-2I (bg)



Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

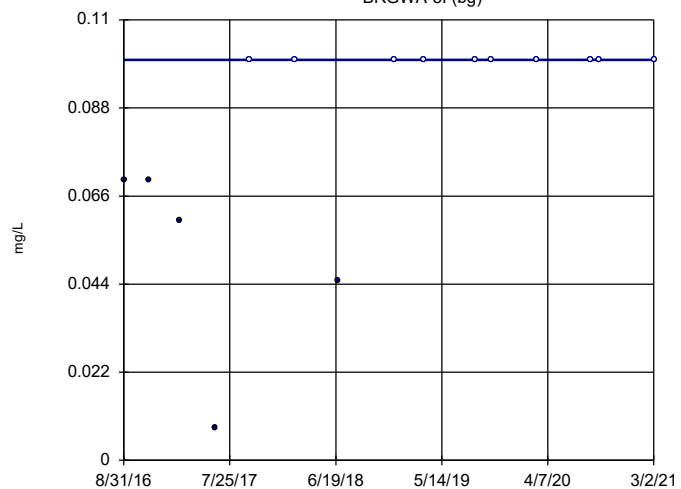
### Sen's Slope Estimator BRGWA-2S (bg)



Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5I (bg)

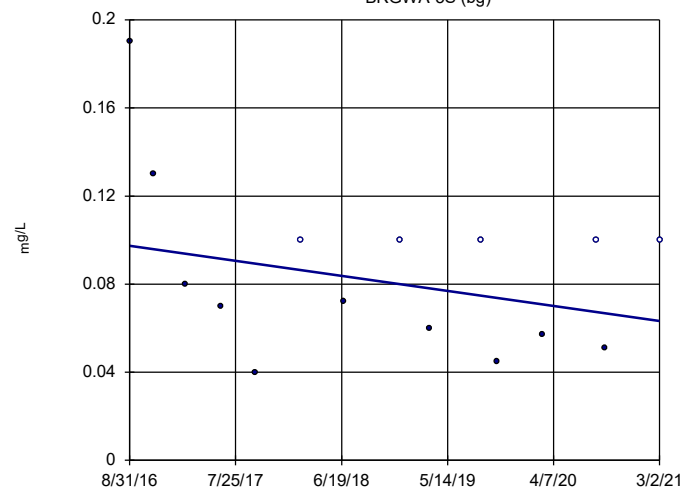


n = 15  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 39  
critical = 53  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-5S (bg)

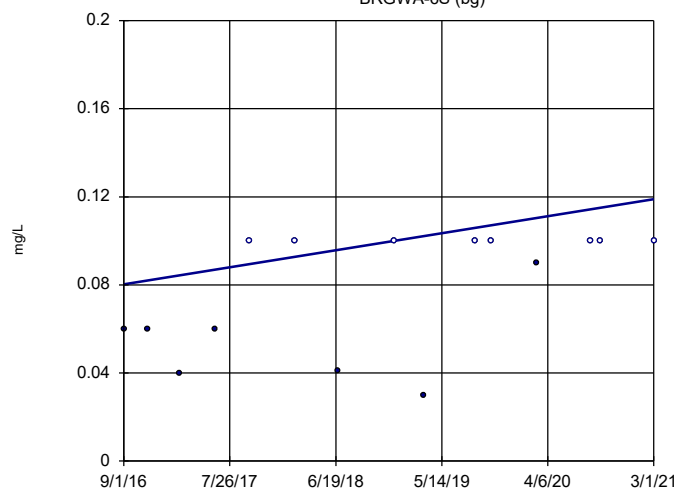


n = 15  
Slope = -0.007584  
units per year.  
Mann-Kendall  
statistic = -25  
critical = -53  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-6S (bg)

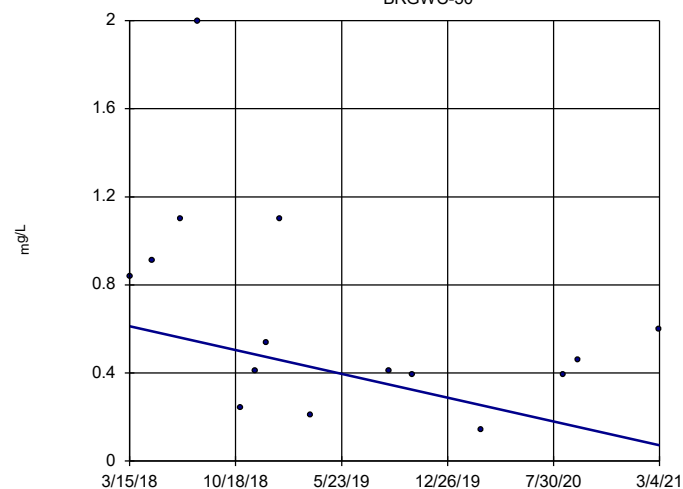


n = 15  
Slope = 0.008561  
units per year.  
Mann-Kendall  
statistic = 34  
critical = 53  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-50

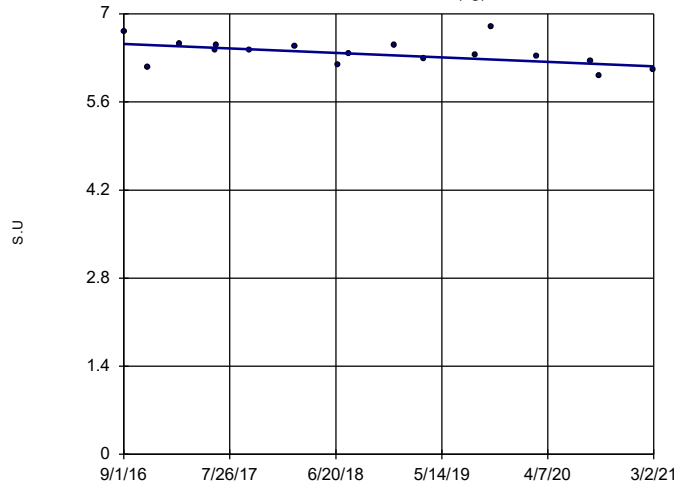


n = 15  
Slope = -0.1819  
units per year.  
Mann-Kendall  
statistic = -28  
critical = -53  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Fluoride Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-12I (bg)

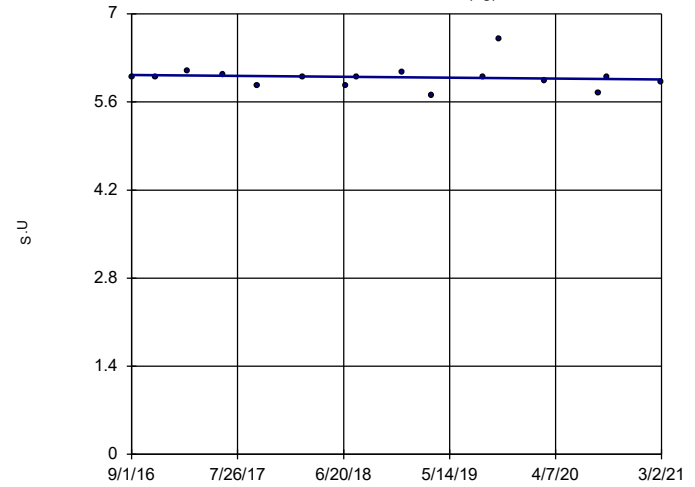


n = 17  
 Slope = -0.07835  
 units per year.  
 Mann-Kendall  
 statistic = -55  
 critical = -63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-12S (bg)

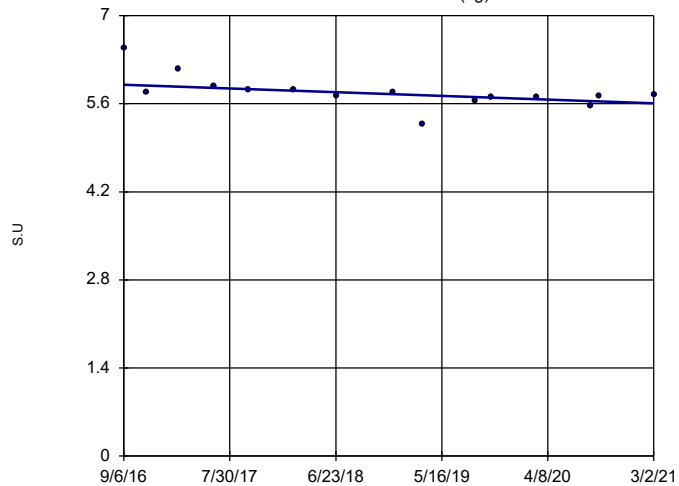


n = 16  
 Slope = -0.01536  
 units per year.  
 Mann-Kendall  
 statistic = -.21  
 critical = -58  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-23S (bg)

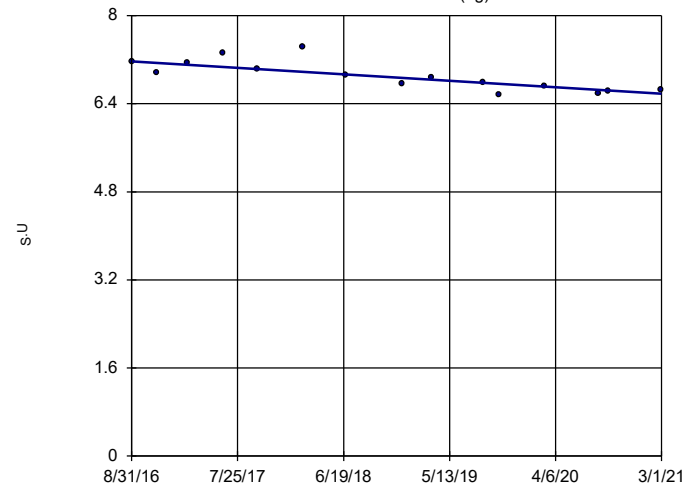


n = 15  
 Slope = -0.06606  
 units per year.  
 Mann-Kendall  
 statistic = -56  
 critical = -53  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

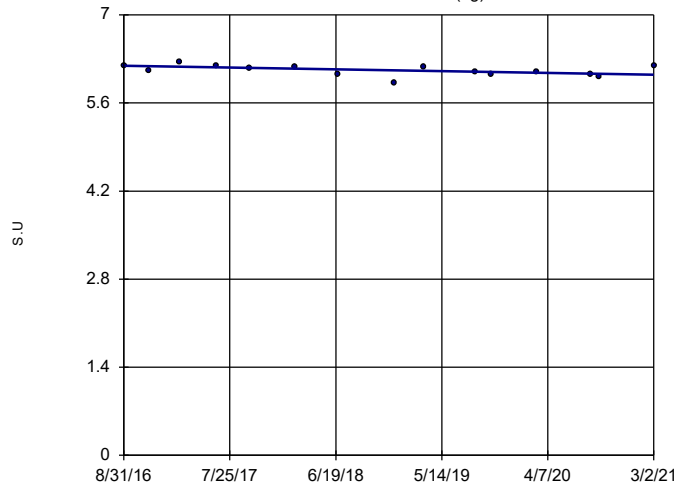
BRGWA-2I (bg)



n = 15  
 Slope = -0.1304  
 units per year.  
 Mann-Kendall  
 statistic = -67  
 critical = -53  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

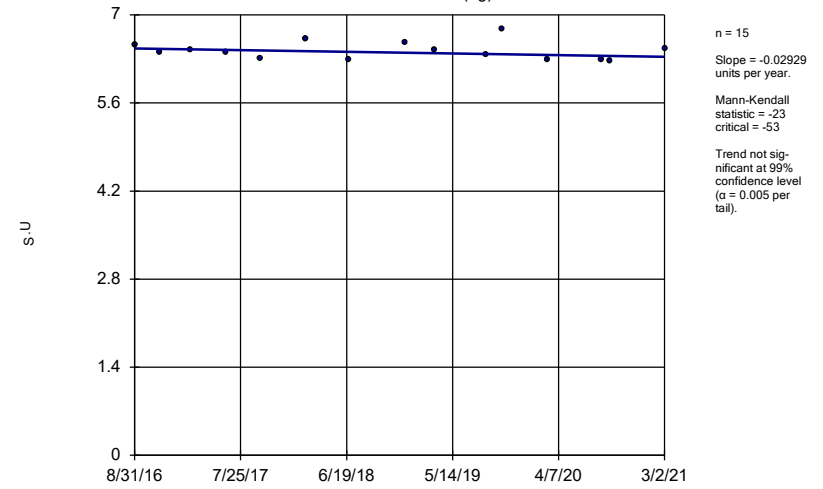
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-2S (bg)



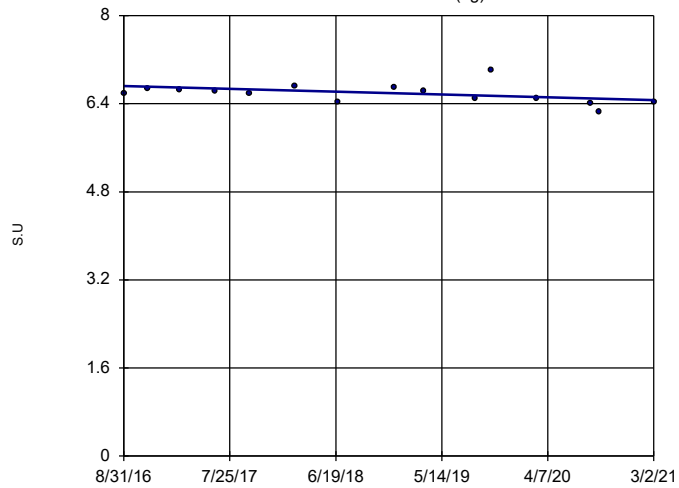
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-5I (bg)



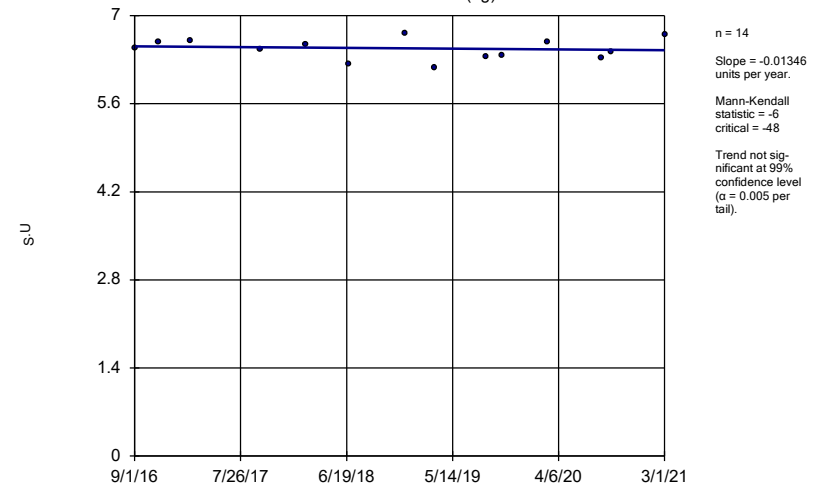
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-5S (bg)



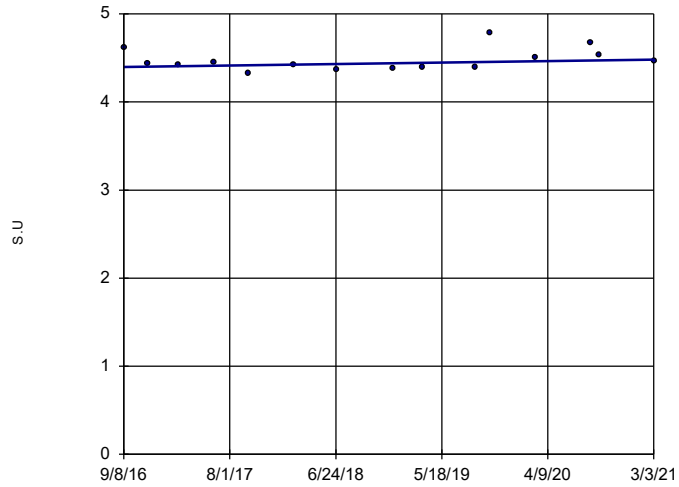
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-6S (bg)



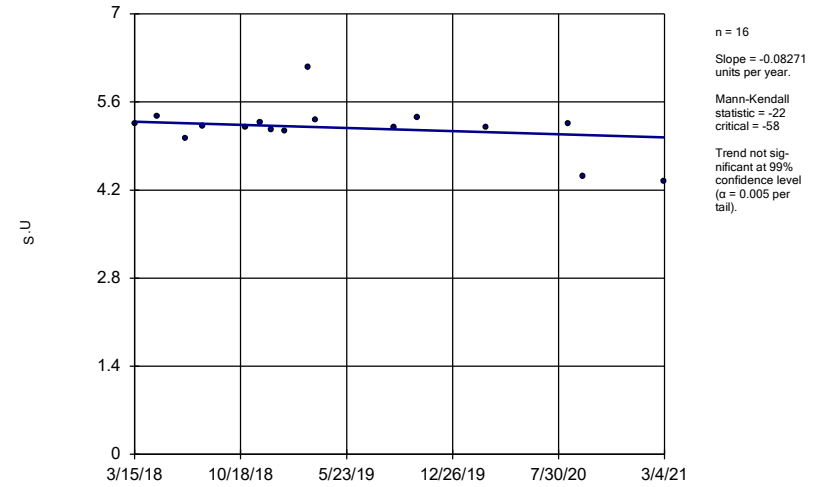
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-29I



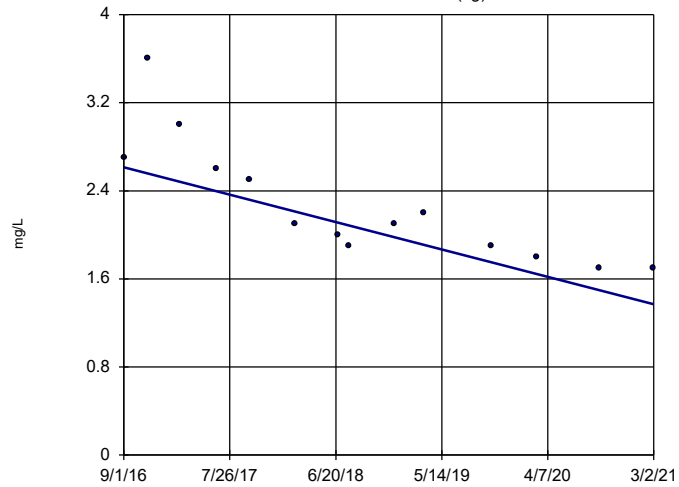
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-50



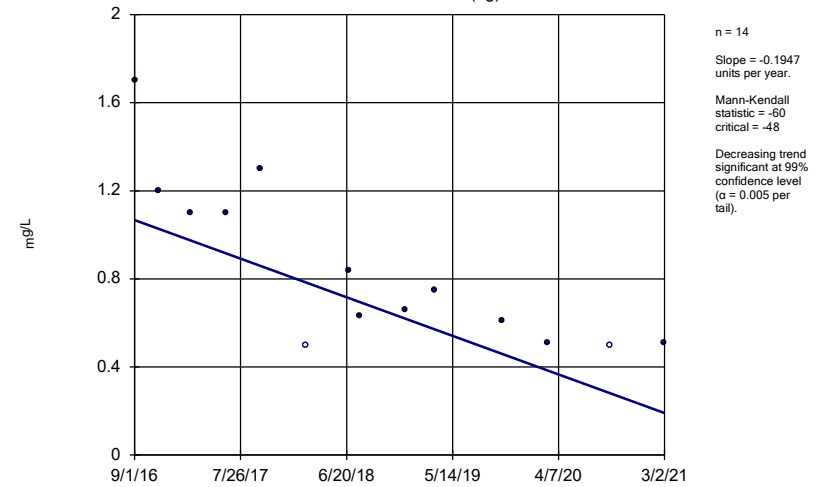
Constituent: pH, Field Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-12I (bg)



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

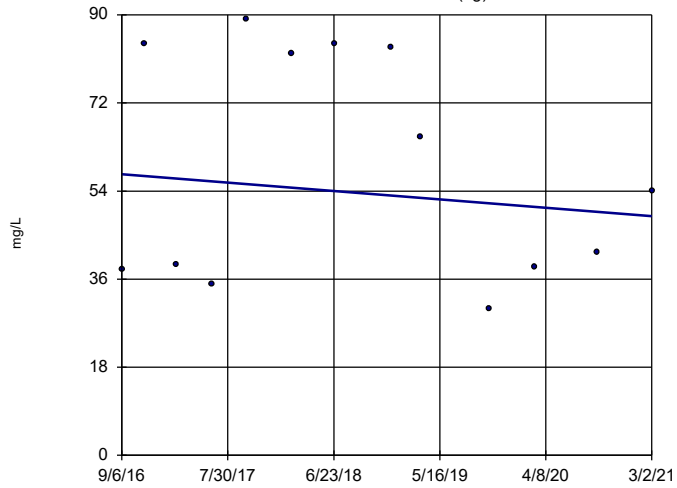
### Sen's Slope Estimator BRGWA-12S (bg)



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-23S (bg)

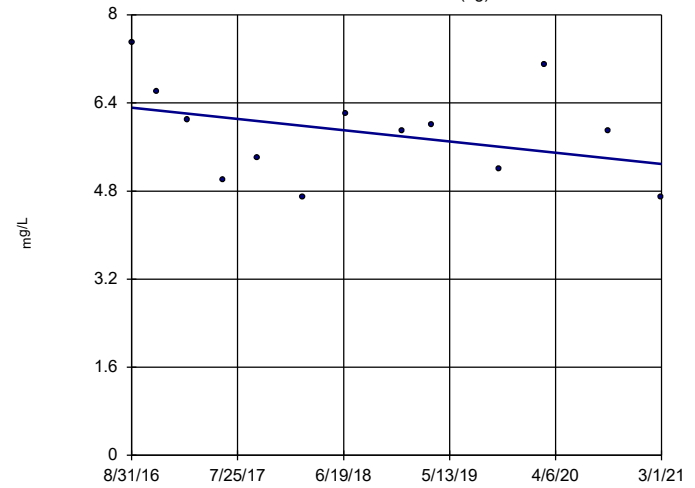


n = 13  
 Slope = -1.903  
 units per year.  
 Mann-Kendall  
 statistic = -8  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2I (bg)

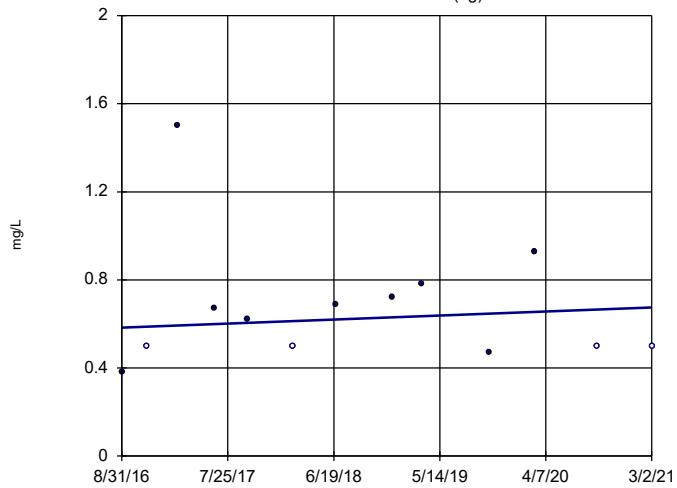


n = 13  
 Slope = -0.2264  
 units per year.  
 Mann-Kendall  
 statistic = -22  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWA-2S (bg)

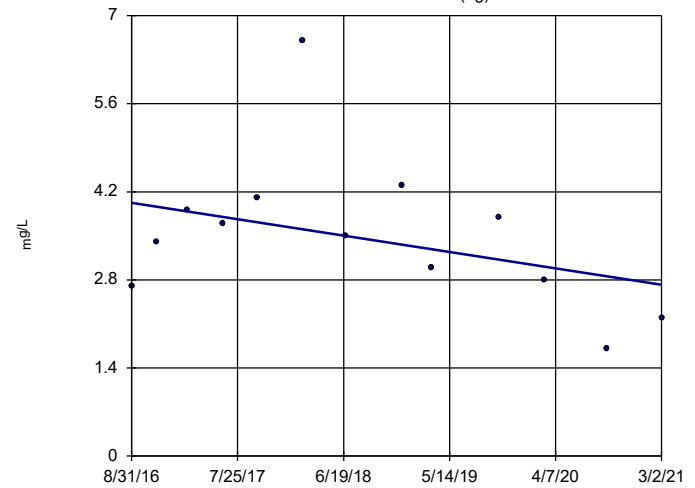


n = 13  
 Slope = 0.02052  
 units per year.  
 Mann-Kendall  
 statistic = 8  
 critical = 43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

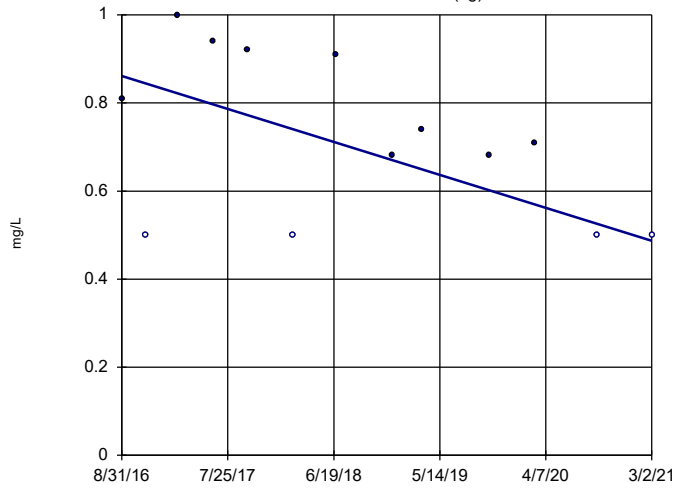
BRGWA-5I (bg)



n = 13  
 Slope = -0.2884  
 units per year.  
 Mann-Kendall  
 statistic = -18  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

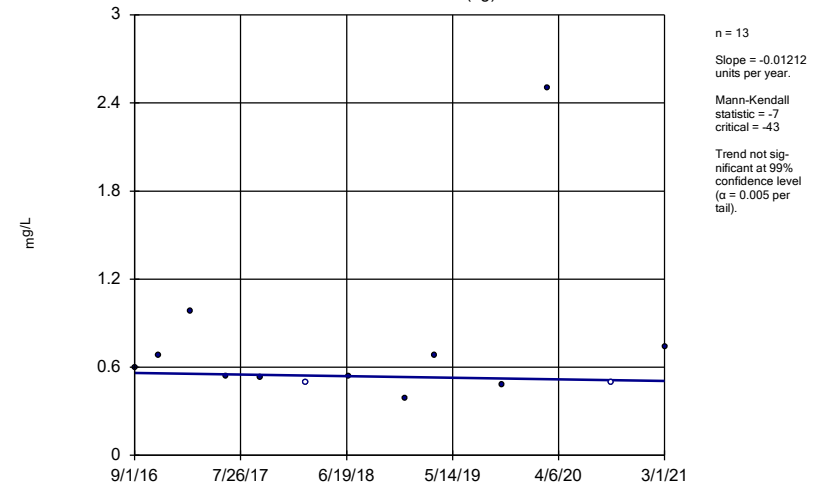
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-5S (bg)



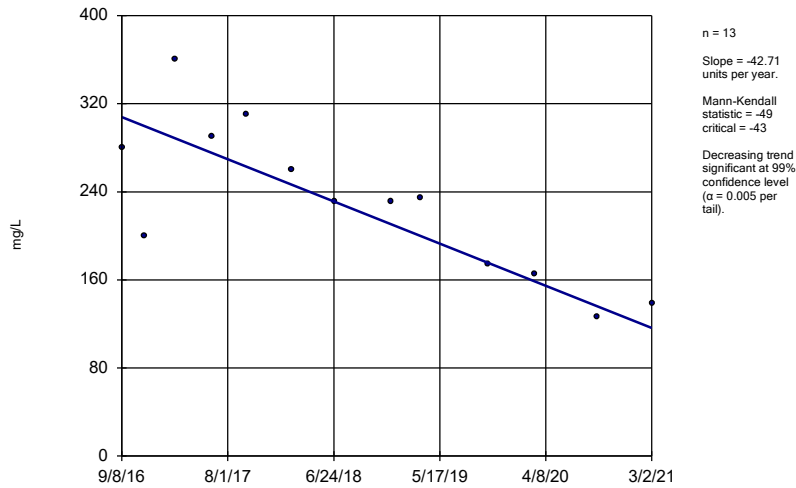
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:38 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-6S (bg)



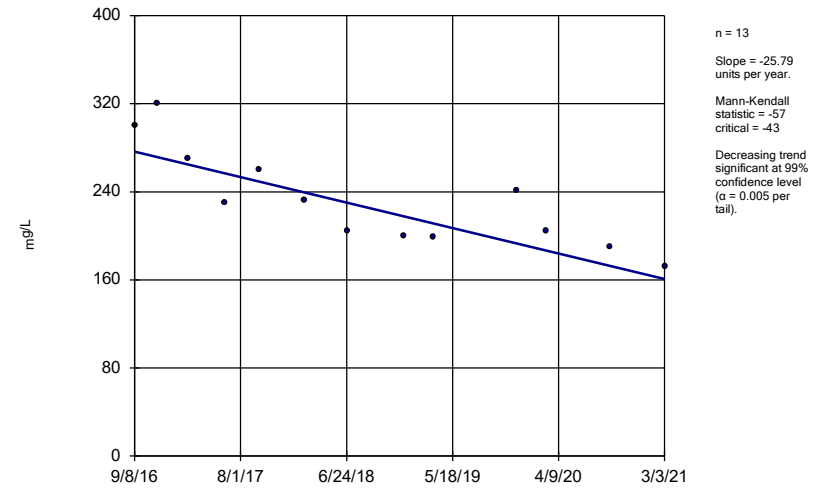
Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWC-25I



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

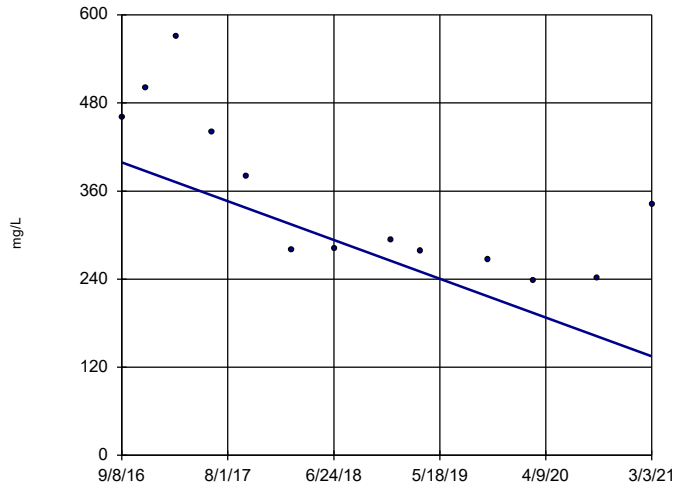
### Sen's Slope Estimator BRGWC-27I



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

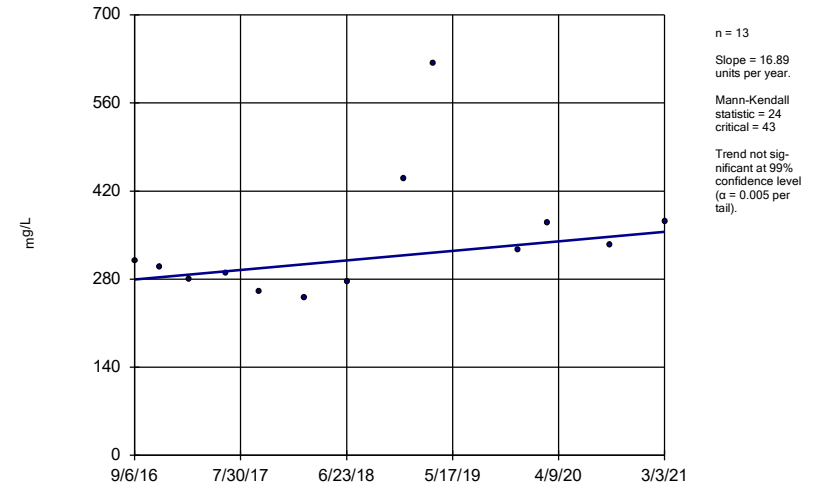
BRGWC-29I



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

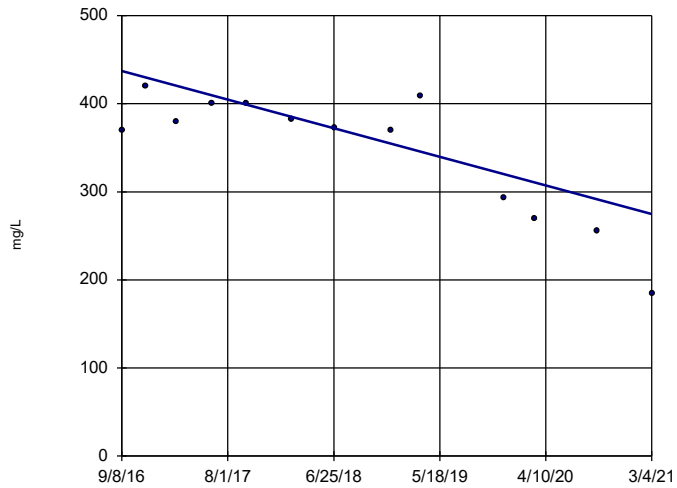
BRGWC-30I



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

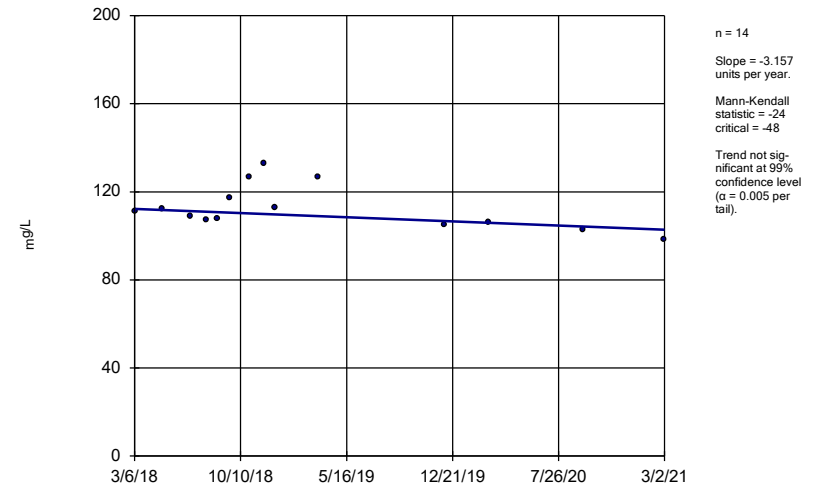
BRGWC-32S



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

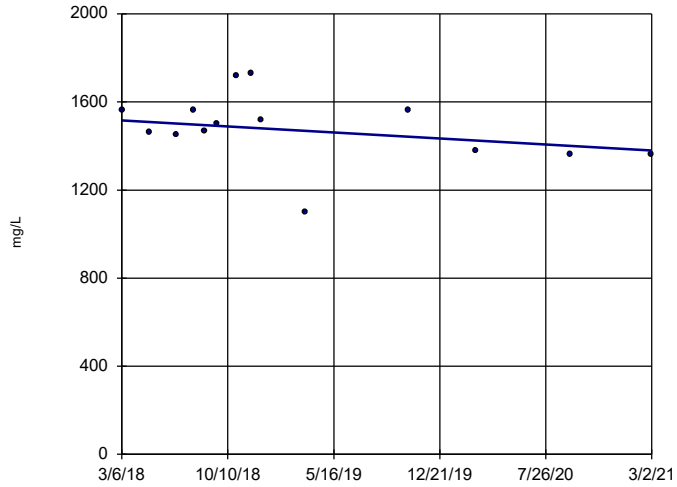
BRGWC-45



Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP



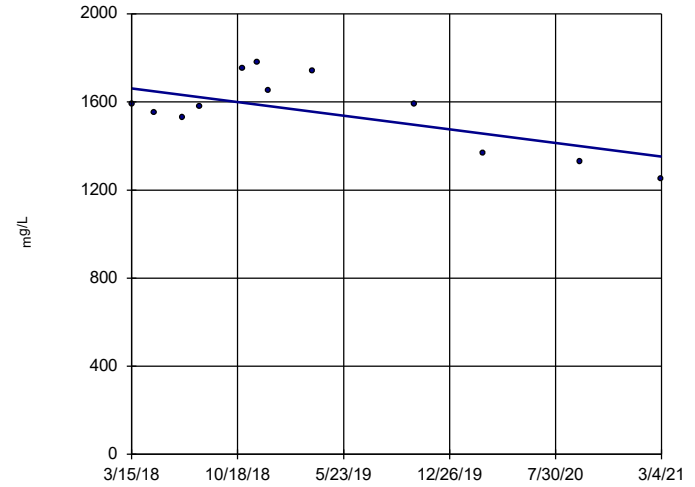
### Sen's Slope Estimator BRGWC-47



n = 14  
 Slope = -46.1  
 units per year.  
 Mann-Kendall  
 statistic = -21  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

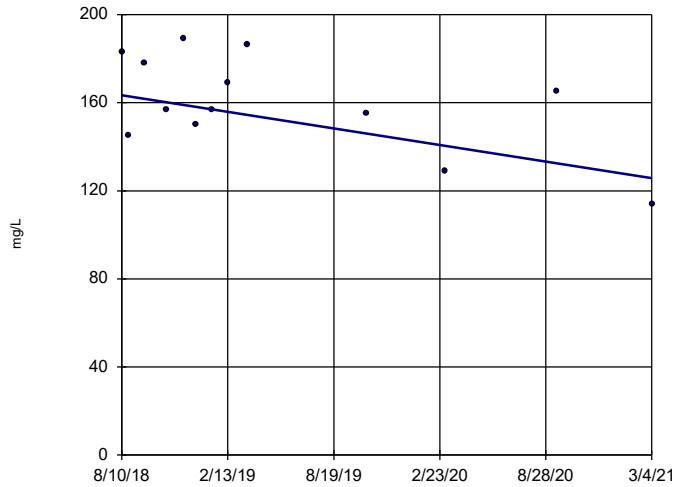
### Sen's Slope Estimator BRGWC-50



n = 12  
 Slope = -103.9  
 units per year.  
 Mann-Kendall  
 statistic = -19  
 critical = -38  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

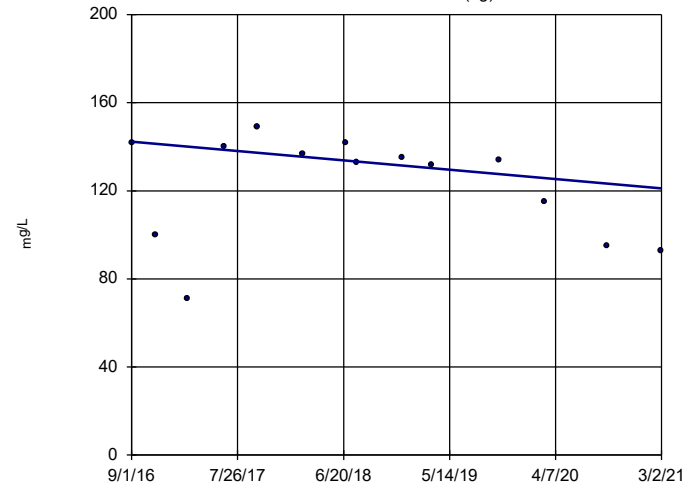
### Sen's Slope Estimator BRGWC-52I



n = 13  
 Slope = -14.67  
 units per year.  
 Mann-Kendall  
 statistic = -21  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Sulfate as SO4 Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

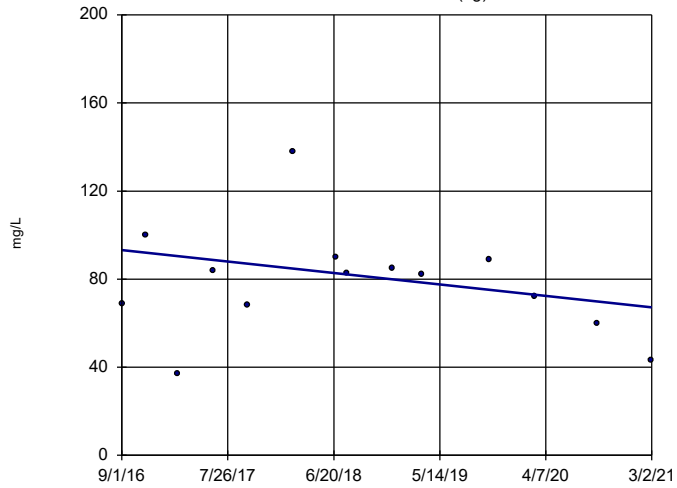
### Sen's Slope Estimator BRGWA-12I (bg)



n = 14  
 Slope = -4.706  
 units per year.  
 Mann-Kendall  
 statistic = -36  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

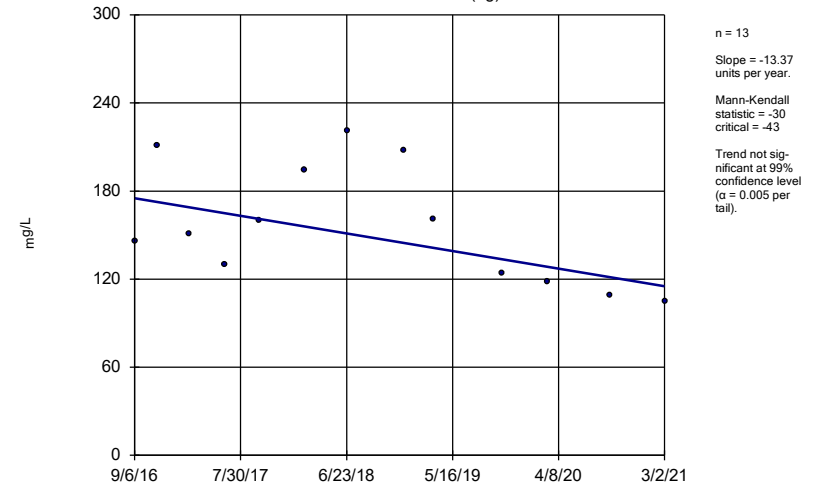
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-12S (bg)



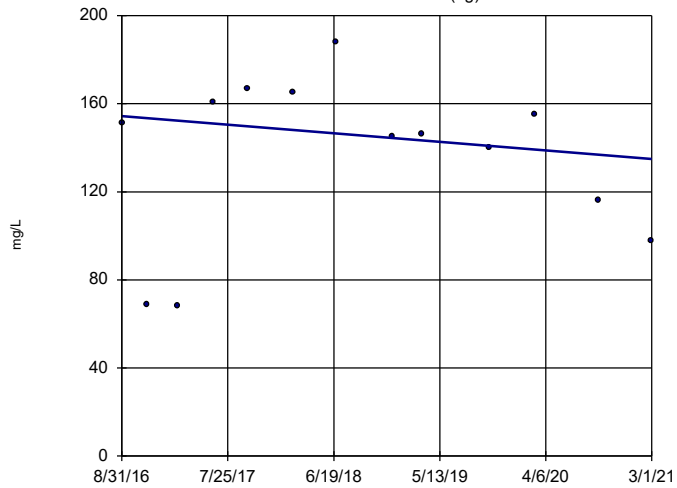
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator BRGWA-23S (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

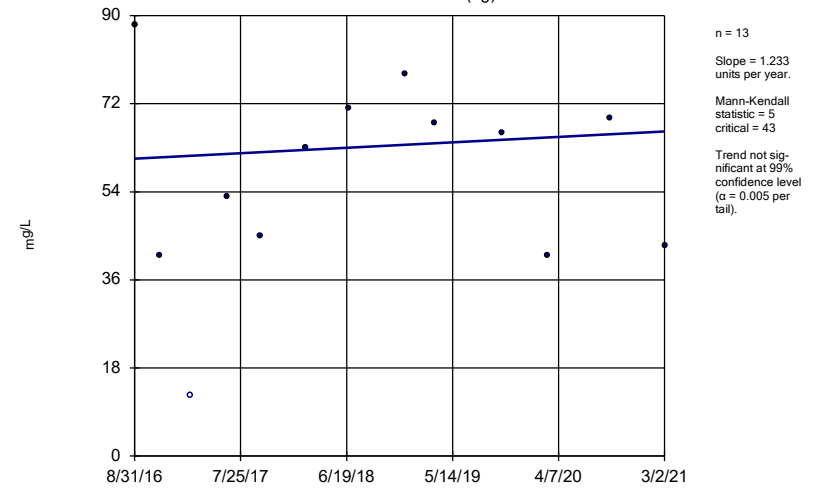
### Sen's Slope Estimator BRGWA-2I (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

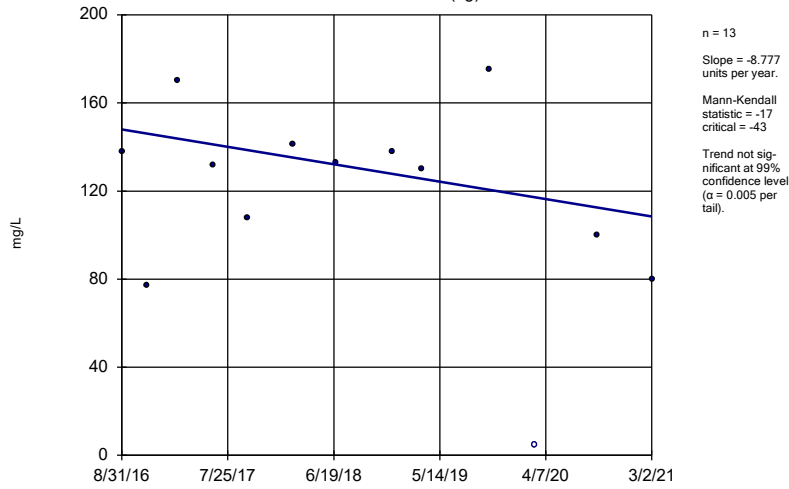
Hollow symbols indicate censored values.

### Sen's Slope Estimator BRGWA-2S (bg)



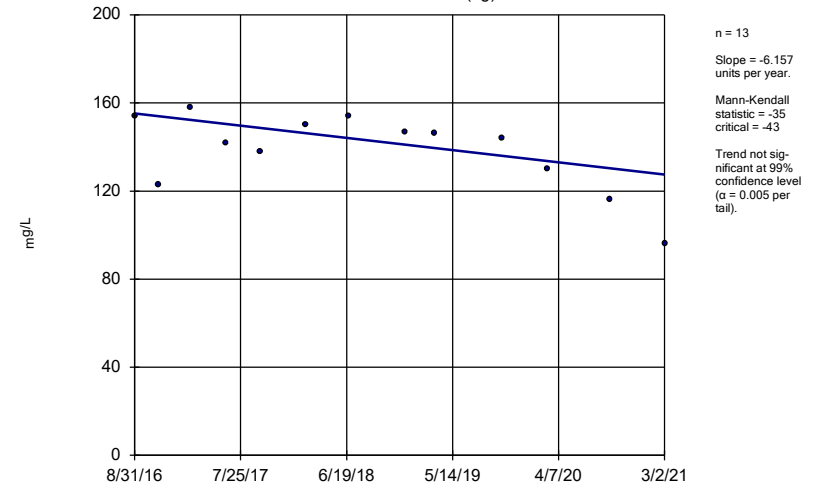
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-5I (bg)



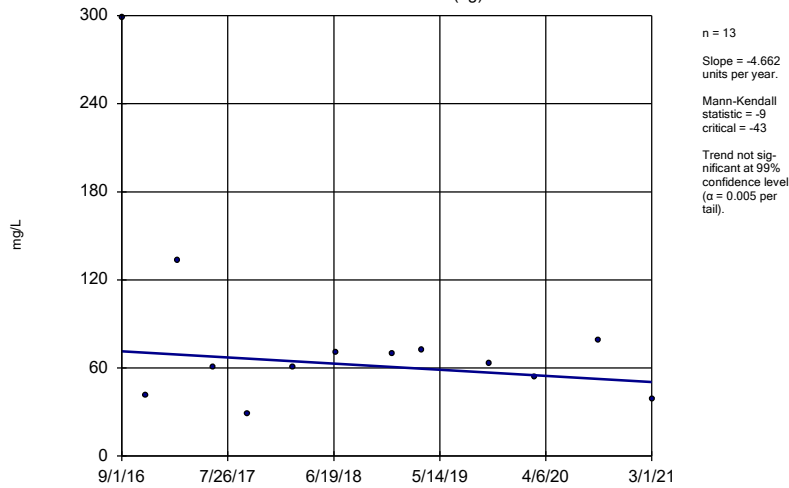
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-5S (bg)



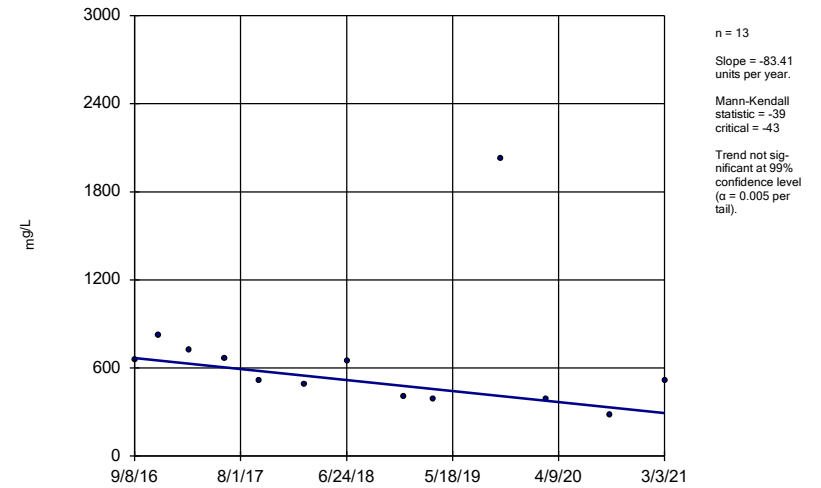
Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

Sen's Slope Estimator  
BRGWA-6S (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

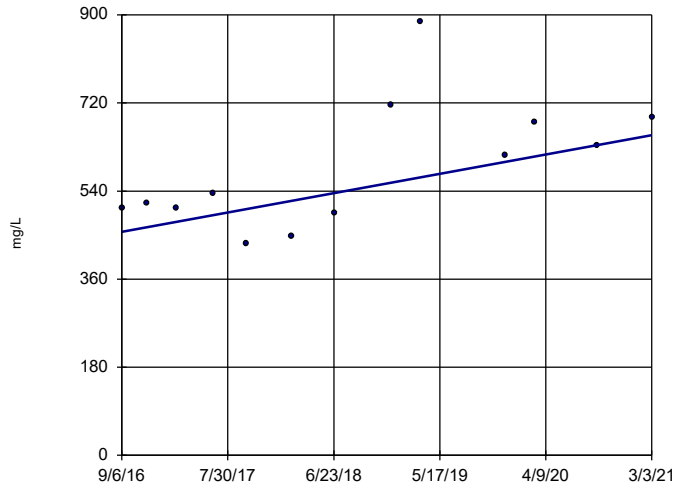
Sen's Slope Estimator  
BRGWC-29I



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-30I

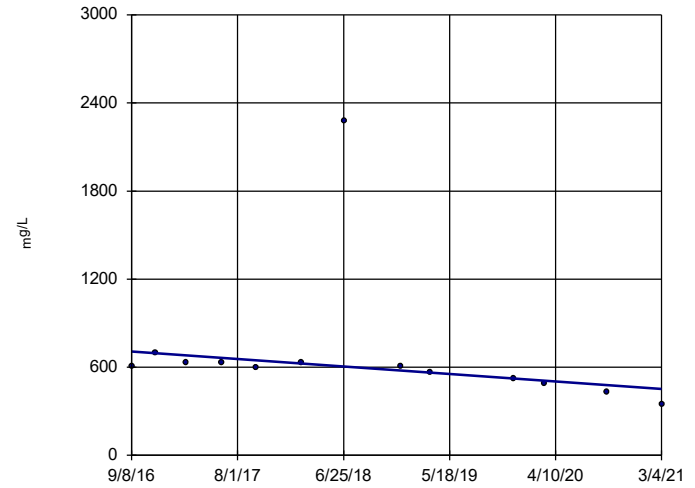


n = 13  
 Slope = 43.95  
 units per year.  
 Mann-Kendall  
 statistic = 32  
 critical = 43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-32S

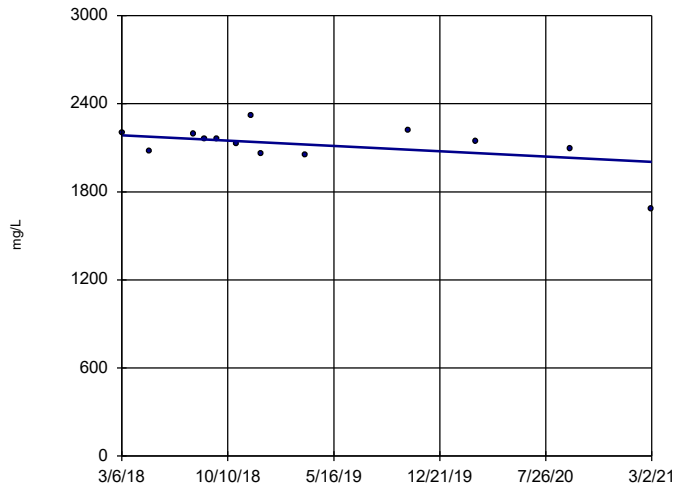


n = 13  
 Slope = -56.88  
 units per year.  
 Mann-Kendall  
 statistic = -53  
 critical = -43  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-47

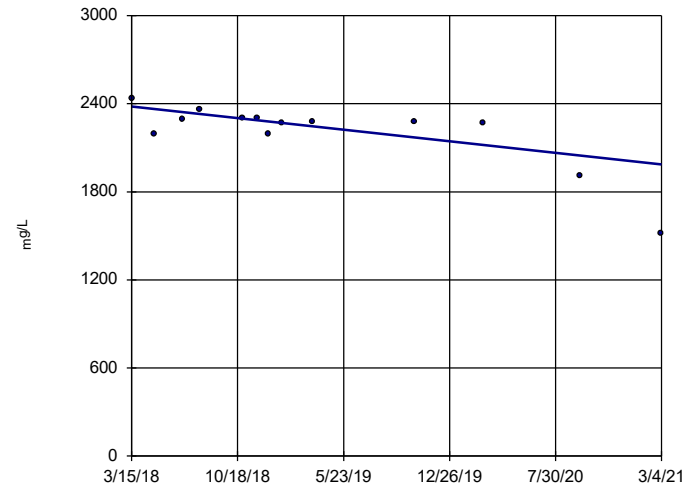


n = 13  
 Slope = -60.54  
 units per year.  
 Mann-Kendall  
 statistic = -27  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-50

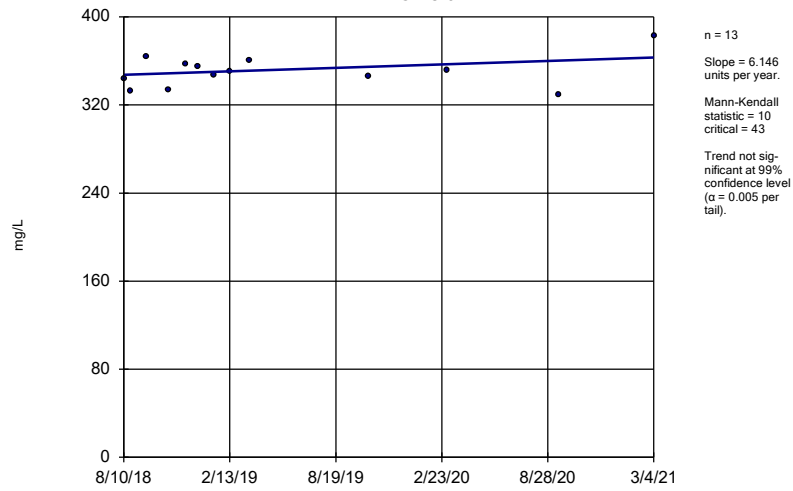


n = 13  
 Slope = -132.5  
 units per year.  
 Mann-Kendall  
 statistic = -40  
 critical = -43  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Sen's Slope Estimator

BRGWC-52I



Constituent: Total Dissolved Solids [TDS] Analysis Run 4/21/2021 2:39 PM View: All Trend  
Plant Branch Client: Southern Company Data: Plant Branch AP

FIGURE F.

# Upper Tolerance Limits

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/21/2021, 2:47 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.012	112	n/a	81.25	n/a	0.003199	NP Inter(NDs)
Arsenic (mg/L)	0.005	112	n/a	74.11	n/a	0.003199	NP Inter(normality)
Barium (mg/L)	0.13	112	n/a	0	n/a	0.003199	NP Inter(normality)
Beryllium (mg/L)	0.0005	112	n/a	100	n/a	0.003199	NP Inter(NDs)
Cadmium (mg/L)	0.0005	114	n/a	98.25	n/a	0.002887	NP Inter(NDs)
Chromium (mg/L)	0.016	112	n/a	19.64	n/a	0.003199	NP Inter(normality)
Cobalt (mg/L)	0.0135	112	n/a	56.25	n/a	0.003199	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	1.646	112	0.4476	0	No	0.05	Inter
Fluoride (mg/L)	0.42	120	n/a	50	n/a	0.002122	NP Inter(normality)
Lead (mg/L)	0.0013	112	n/a	83.93	n/a	0.003199	NP Inter(NDs)
Lithium (mg/L)	0.089	112	n/a	39.29	n/a	0.003199	NP Inter(normality)
Mercury (mg/L)	0.00021	96	n/a	92.71	n/a	0.007269	NP Inter(NDs)
Molybdenum (mg/L)	0.01	109	n/a	78.9	n/a	0.003731	NP Inter(NDs)
Selenium (mg/L)	0.006	112	n/a	91.07	n/a	0.003199	NP Inter(NDs)
Thallium (mg/L)	0.001	112	n/a	100	n/a	0.003199	NP Inter(NDs)

FIGURE G.



<b>PLANT BRANCH PONDS B,C,D GWPS</b>			
<b>Constituent Name</b>	<b>MCL</b>	<b>Background Limit</b>	<b>GWPS</b>
Antimony, Total (mg/L)	0.006	0.012	0.012
Arsenic, Total (mg/L)	0.01	0.005	0.01
Barium, Total (mg/L)	2	0.13	2
Beryllium, Total (mg/L)	0.004	0.0005	0.004
Cadmium, Total (mg/L)	0.005	0.0005	0.005
Chromium, Total (mg/L)	0.1	0.016	0.1
Cobalt, Total (mg/L)	n/a	0.014	0.014
Combined Radium, Total (pCi/L)	5	1.65	5
Fluoride, Total (mg/L)	4	0.42	4
Lead, Total (mg/L)	n/a	0.0013	0.0013
Lithium, Total (mg/L)	n/a	0.089	0.089
Mercury, Total (mg/L)	0.002	0.00021	0.002
Molybdenum, Total (mg/L)	n/a	0.01	0.01
Selenium, Total (mg/L)	0.05	0.006	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

*\*Highlighted cells indicate Background is higher than MCLs*

*\*MCL = Maximum Contaminant Level*

*\*GWPS = Groundwater Protection Standard*

FIGURE H.

# Confidence Interval Summary Table - Significant Results

Plant Branch Client: Southern Company Data: Plant Branch AP Printed 4/22/2021, 11:40 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cadmium (mg/L)	BRGWC-50	0.04553	0.01408	0.005	Yes	14	0	sqrt(x)	0.01	Param.
Cobalt (mg/L)	BRGWC-50	1.5	1.3	0.014	Yes	14	0	No	0.01	NP (normality)
Cobalt (mg/L)	PZ-51I	0.041	0.017	0.014	Yes	7	0	No	0.008	NP (normality)

# Confidence Interval Summary Table - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/22/2021, 11:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	BRGWC-29I	0.003	0.0007	0.012	No	14	92.86	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-32S	0.003	0.0014	0.012	No	14	92.86	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-45	0.0031	0.0012	0.012	No	15	53.33	No	0.01	NP (normality)
Antimony (mg/L)	BRGWC-47	0.003	0.00035	0.012	No	15	93.33	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-50	0.003	0.00092	0.012	No	14	78.57	No	0.01	NP (NDs)
Antimony (mg/L)	BRGWC-52I	0.003	0.00091	0.012	No	14	78.57	No	0.01	NP (NDs)
Antimony (mg/L)	PZ-51I	0.003	0.00079	0.012	No	5	60	No	0.031	NP (normality)
Antimony (mg/L)	PZ-51S	0.003	0.00043	0.012	No	5	60	No	0.031	NP (normality)
Arsenic (mg/L)	BRGWC-25I	0.005	0.00072	0.01	No	14	71.43	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-27I	0.005	0.0011	0.01	No	14	71.43	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-29I	0.005	0.00065	0.01	No	14	50	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-30I	0.005	0.00056	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-32S	0.005	0.00053	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-45	0.005	0.00075	0.01	No	15	66.67	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-47	0.005	0.00089	0.01	No	15	40	No	0.01	NP (normality)
Arsenic (mg/L)	BRGWC-50	0.005	0.0014	0.01	No	14	78.57	No	0.01	NP (NDs)
Arsenic (mg/L)	BRGWC-52I	0.003445	0.001758	0.01	No	14	28.57	No	0.01	Param.
Barium (mg/L)	BRGWC-25I	0.03715	0.02734	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-27I	0.01715	0.01522	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-29I	0.01967	0.01696	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-30I	0.02576	0.02164	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-32S	0.04526	0.02906	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-45	0.09774	0.07893	2	No	15	0	No	0.01	Param.
Barium (mg/L)	BRGWC-47	0.04477	0.03469	2	No	15	0	No	0.01	Param.
Barium (mg/L)	BRGWC-50	0.02172	0.01871	2	No	14	0	No	0.01	Param.
Barium (mg/L)	BRGWC-52I	0.02677	0.0168	2	No	14	0	No	0.01	Param.
Barium (mg/L)	PZ-51I	0.01765	0.01235	2	No	5	0	No	0.01	Param.
Barium (mg/L)	PZ-51S	0.03713	0.02807	2	No	5	0	No	0.01	Param.
Beryllium (mg/L)	BRGWC-27I	0.0005	0.0001	0.004	No	15	20	No	0.01	NP (normality)
Beryllium (mg/L)	BRGWC-29I	0.001074	0.0007185	0.004	No	14	7.143	No	0.01	Param.
Beryllium (mg/L)	BRGWC-45	0.0005	0.000079	0.004	No	16	87.5	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-47	0.0005	0.000056	0.004	No	15	80	No	0.01	NP (NDs)
Beryllium (mg/L)	BRGWC-50	0.004768	0.002275	0.004	No	14	14.29	No	0.01	Param.
Beryllium (mg/L)	PZ-51I	0.0005	0.000064	0.004	No	5	20	No	0.031	NP (normality)
Cadmium (mg/L)	BRGWC-27I	0.0005	0.00009	0.005	No	15	86.67	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-30I	0.0005	0.00008	0.005	No	15	93.33	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-32S	0.0005	0.00011	0.005	No	15	80	No	0.01	NP (NDs)
Cadmium (mg/L)	BRGWC-45	0.0005	0.00014	0.005	No	16	75	No	0.01	NP (normality)
Cadmium (mg/L)	BRGWC-47	0.0005	0.00015	0.005	No	15	40	No	0.01	NP (normality)
<b>Cadmium (mg/L)</b>	<b>BRGWC-50</b>	<b>0.04553</b>	<b>0.01408</b>	<b>0.005</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>sqrt(x)</b>	<b>0.01</b>	<b>Param.</b>
Cadmium (mg/L)	PZ-51I	0.02039	0.0003353	0.005	No	7	0	x^(1/3)	0.01	Param.
Chromium (mg/L)	BRGWC-25I	0.005	0.0016	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-27I	0.005	0.003	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-29I	0.02	0.005	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-30I	0.0051	0.005	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-32S	0.005	0.0012	0.1	No	14	35.71	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-45	0.005	0.0014	0.1	No	15	80	No	0.01	NP (NDs)
Chromium (mg/L)	BRGWC-47	0.005	0.00092	0.1	No	15	73.33	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-50	0.005	0.00071	0.1	No	14	50	No	0.01	NP (normality)
Chromium (mg/L)	BRGWC-52I	0.005	0.0017	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	PZ-51I	0.005	0.0008	0.1	No	5	60	No	0.031	NP (normality)
Chromium (mg/L)	PZ-51S	0.005	0.00042	0.1	No	5	60	No	0.031	NP (normality)
Cobalt (mg/L)	BRGWC-25I	0.007178	0.004264	0.014	No	14	7.143	No	0.01	Param.
Cobalt (mg/L)	BRGWC-27I	0.01116	0.008169	0.014	No	15	0	No	0.01	Param.
Cobalt (mg/L)	BRGWC-29I	0.01048	0.00646	0.014	No	14	7.143	No	0.01	Param.
Cobalt (mg/L)	BRGWC-30I	0.005	0.00078	0.014	No	15	20	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-32S	0.005	0.0025	0.014	No	15	86.67	No	0.01	NP (NDs)
Cobalt (mg/L)	BRGWC-45	0.0162	0.0064	0.014	No	16	0	No	0.01	NP (normality)
Cobalt (mg/L)	BRGWC-47	0.003658	0.0006857	0.014	No	15	6.667	x^(1/3)	0.01	Param.
<b>Cobalt (mg/L)</b>	<b>BRGWC-50</b>	<b>1.5</b>	<b>1.3</b>	<b>0.014</b>	<b>Yes</b>	<b>14</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>NP (normality)</b>
Cobalt (mg/L)	BRGWC-52I	0.005	0.0012	0.014	No	14	50	No	0.01	NP (normality)
<b>Cobalt (mg/L)</b>	<b>PZ-51I</b>	<b>0.041</b>	<b>0.017</b>	<b>0.014</b>	<b>Yes</b>	<b>7</b>	<b>0</b>	<b>No</b>	<b>0.008</b>	<b>NP (normality)</b>
Cobalt (mg/L)	PZ-51S	0.008517	0.003983	0.014	No	6	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-25I	1.169	0.5947	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-27I	1.177	0.5792	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-29I	1.656	1.17	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-30I	1.162	0.6073	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-32S	1.111	0.4399	5	No	14	0	No	0.01	Param.

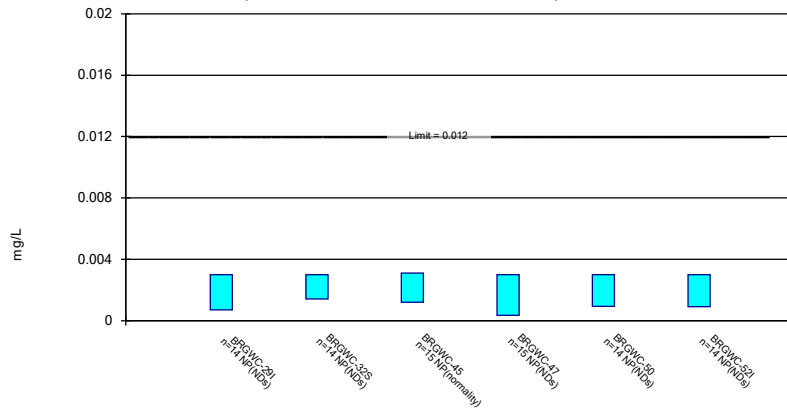
# Confidence Interval Summary Table - All Results

Plant Branch    Client: Southern Company    Data: Plant Branch AP    Printed 4/22/2021, 11:40 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Combined Radium 226 + 228 (pCi/L)	BRGWC-45	0.8333	0.3554	5	No	15	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-47	1.489	0.858	5	No	15	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-50	2.004	1.181	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BRGWC-52I	2.139	1.351	5	No	14	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	PZ-51I	11.7	0.937	5	No	5	0	No	0.031	NP (normality)
Combined Radium 226 + 228 (pCi/L)	PZ-51S	17.1	0.599	5	No	5	0	No	0.031	NP (normality)
Fluoride (mg/L)	BRGWC-25I	0.2698	0.127	4	No	15	6.667	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-27I	0.2757	0.1502	4	No	15	13.33	No	0.01	Param.
Fluoride (mg/L)	BRGWC-29I	0.2414	0.09354	4	No	15	13.33	ln(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-30I	0.3868	0.1302	4	No	15	6.667	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-32S	0.11	0.09	4	No	15	60	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-45	0.19	0.067	4	No	16	56.25	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-47	0.48	0.076	4	No	16	43.75	No	0.01	NP (normality)
Fluoride (mg/L)	BRGWC-50	0.8957	0.3324	4	No	15	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BRGWC-52I	0.2502	0.1321	4	No	14	7.143	No	0.01	Param.
Fluoride (mg/L)	PZ-51I	0.1	0.061	4	No	6	83.33	No	0.0155	NP (NDs)
Fluoride (mg/L)	PZ-51S	0.1332	0.0352	4	No	5	0	No	0.01	Param.
Lead (mg/L)	BRGWC-25I	0.001	0.00011	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-27I	0.001	0.00063	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-29I	0.0004591	0.0002898	0.0013	No	13	0	sqrt(x)	0.01	Param.
Lead (mg/L)	BRGWC-30I	0.001	0.00011	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-45	0.001	0.00026	0.0013	No	15	80	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-47	0.001	0.00012	0.0013	No	15	80	No	0.01	NP (NDs)
Lead (mg/L)	BRGWC-50	0.001	0.00085	0.0013	No	14	42.86	No	0.01	NP (normality)
Lead (mg/L)	BRGWC-52I	0.001	0.000042	0.0013	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	PZ-51I	0.001	0.00017	0.0013	No	5	60	No	0.031	NP (normality)
Lithium (mg/L)	BRGWC-27I	0.0021	0.0014	0.089	No	14	14.29	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-29I	0.003732	0.003096	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-30I	0.01504	0.01154	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-32S	0.015	0.002	0.089	No	14	14.29	No	0.01	NP (normality)
Lithium (mg/L)	BRGWC-45	0.003616	0.00307	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-47	0.04413	0.04046	0.089	No	15	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-50	0.04481	0.03805	0.089	No	14	0	No	0.01	Param.
Lithium (mg/L)	BRGWC-52I	0.007388	0.003111	0.089	No	14	7.143	sqrt(x)	0.01	Param.
Lithium (mg/L)	PZ-51I	0.026	0.019	0.089	No	5	0	No	0.031	NP (normality)
Lithium (mg/L)	PZ-51S	0.015	0.0012	0.089	No	5	80	No	0.031	NP (NDs)
Mercury (mg/L)	BRGWC-25I	0.0002	0.000083	0.002	No	12	83.33	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-27I	0.0002	0.00005	0.002	No	12	83.33	No	0.01	NP (NDs)
Mercury (mg/L)	BRGWC-29I	0.0002	0.00007	0.002	No	12	75	No	0.01	NP (normality)
Mercury (mg/L)	BRGWC-30I	0.0002	0.00007	0.002	No	12	75	No	0.01	NP (normality)
Mercury (mg/L)	BRGWC-32S	0.0002	0.00009	0.002	No	12	75	No	0.01	NP (normality)
Mercury (mg/L)	PZ-51I	0.0002	0.000099	0.002	No	5	80	No	0.031	NP (NDs)
Molybdenum (mg/L)	BRGWC-25I	0.01	0.00081	0.01	No	13	76.92	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-30I	0.01	0.0022	0.01	No	13	84.62	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-45	0.01	0.00076	0.01	No	14	92.86	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-50	0.01	0.0033	0.01	No	13	84.62	No	0.01	NP (NDs)
Molybdenum (mg/L)	BRGWC-52I	0.01	0.001	0.01	No	13	38.46	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-25I	0.005	0.0021	0.05	No	14	92.86	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-27I	0.003864	0.002296	0.05	No	14	21.43	No	0.01	Param.
Selenium (mg/L)	BRGWC-29I	0.0058	0.0042	0.05	No	14	50	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-30I	0.005	0.0038	0.05	No	14	71.43	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-32S	0.1	0.0019	0.05	No	15	26.67	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-45	0.005	0.0029	0.05	No	15	93.33	No	0.01	NP (NDs)
Selenium (mg/L)	BRGWC-47	0.005	0.0017	0.05	No	15	60	No	0.01	NP (normality)
Selenium (mg/L)	BRGWC-50	0.005	0.002	0.05	No	14	50	No	0.01	NP (normality)
Thallium (mg/L)	BRGWC-29I	0.0002	0.00016	0.002	No	13	0	No	0.01	NP (normality)

### Non-Parametric Confidence Interval

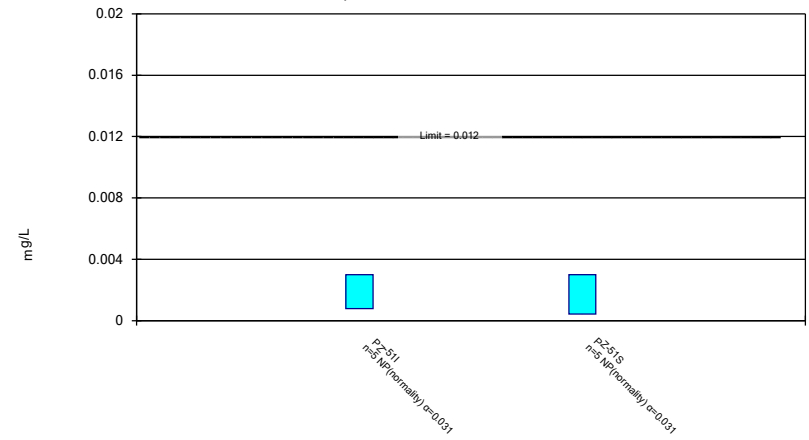
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

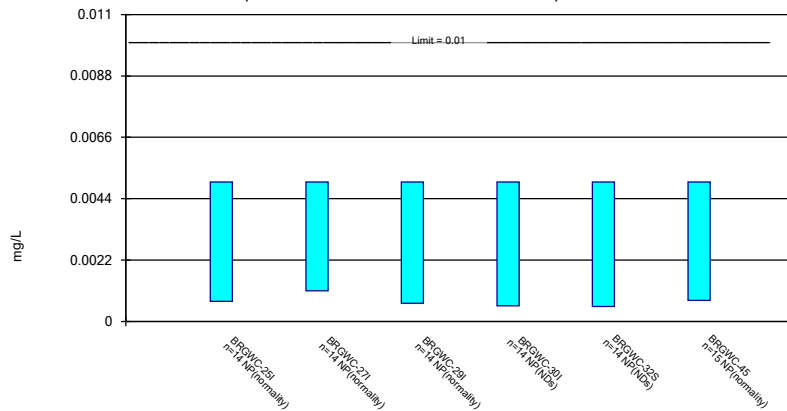
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

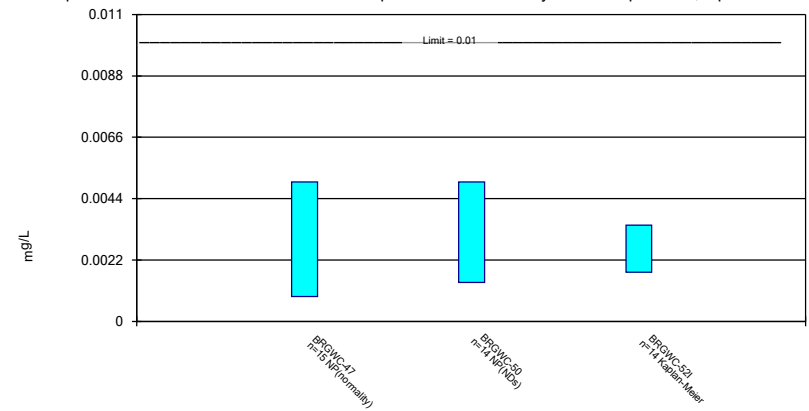
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

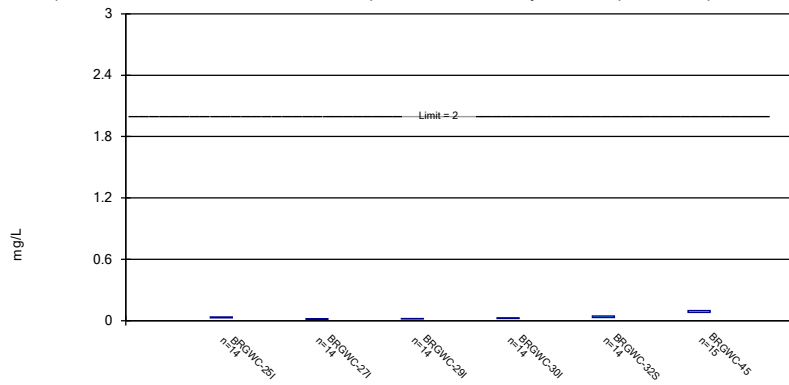
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric Confidence Interval

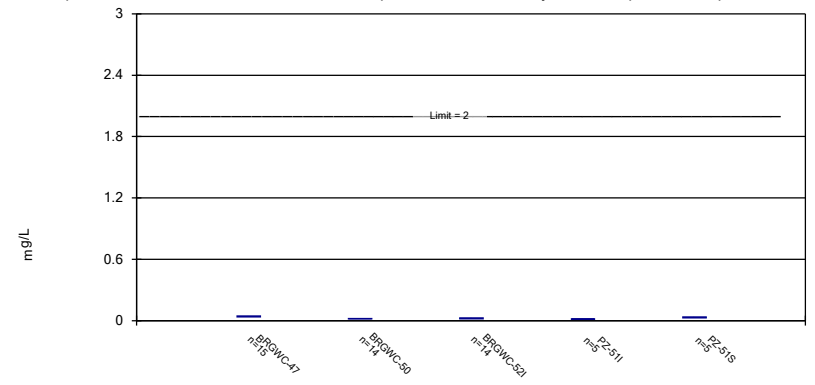
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 4/22/2021 11:38 AM View: AIV  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric Confidence Interval

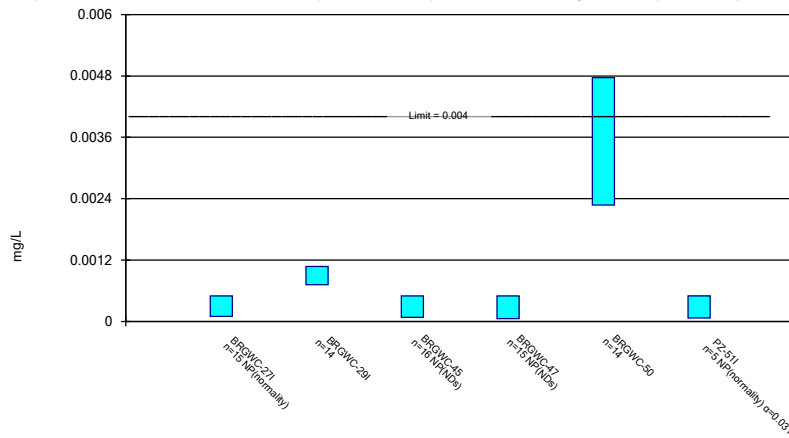
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Constituent: Barium Analysis Run 4/22/2021 11:38 AM View: AIV  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

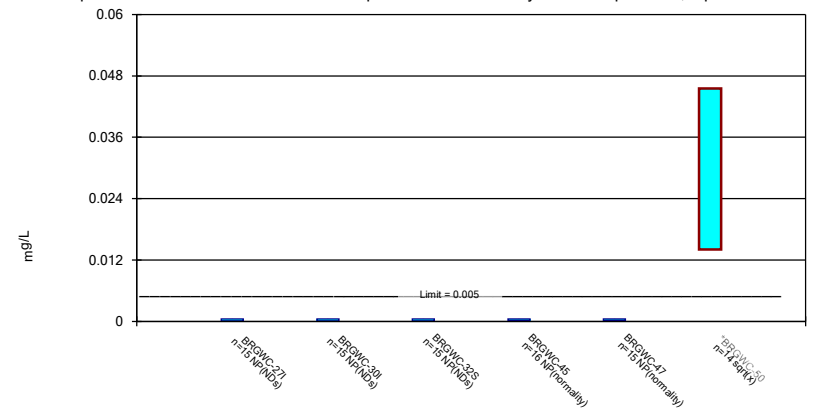
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 4/22/2021 11:38 AM View: AIV  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

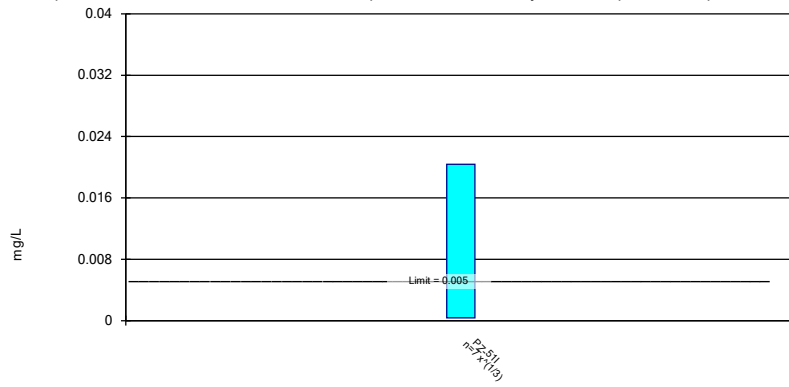
Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 4/22/2021 11:38 AM View: AIV  
 Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric Confidence Interval

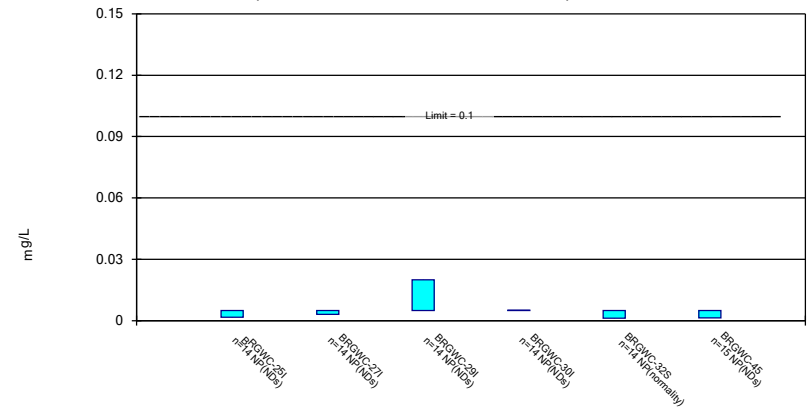
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

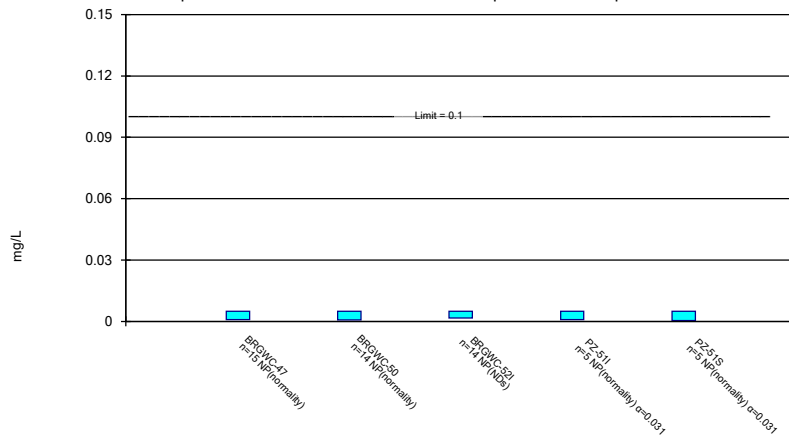
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

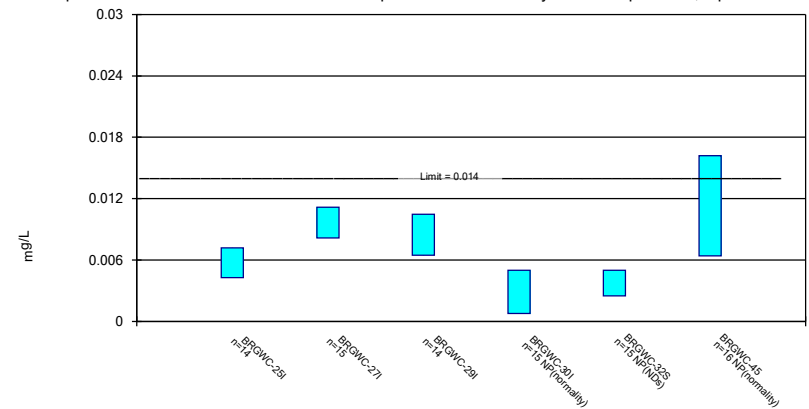
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

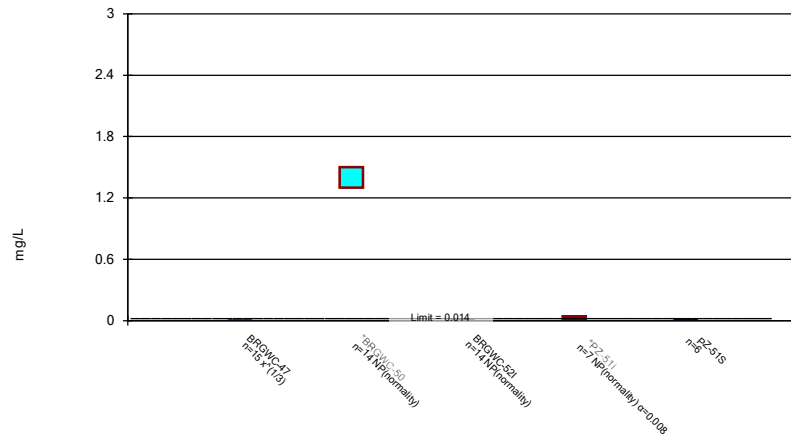


Constituent: Cobalt Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP



### Parametric and Non-Parametric (NP) Confidence Interval

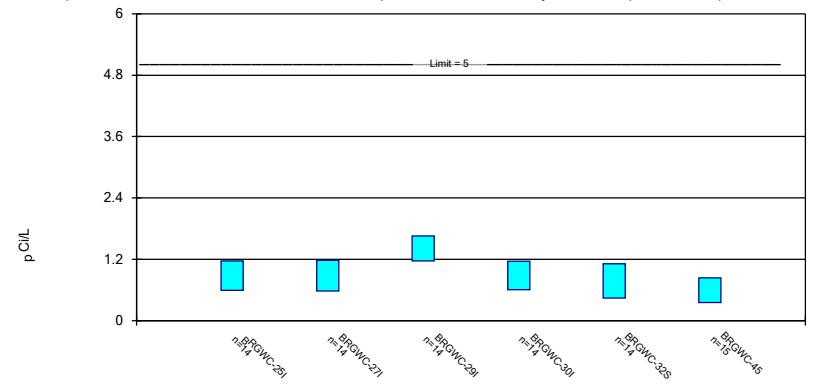
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 4/22/2021 11:38 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric Confidence Interval

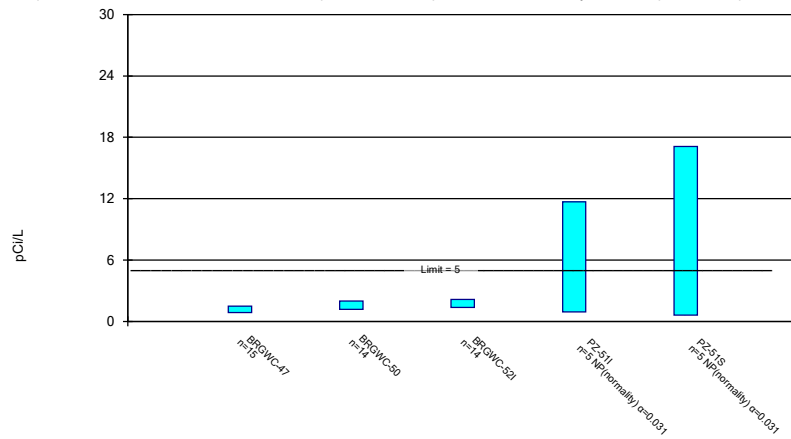
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Constituent: Combined Radium 226 + 228 Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

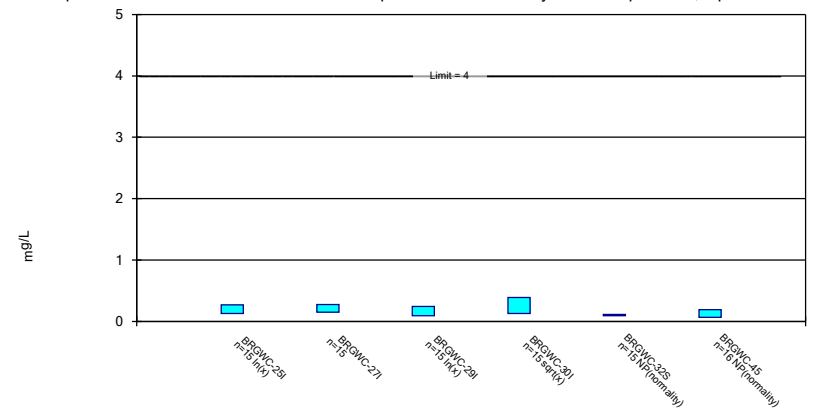
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

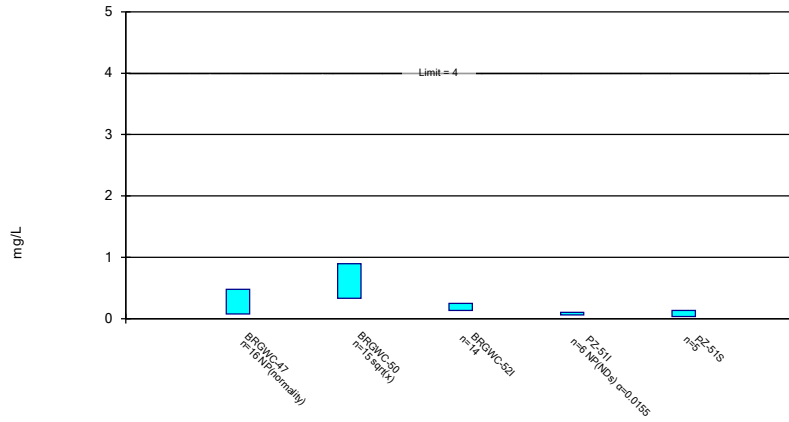
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Constituent: Fluoride Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

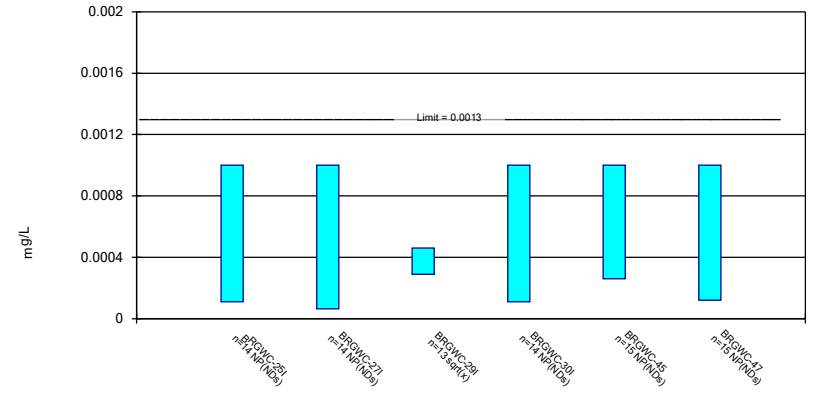
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

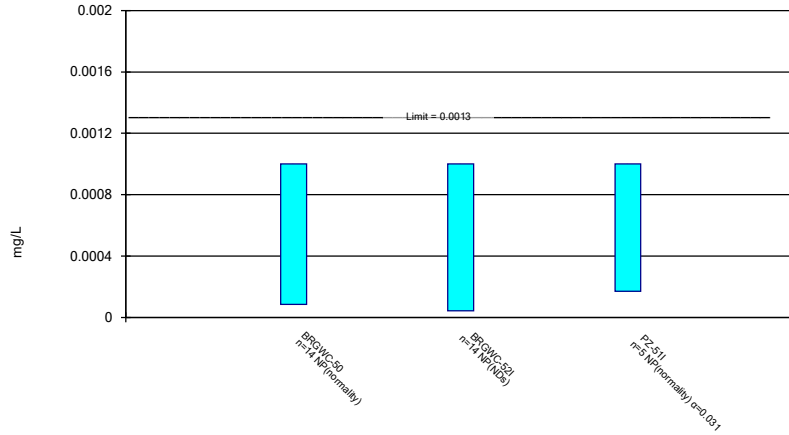
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Constituent: Lead Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

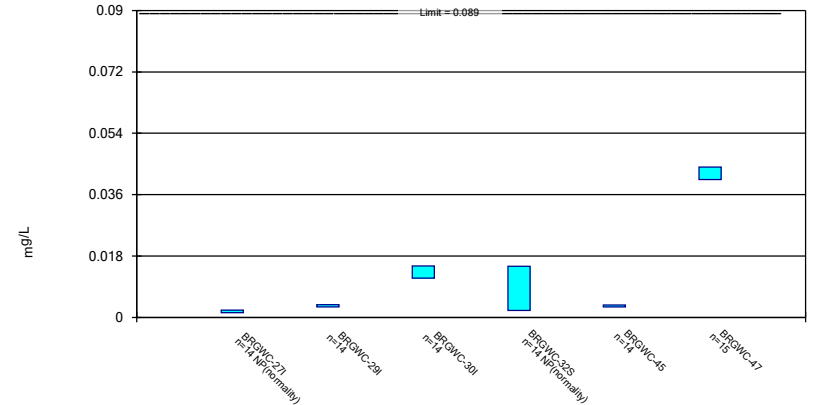
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

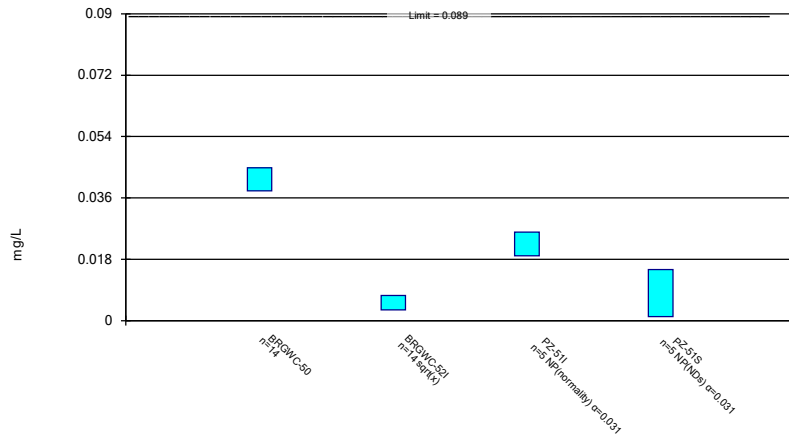
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Constituent: Lithium Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

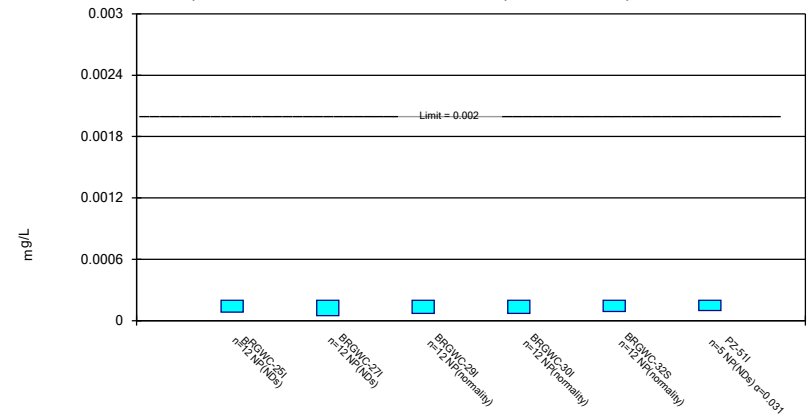
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Constituent: Lithium Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

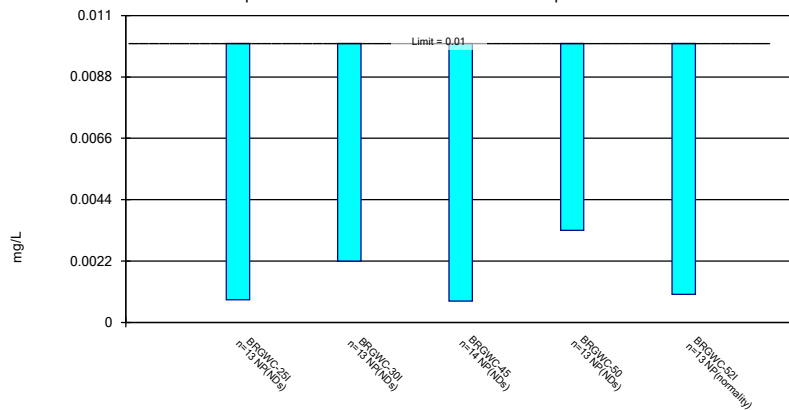
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Mercury Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

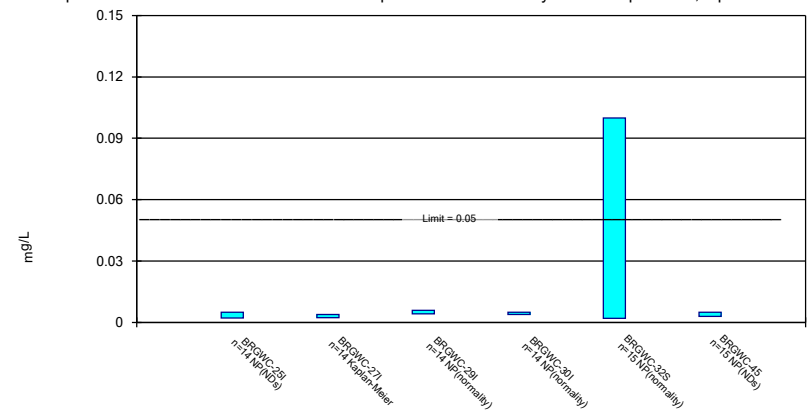
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Molybdenum Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Parametric and Non-Parametric (NP) Confidence Interval

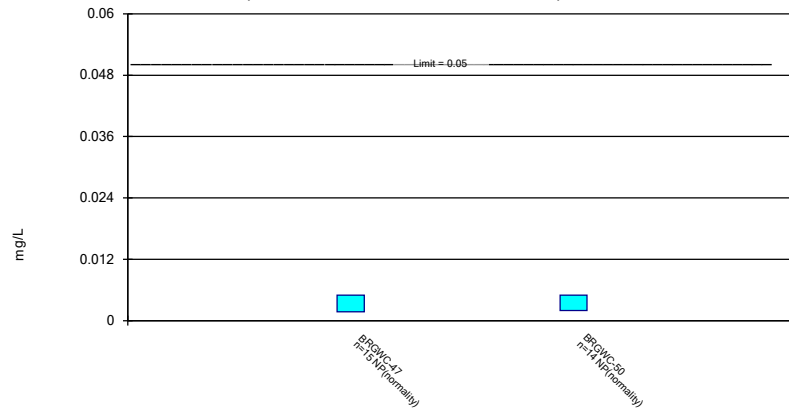
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 4/22/2021 11:39 AM View: AIV  
Plant Branch Client: Southern Company Data: Plant Branch AP

**APPENDIX D**

**SEMI-ANNUAL REMEDY  
SELECTION AND  
DESIGN PROGRESS  
REPORT**



**REPORT**

# Semi-Annual Remedy Selection and Design Progress Report

*Plant Branch Ash Ponds B, C, and D*

Submitted to:

**Georgia Power Company**

241 Ralph McGill Boulevard, Atlanta, Georgia 30308

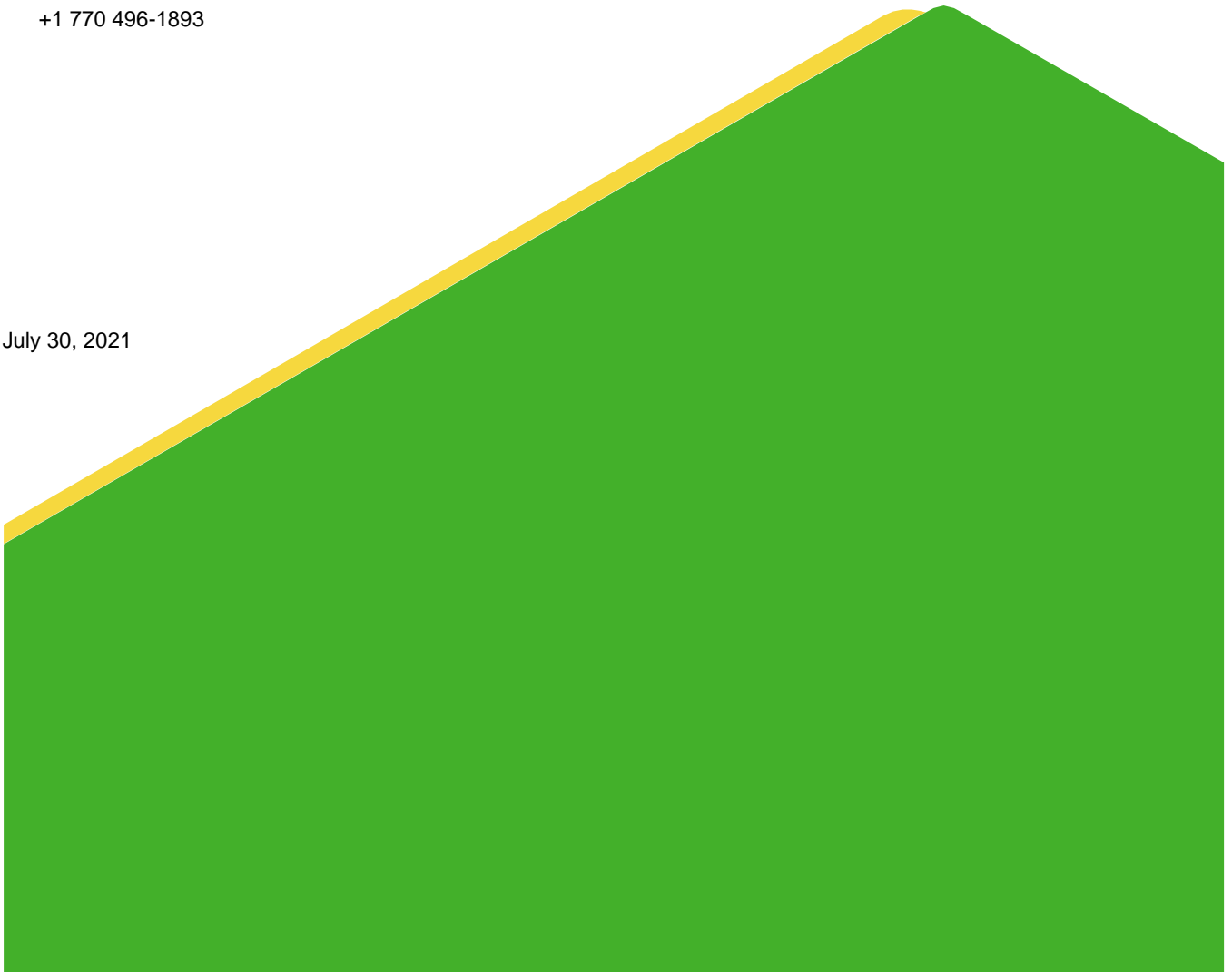
Submitted by:

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July 30, 2021



## Table of Contents

<b>1.0 INTRODUCTION</b>	<b>4</b>
<b>2.0 POND CLOSURE ACTIVITIES</b>	<b>6</b>
<b>3.0 SUMMARY OF RECENT WORK COMPLETED</b>	<b>6</b>
3.1 Nature and Extent Delineation	7
3.2 Supplemental Data Collection	8
<b>4.0 UPDATED SITE CONCEPTUAL SITE MODEL</b>	<b>10</b>
<b>5.0 CORRECTIVE MEASURES ALTERNATIVES</b>	<b>10</b>
<b>6.0 PLANNED ACTIVITIES AND ANTICIPATED SCHEDULE</b>	<b>12</b>
<b>7.0 REFERENCES</b>	<b>13</b>

## TABLES

Table 1:	Evaluation of Remedial Technologies – AP-BCD
Table 2:	Summary of Monitoring Well, Assessment and Piezometer Construction
Table 3:	Analytical Data Summary – AP-BCD (March and April 2021)
Table 4:	Analytical Data Summary – Soil Samples AP-BCD (March 2021)
Table 5:	Summary of Aquifer Test Data – AP-BCD
Table 6:	Proposed ACM Supplementary Data Collection Tasks for 2021 – AP-BCD

## FIGURES

Figure 1:	Site Location Map
Figure 2:	Monitoring Well, Piezometer and Surface Water Location Map
Figure 3:	Potentiometric Surface Elevation Contour Map – March 2021
Figure 4:	Cadmium Isoconcentration Contour Map Pond BCD – March 2021 and April 2021
Figure 5:	Cobalt Isoconcentration Contour Map Pond BCD – March 2021 and April 2021
Figure 6:	Soil Boring Location Map

## APPENDICES

Appendix A: Soil Sample Laboratory Analytical Results, Sequential Extraction Procedure Results, Groundwater Analytical Results, Aquifer Testing Results, and Porewater Laboratory Analytical Results



## Signature

This *Semi-Annual Remedy Selection and Design Progress Report, Georgia Power Company – Plant Branch Ash Pond B, C, and D (AP-BCD)*, has been prepared in accordance with the United States Environmental Protection Agency coal combustion residual rule, specifically 40 Code of Federal (CFR) 227.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 341-3-4-.10(6)(a).

### Golder Associates Inc.



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## 1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (US EPA) coal combustion residuals (CCR) rule [40 Code of Federal Regulations (CFR) 257 Subpart D]; published in 80 FR 21302-21501, April 17, 2015 (CCR Rule; EPA, 2015), Golder Associates Inc. (Golder) has prepared this *Semi-Annual Remedy Selection and Design Progress Report* (Semi-Annual Progress Report) for Georgia Power Company (Georgia Power) Plant Branch Ash Ponds B, C, and D (AP-BCD or Site). Specifically, this Semi-Annual Progress Report has been prepared pursuant to 40 CFR § 257.97(a) and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). For ease of reference, the US EPA CCR rule is cited within this report.

Plant Branch formerly operated as a coal-fired power plant since the 1960s until its retirement in 2015. Plant Branch is no longer active and is decommissioned. A site location map is included as Figure 1. Because Plant Branch ceased producing electricity prior to April 2015, AP-BCD is not subject to the US EPA CCR Rule.

Pursuant to § 257.96, Georgia Power initiated an Assessment of Corrective Measures (ACM) for AP-BCD on July 9, 2020, to address the occurrence of cadmium (Cd) and cobalt (Co) in groundwater at statistically significant levels (SSLs). Subsequently, Georgia Power completed an ACM report on December 4, 2020, and posted it to the CCR compliance website in January 2021 (Golder, 2020a).

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate constituents that are present at SSLs in groundwater (i.e., Cd and Co) at AP-BCD. The evaluation provides one of many lines of evidence that will be evaluated and factored into the remedy selection process, which will be completed in accordance with § 257.97. Based on this risk evaluation, concentrations of constituents detected in groundwater at AP-BCD between August 2016 and March 2020 are not expected to pose a risk to human health or the environment (Geosyntec, 2020). Cobalt and cadmium data collected since March 2020 are consistent with data used in the risk evaluation; therefore, the conclusions provided in the 2020 Risk Evaluation Report are supported by current conditions.

Pursuant to 40 CFR 257.97, Georgia Power is evaluating the potential corrective measures presented in the ACM report to identify a remedy or combination of remedies as soon as possible. The following corrective measures are potentially feasible for use at AP-BCD:

- Geochemical Approaches (In-Situ Injection)
- Hydraulic Containment (Pump and Treat)
- In-Situ Solidification/Stabilization (ISSS)
- Monitored Natural Attenuation (MNA)
- Permeable Reactive Barrier (PRB)
- Phytoremediation
- Subsurface Vertical Barrier Walls.

A comparative screening of the corrective measures as presented in the ACM report is provided in Table 1. As required by the rules, this Semi-Annual Progress Report describes the progress made in selecting and designing a remedy.

The following remedial alternatives were not retained for further evaluation.

- **In-Situ Solidification/Stabilization (ISSS):** In-situ stabilization is a technique that uses mixing of the CCR with additives to solidify the material in place and reduce future dissolution of CCR compounds from the stabilized material. This option is not retained for further analysis because AP-BCD will be closed by removal.
- **Permeable Reactive Barrier (PRB):** PRB technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. PRB walls are typically keyed into the bedrock with a zero valent iron (ZVI)-Carbon matrix or solid carbon (bio-barrier) that are most viable for the removal of Co and Cd. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. Additionally, because there is limited space available downgradient of wells where SSL exceedances exist, PRB has been removed from further consideration.
- **Phytoremediation:** Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-BCD, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. Due to the depth of groundwater and the limited physical space for installation of a phytoremediation system between the AP-BCD and the adjacent surface water bodies, phytoremediation has been removed from consideration for groundwater corrective action at AP-BCD.
- **Subsurface Vertical Barrier Walls:** 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. Though highly effective, vertical barrier walls may serve as groundwater dams, so mounding of groundwater behind barrier walls, or flow of groundwater around the ends of barrier walls, should be considered in corrective action design. Because AP-BCD will be closed by removal and thus would remove the source and any future migration from the source, the vertical barrier is not a suitable option at the site. In addition, there is limited space available for a barrier wall downgradient of wells where SSL exceedances exist, this option has been removed from further consideration.

The following options are retained for further evaluation.

- **Geochemical Approaches (In-Situ Injection):** This approach uses of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Cd and Co. A targeted injection layout may result in decreased concentrations of Co and Cd in groundwater below the Groundwater Protection Standards (GWPS). As such, this option is retained for further evaluation.

- **Hydraulic Containment (Pump and Treat):** 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, coal combustion residual (CCR) conditioning, etc.]. Pump and Treat (P&T) is a potentially viable interim corrective measure for Co and Cd in groundwater at Plant Branch AP-BCD and will be retained for further evaluation.
- **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. Therefore, MNA is a potentially viable corrective measure for Co and Cd in groundwater at Plant Branch AP-BCD and will be retained for further evaluation.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Golder 2020a) to support the groundwater remedy selection process and address potential changes in site conditions as appropriate during the ash pond closure. The adaptive site management approach will take existing site conditions, including natural attenuation mechanisms, into account. Characterization activities to evaluate attenuation mechanisms at the site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the US EPA guidelines for MNA (USEPA 2007, 2015). In 2007, the USEPA issued MNA technical guidance specific to inorganic contaminants (USEPA, 2007) that contained four “tiers.” The 2015 MNA guidance retains these four “tiers,” but describes them as “phases” as described below (USEPA, 2015). This 2015 MNA document for inorganic contaminants expands on and is designed to be a companion to the 1999 MNA guidance, summarized below.

Phase I: Demonstration that the groundwater plume is not expanding.

Phase II: Determination that the mechanism and rate of the attenuation process are sufficient.

Phase III: Determination that the capacity of the aquifer is sufficient to attenuate the mass of contaminant within the plume and the stability of the immobilized contaminant is sufficient to resist re-mobilization.

Phase IV: Design of a performance monitoring program based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Georgia Power will address Phase IV as appropriate during the development of the future corrective action monitoring plan, after the final remedy selection report.

## 2.0 POND CLOSURE ACTIVITIES

Georgia Power retired Plant Branch in 2015 and began closure activities. Plant Branch will remove ash from four ash ponds (Ponds B, C, D, and E) and consolidate the ash in a new, lined onsite landfill. The closure of the AP-BCD 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 semi-annual progress report are being evaluated to address SSLs in groundwater at the waste boundary.

### 3.0 SUMMARY OF RECENT WORK COMPLETED

The following section summarizes a series of field investigation activities and supplemental data collected since the previous *Semi-Annual Remedy Selection Progress Report* (Golder 2021a) in support of site characterization and delineation of Appendix IV SSLs, as well as evaluation of the corrective measures presented in the ACM Report. These data will be used to evaluate the feasibility, mechanisms, rates, and stability of identified remedial alternatives including MNA as a corrective action for groundwater impacts from AP-BCD.

#### 3.1 Nature and Extent Delineation

CCR compliance groundwater monitoring-related activities have been performed for AP-BCD since September 2016 pursuant to the CCR rule. Georgia Power initiated an assessment monitoring program in November 2019 after identifying statistically significant increases (SSIs) of Appendix III parameters in groundwater. Pursuant to § 257.95, samples were collected from the compliance monitoring wells as shown on Figure 2 and analyzed for Appendix IV constituents.

The June 2020 through July 2021 assessment monitoring groundwater data show SSLs of state and/or federal GWPS for Cd and Co, as presented below. Details are provided in the 2021 *Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2021b). The fourth sampling event for horizontal delineation well PZ-51I was completed in March 2021. Statistical analysis of the Appendix IV data indicates a Co SSL at PZ-51I.

AP-BCD Statistically Significant Level Exceedances	
AP-BCD Monitoring Network	Appendix IV Parameter
BRGWC-50	Cobalt, Cadmium
PZ-51I	Cobalt

The locations of the site monitoring wells and piezometers are shown on Figure 2. Table 2 provides a summary of construction details for each of the site wells and piezometers, respectively. Supporting details and documents (e.g., boring logs, well construction tables) have been previously submitted within separate well installation reports (Golder, 2020b; Golder, 2020c; Golder, 2021c). A potentiometric surface map illustrating the March 2021 potentiometric surface elevations is provided on Figure 3.

#### Horizontal and Vertical Delineation Well and Piezometer Installation

To characterize the nature and extent of SSLs for Cd and Co in BRGWC-50, two piezometers (PZ-50D and PZ-51D) were installed in October 2020 and four piezometers (PZ-57I, PZ-58I, PZ-60I, and PZ-61I) were installed in March 2021. Additionally, PZ-59I was installed in March 2021 to refine groundwater flow direction. Figure 2 shows the locations of the wells and piezometers. Figure 4 and Figure 5 present the isoconcentration contours of each of the constituents where SSLs have been observed.

Horizontal delineation wells installed in March 2021 were screened within the transitionally weathered rock (TWR), upgradient of BRGWC-50 (PZ-57I, PZ-58I, and PZ-60I) and downgradient of PZ-51I (PZ-61I) (Figure 2). An additional piezometer (PZ-59I) was installed upgradient of PZ-51I to characterize the groundwater flow conditions east of BRGWC-50 and upgradient of PZ-59I. Due to access limitations (overhead powerlines and proximity to Lake Sinclair), piezometers PZ-58I, PZ-59I, and PZ-61I were installed utilizing angled drilling techniques. Delineation piezometers PZ-57I, PZ-58I, PZ-60I, and PZ-61I are in the vicinity of BRGWC-50 and

downgradient of Ash Pond B. Piezometer PZ-59I is located side gradient of this flow path and will assist with refining the groundwater flow direction in this area. Georgia Power will continue to monitor the delineation wells and adaptively manage the Site as new data become available.

### Groundwater Sampling

In April 2021, groundwater samples were collected from delineation piezometers PZ-57I, PZ-58I, PZ-60I and PZ-61I, and analyzed for Appendix III constituents, targeted Appendix IV constituents (i.e., Cd and Co), and major cations/anions (e.g., bicarbonate/carbonate alkalinity, sodium, magnesium, and potassium). Appendix IV data from the four piezometers will be statistically analyzed once four sampling events are completed. PZ-61I was resampled in May 2021 and confirmed the initial results of boron and Co.

Groundwater samples were collected in March 2021 for major cations and anions from AP-BCD network, detection, and assessment wells (Golder 2021b), including iron, manganese, total alkalinity, bicarbonate/carbonate alkalinity, dissolved organic carbon, nitrate/nitrite, total hardness, potassium, sodium, and magnesium.

The results from delineation piezometers PZ-50D, PZ-51D, PZ-57I, PZ-58I, PZ-60I and PZ 61I show that Cd is delineated upgradient and downgradient in the area around BRGWC-50. Co is delineated downgradient of BRGWC-50 using data from surface water samples collected from Lake Sinclair. Based on data collected to date, there are no impacts to surface water by constituents with SSLs at AP-BCD at Plant Branch. Therefore, vertical and horizontal delineation of Cd and Co at well BRGWC-50 and PZ-51I is complete.

Results of these analyses are presented in the 2021 *Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2021b), and are included as Table 3.

## 3.2 Supplemental Data Collection

Additional field investigation activities and data analyses have been performed for evaluation of the retained options and evaluation of soil and aquifer for materials for possible remedial alternatives. A summary of these data is included below.

### Soil Sampling and Analysis

Five soil borings (B-10 through B-14), locations shown on Figure 6, were completed within the former laydown area upgradient of BRGWC-50 (a potential source of Cd and Co in groundwater at BRGWC-50) to further characterize soil chemistry. Soil borings were advanced using sonic drilling techniques, and soil samples were collected two feet above the groundwater surface at approximately 32 feet (ft) below ground surface (bgs). Soil samples from borings, in addition to the soil samples collected from piezometer installation of PZ-57I through PZ-61I, were analyzed for targeted Appendix IV constituents (i.e., Cd and Co). Soil sampling results indicate the presence of Co, at concentrations that range from 6.4 to 9.2 milligrams per kilogram (mg/kg), well within naturally occurring levels expected in soils and sediment (Smith and Huyck 1999). Cd concentrations in soil were below laboratory detection limits, which range from 0.076 to 0.091 mg/kg. Results of these analyses are presented in Table 4, and laboratory results included in Appendix A.

Chemical analysis of soils for total metals and Sequential Extraction Procedure (SEP) analysis were conducted for one solid sample (collected from PZ-51S) from AP-BCD. The seven-step SEP is defined by specific extraction steps based on a modified Tessier method (Tessier et al., 1979).



Additional chemical analyses of soils were conducted for three solid samples (collected from PZ-57I, PZ-60I and PZ-61I) from AP-BCD. The analyses consisted of total sulfur, sulfide, total inorganic carbon, acid producing potential, and quantitative x-ray diffraction (XRD) with Rietveld refinement. The purpose of the mineralogical analysis was to identify and quantify the crystalline mineral phases in each sample and acid producing potential of the soils. Results of these analyses are presented in Appendix A.

Sequential extraction results indicate that the samples from PZ-51S exhibit relatively high concentrations of aluminum and iron in SEP steps 3 and 4, at 1,800 and 6,610 mg/kg, respectively. The presence of aluminum and iron in soil is well understood to provide a mechanism of attenuation for other metals, such as Cd and Co. The soils also contained 0.015 mg/kg of Cd and 4.8 mg/kg of Co in the combined steps 3 and 4 of the SEP, which indicate these metals are present in a fraction that would indicate attenuation or that cadmium and cobalt are leaching to an environmentally available fraction from a non-environmentally available fraction (Steps 6 and 7) due to relatively low pH near wells BRGWC-50 and PZ-51I. The majority of Co, however, was present in SEP steps 6 and 7 (12.3 mg/kg). Cd was below the detection limits in SEP steps 6 or 7. The results indicate sufficient naturally occurring Co and Cd in soil to account for the concentrations detected in groundwater observed in the vicinity of BRGWC-50 and PZ-51I. Evaluation of these data as it relates to remedy selection alternatives is ongoing and will be presented in a future report(s).

### Aquifer Testing Activities

Aquifer tests (slug tests) were performed in February 2021 for piezometers PZ-50D, PZ-51S, PZ-51I, PZ-51D, and PB-10 by experienced Golder representatives. The purpose of the testing was to estimate the horizontal hydraulic conductivity and refine the subsurface hydraulic characteristics of aquifer materials near the SSL delineation area.

In-situ rising- and falling-head tests provide a quantitative estimate of horizontal hydraulic conductivity and a qualitative estimate of aquifer anisotropy in water-bearing units. The slug test data were analyzed using the mathematical solution by Bouwer and Rice (Bouwer and Rice, 1976 and 1989), which is applicable to fully or partially penetrating piezometers in unconfined or confined aquifers.

The computer software program AQTESOLV<sup>®</sup> was used to assist in the analysis and plotting of data. The best fit lines were initially calculated by the computer software and were then adjusted manually, where necessary. A summary of the aquifer testing data is presented in Table 5. These new data will be used to supplement existing hydraulic conductivity data. An updated understanding of aquifer properties, including conductivity, will help refine the conceptual site model (CSM), and support assessment of certain groundwater corrective measures, such as hydraulic containment, in-situ injections, or MNA.

A limited pumping test was performed at the site using BRGWC-50 as the pumping well in February 2021. Four surrounding piezometers were monitored as observation wells (PZ-50D, PZ-51S, PZ-51I, and PZ-51D) during the test. Depth to water measurements at the observation wells were collected with data logging pressure transducers. The objective of the pumping test was to estimate aquifer parameters, including storativity, and transmissivity. Data will be used to evaluate potential groundwater remedial alternatives at Plant Branch.

No influence from the pumping of BRGWC-50 was observed in observation wells. The maximum pumping rate of 2.5 gallons per minute (gpm) for the pump used (Proactive Mega Monsoon XL 2-inch Submersible Pump) was reached. The maximum drawdown observed in BRGWC-50 was approximately 4 feet, however pump malfunction limited the test to two separate pumping periods consisting of approximately one hour each. After the initial pump

malfunction and troubleshooting the equipment, the pump was lowered back into the well and the pumping test was resumed. The second set of pumping data were analyzed using the mathematical solution by Hantush and Jacob (Hantush and Jacob 1955) which is applicable to fully or partially penetrating piezometers in leaky confined aquifers. The computer software program AQTESOLV<sup>®</sup> was used to assist in the analysis and plotting of data.

Results of these analyses are presented in Appendix A. Evaluation of these data as it relates to remedy selection alternatives is incomplete, and additional testing may be performed in the future; data will be presented in a future report(s).

### Porewater Sampling

Two piezometers screened in CCR material, IW-B-1 and IW-B-2, were sampled for porewater from within AP-BCD and analyzed for Appendix III constituents, Appendix IV constituents, and cations and anions, in March 2021. These results of these analyses are presented in Appendix A.

Results from IW-B-1 and IW-B-2 indicate calcium carbonate-type water, as opposed to calcium sulfate-type water commonly associated with CCR groundwater. Neither porewater samples contained Cd or Co above the laboratory reporting limits, and both the samples had near-neutral field pH (6.86 and 7.15 standard units).

## 4.0 UPDATED SITE CONCEPTUAL SITE MODEL

The additional data collected since the issuance of the ACM Report (Golder, 2020a), and presented herein, together with new data evaluation tools (described above) and interpretations allow the development of a more refined CSM. The following bullets summarize the current understanding of the CSM within the context of evaluating groundwater corrective measure for AP-BCD. Data collected since submitting the ACM report is consisting with previous data (Geosyntec, 2020b). New data show the following:

- The March 2021 potentiometric surface for the uppermost aquifer shows groundwater flow generally to the east, south, and west from Ponds B, C, and D. The latest water level data collected in 2021 confirm groundwater flow in the uppermost aquifer to be consistent with the CSM. The additional aquifer data (e.g., slug tests) indicate hydraulic conductivity values consistent with those presented in the CSM.
- The site is underlain by biotite gneiss with a few isolated local mafic bodies within the gneiss. The boring logs from the horizontal delineation wells PZ-571 through PZ-611 confirm geology consistent with that presented in the CSM (i.e., transitionally weathered biotite gneiss). The borings PZ-581, PZ-591, and PZ-601 showed thin lenses (4 inches to 1.5 feet) of cobble fill material used to construct the dike for AP-B, between approximately 10 feet and 20 feet bgs from within the three borings.

## 5.0 CORRECTIVE MEASURES ALTERNATIVES

Based on the data collected to date, three of the seven potential corrective measures being evaluated for AP-BCD will be retained for further evaluation. Table 1 presents a summary of each of the remedial alternatives presented in the ACM Report (Golder 2020a). Table 6 provides a summary of additional data to be collected. The retention evaluation (not retained) for each potential remedial alternative is listed below and included on Table 1.

The following options are retained for further evaluation.

**Geochemical Approaches (In-Situ Injection):** This approach uses of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic



attenuation of Cd and Co. Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Cd. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co and Cd onto these mineral phases. A targeted injection layout may result in decreased concentrations of Co and Cd in groundwater below the GWPS. As such, this option is retained for further evaluation.

#### **Hydraulic Containment (Pump and Treat):**

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, coal combustion residual (CCR) conditioning, etc.]. It is applicable to a variable mix of inorganic constituents, including dissolved Co and Cd. During ash pond closure, there will be an on-site wastewater treatment plant that may be available for treatment of extracted groundwater. Therefore, P&T is a potentially viable interim corrective measure for Co and Cd in groundwater at Plant Branch AP-BCD and will be retained for further evaluation.

#### **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.

Given that groundwater conditions and/or statistical results are likely to be affected by closure and construction activities at AP-BCD, an adaptive site management approach will be used to address changes in groundwater conditions as a consequence of closure activities. Continued groundwater monitoring and updates to the statistical analyses will further refine the CSM and allow for the continued evaluation of appropriate groundwater corrective measures at the Site. This may include additional tests using the unconsolidated aquifer materials to further demonstrate the viability of MNA according to US EPA's phased approach for the use of MNA in groundwater.

The following options are not retained for further evaluation.

**PRB** – PRB technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater flow passes through the media. PRB walls are normally keyed into the bedrock. BRGWC-50 is located on the dike of AP-BCD and the depth to competent bedrock in this area is about 60 feet. Constructing a PRB wall along this dike will be difficult because of the depth to bedrock and effectively keying into competent bedrock. Also, there could be limited effectiveness of such a wall because of divergence of groundwater flow paths through the partially weathered rock above competent bedrock and the potential for biofouling and mineral precipitation, which reduce the effectiveness of media over time and can increase the amount of maintenance needed for media changeouts. Further, there is lack of available space between the AP-BCD dike and Lake Sinclair for an effective installation and functioning of a PRB wall. Because AP-BCD will be closed by removal of CCR material to a lined-landfill, the retained options are more suitable for corrective action rather than the installation of a PRB. For these reasons, PRB wall option has been removed from consideration.

**Phytoremediation** – Phytoremediation is the use of plants to degrade, immobilize, or contain constituents in soil, groundwater, surface water, and sediments. Due to the required space for proper growth and the limited space, a TreeWell® system would be the only feasible option for this remedial alternative. However, due to the depth of groundwater and the limited physical space for installation of a phytoremediation system between the AP-BCD and the adjacent surface water bodies, phytoremediation has been removed from consideration for groundwater corrective action at AP-BCD.

**Subsurface Vertical Barrier Walls** – Physical barriers include vertical walls (e.g., grout injection, slurry walls, sheet piles) used to physically control groundwater flow through isolation or redirection, typically around or upgradient of a source area. The design and technique used to construct a barrier wall typically depend on the length of the barrier, the depth to a competent confining layer or bedrock, and cost considerations. Sheet piling, trenching, and vertical drilling are the most common methods for barrier construction. Sheet piling and trenching are typically limited to depths of approximately 50 ft bgs, and drilling techniques can achieve depths greater than 50 ft bgs. Construction of a vertical barrier would involve drilling to competent bedrock and injecting bentonite or grout into fractured bedrock, the transition zone, and saprolite flow zones.

Keying the vertical barrier into bedrock may be difficult to achieve consistently due to the complex Piedmont geology underlying the site. Competent bedrock depths range from 60 to 80 ft bgs at the site. Depth to competent bedrock significantly varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the transition zone. Installation of an effective barrier to depths greater than 60 ft is technically feasible but would possibly encounter challenges during installation. Further, the complete removal of CCR source material and a lack of available space between AP-BCD and Lake Sinclair, limits its applicability at this Site and the retained options are better suited for corrective action. For these reasons, the vertical barrier technology was not retained for further consideration.

**ISSS** – ISSS could be applied to aquifer matrix in groundwater flow zones to reduce Cd and Co mobility. However, the soil data collected during the reporting period indicated the Cd and Co plume is dilute and that there is not a significant solid phase source of Cd and Co in the aquifer near BRGWC-50. Therefore, it is less applicable than other technologies evaluated. Given the relative lack of applicability for groundwater in comparison to the other technologies, ISSS technology was not retained for further consideration.

## 6.0 PLANNED ACTIVITIES AND ANTICIPATED SCHEDULE

The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. During the pond closure by excavation and consolidation of CCR, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power has initiated activities as outlined in the ACM Report (Golder, 2020a) to support the groundwater remedy selection process and address potential changes in site conditions as appropriate. The adaptive site management approach toward remedy selection may be adjusted over the site's life cycle as new site information and technologies become available. To this end, Georgia Power will continue its data collection efforts as necessary in support of efforts to refine the CSM and to further evaluate the feasibility of each corrective measure proposed in the ACM Report (Golder, 2020a). At this time, and as discussed in Section 4.0, three of the seven of the corrective measures outlined in the 2020 ACM Report are being retained for further evaluation. The three corrective measures that are being retained are as follows:

- Geochemical Approaches (In-Situ Injection)

- Hydraulic Containment (Pump and Treat)
- MNA

Supplementary data collection and evaluation activities proposed to be completed are presented on Table 6, with the key elements summarized below.

- Using the data soil SEP data, and cations and anions groundwater and porewater results, an evaluation of aquifer matrix for attenuation mechanisms and rates, aquifer capacity for attenuation, and mineralogical characterization will be performed. This evaluation of attenuation rates and aquifer capacity for Cd and Co and long-term stability of attenuation will help demonstrate the potential for natural attenuation of target constituents in the aquifer media.
- A conceptual-level feasibility study of applied corrective measures will be performed to evaluate the potential radius of influence and determine conceptual layouts of geochemical injections in target areas.

Additional field investigation activities and or data analyses may be required to evaluate possible hydraulic containment in targeted area near well BRGWC-50 and PZ-51I. Georgia Power will continue to prepare semi-annual progress reports to document AP-BCD groundwater conditions, results associated with additional data collection, and update the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include the semi-annual progress reports in routine groundwater monitoring and corrective action reports to meet the requirements of § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

## 7.0 REFERENCES

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Tables

**TABLE 1 – EVALUATION OF REMEDIAL TECHNOLOGIES – AP-BCD**  
Georgia Power Company – Plant Branch

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Description	Performance	Reliability
<b>Geochemical Approaches (in situ injection)</b>	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of cadmium (Cd) and cobalt (Co). Under anaerobic conditions, Co would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Cd. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of Co and Cd onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including Co. However, the main attenuation mechanism for Co and Cd is sorption, which is more dependent on pH than redox.	The effective immobilization of Co has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether cadmium can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics. Cd attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Cd is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to Co.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of Co and Cd in groundwater.
<b>Hydraulic Containment (pump- and-treat)</b>	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, coal combustion residual (CCR) conditioning, etc.]. It is applicable to a variable mix of inorganic constituents, including dissolved Co and Cd.	Pump and treat (P&T) 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 AP-BCD, implementation of the corrective measure is contingent on completing additional assessment activities (i.e., high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/ effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms
<b>In-Situ Stabilization (ISS)</b>	In-situ stabilization is a technique that uses mixing of the CCR with additives to solidify the material in place and reduce future dissolution of CCR compounds from the stabilized material. Additives typically include Portland cement, and the solidification is completed in-situ using large diameter augers. CCR located beneath the water table would be isolated by ISS.	Medium to high, groundwater impacts would be addressed through the processes of natural attenuation. This alternative would isolate/secure the source in a bound matrix, and over time, allow the concentrations of Co and Cd in downgradient groundwater to decline to below applicable standards.	In-situ stabilization can be a reliable corrective measure for Co, and Cd in groundwater. Reliability is dependent on the permeability of the subsurface and mechanics of injection.
<b>Monitored Natural Attenuation (MNA)</b>	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including Co and Cd at AP-BCD are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation, and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Co and Cd, the main attenuation processes include sorption to iron and manganese oxides (Co and Cd), and formation of sparingly soluble sulfide minerals (Co).	Physical and chemical MNA mechanisms for cobalt and cadmium, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for Co and Cd are already occurring at the site as evidenced by groundwater data from the delineation wells. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for Co and Cd at AP-BCD will further enhance ongoing MNA.	Reliable as long as the aquifer conditions that result in Co and Cd attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved Co and/or Cd, or in combination with a second technology.

**TABLE 1 – EVALUATION OF REMEDIAL TECHNOLOGIES – AP-BCD**  
**Georgia Power Company – Plant Branch**

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Description	Performance	Reliability
<b>Permeable Reactive Barrier (PRB)</b>	<p>PRB technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are most likely viable for the concurrent removal of Co and Cd. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB would be contingent on finalization of the nature and extent characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as “funnel and gate” systems, where a barrier wall directs groundwater to a smaller “treatment gate” filled with reactive media.</p>	<p>PRBs have been shown to effectively address Co and Cd in groundwater if the right mix of reactive materials (e.g., ZVI and carbon) is selected for concurrent removal/immobilization of these constituents. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Cadmium redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for Co. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Cd.</p>	<p>Reliable groundwater corrective measure technology, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.</p>
<b>Phyto Remediation (TreeWell®)</b>	<p>Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-BCD, this corrective measure would likely use an engineered (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 Cd and Co within the root zone as well as incidental uptake of dissolved Cd and Co with groundwater is expected to occur concurrent with hydraulic control.</p>	<p>Once established (typically at the end of the third growing season), a TreeWell® system is effective for providing hydraulic containment of groundwater, and potential reduction of Cd and Co concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Given the current groundwater flow velocities, the approach is currently not considered viable. However, changing site conditions may make the corrective measure viable for the area downgradient of AP-BCD. Additional aquifer testing and/or groundwater flow modeling may be needed to confirm the suitability at that time.</p>	<p>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.</p>
<b>Subsurface Vertical Barrier Walls</b>	<p>This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier. Though highly effective, vertical barrier walls may serve as groundwater dams, so mounding of groundwater behind barrier walls, or flow of groundwater around the ends of barrier walls, should be considered in corrective action design.</p>	<p>Barrier walls are a proven technology for groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation, which is approximately 90 feet below ground surface (bgs). However, site-specific geologic and technology-specific considerations specific to the former CCR Unit may limit this depth to shallower installations. Within the context of the former CCR Unit, a barrier wall might be used in conjunction with a “funnel and gate” system for a PRB rather than a stand-alone technology. As such, groundwater with cobalt and cadmium above GWPS could either be directed to “treatment gates” for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations and compatibility testing with groundwater from the former CCR Unit will be needed.</p>	<p>Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.</p>



**TABLE 1 – EVALUATION OF REMEDIAL TECHNOLOGIES – AP-BCD**  
 Georgia Power Company – Plant Branch

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
<b>Geochemical Approaches (in situ injection)</b>	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly evaluated and implemented. Consideration of groundwater flow to nearby sensitive environments may be needed.	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.
<b>Hydraulic Containment (pump- and-treat)</b>	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co and Cd. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for Co and Cd.
<b>In-Situ Stabilization</b>	Easy to moderate, implementation of ISS will require a detailed design effort with bench scale testing to determine the appropriate amendment mix for a variety of overburden geologic materials. Pilot testing will also be needed to verify the ability of equipment to solidify material at depth. ISS has not been commonly used to stabilize entire ash units as part of a closure strategy.	Potential impacts of the remedy will be negligible.	In-situ stabilization around the area of exceedance is predicted to take a number of years to complete, depending on the availability of specialized contractors and equipment.
<b>MNA</b>	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame following pond closure. Engineering measures will be implemented during closure of AP-BCD to minimize potential impacts to the subsurface during closure activities and routine groundwater monitoring will be used to verify that groundwater impacts remain stable or decrease over time.



**TABLE 1 – EVALUATION OF REMEDIAL TECHNOLOGIES – AP-BCD**  
**Georgia Power Company – Plant Branch**

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
<b>PRB</b>	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Site-specific geology (i.e., partially weathered bedrock layer) poses a possible constructability challenge when attempting to key PRB material into competent bedrock. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary.	Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.	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.
<b>Phyto Remediation (TreeWell®)</b>	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.	The design phase will require some groundwater modeling for optimal placement of the TreeWell® units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
<b>Subsurface Vertical Barrier Walls</b>	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, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (e.g., pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Minimal impacts are expected following the construction of the remedy. Short-term impacts during remedy construction can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Groundwater extraction may unintentionally alter the geochemistry within the wall that may result in the mobilization of other constituents that require treatment.	Installation of a barrier wall can be accomplished relatively quickly (i.e., 6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.

**TABLE 1 – EVALUATION OF REMEDIAL TECHNOLOGIES – AP-BCD**  
**Georgia Power Company – Plant Branch**

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)			
	Institutional Requirements	Other Env. Or Public Health Requirements	Relative Costs	Retention Evaluation
<b>Geochemical Approaches (in situ injection)</b>	Deed restrictions may be necessary until in-situ treatment has achieved GWPS. An underground injection control (UIC) permit would be required to implement this corrective measure. No other institutional requirements are expected at this time.	None expected at this point. Potential for mobilization of redox-sensitive constituents exists during implementation of an anerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)	Remedial approach retained due to limited area of SSL exceedances, a targeted injection layout may result in decreased concentrations of Co and Cd in groundwater below the GWPS.
<b>Hydraulic Containment (pump-and-treat)</b>	Depending on the effluent management strategy, modifications to the existing National Pollutant Discharge Elimination System (NPDES) permit may be required or obtaining a new UIC permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required as long as groundwater conditions are above regulatory standards for unrestricted use.	Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	During ash pond closure, there will be an on-site wastewater treatment plant that may be available for treatment of extracted groundwater. Therefore, P&T is a potentially viable interim corrective measure for cobalt and cadmium in groundwater at Plant Branch and will be retained for further evaluation.
<b>In-Situ Stabilization</b>	Deed restrictions may be necessary until groundwater concentrations are below GWPS. No other institutional requirements that may limit application of this technology are expected at this time.	Changes to groundwater chemistry relative to the mobility of Appendix IV constituents following completion of ISS, where large volumes of amendments (typically Portland cement) are added to the subsurface, are unknown and would require pilot testing.	Medium, depending on permeability of aquifer.	Not retained for further analysis; strategy is deemed impractical because AP-BCD will be closed by removal.
<b>MNA</b>	MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.	Little to no physical disruption to remediation areas and no adverse construction related impacts are expected on the surrounding community.	Low to medium	Under current conditions, attenuation processes for Cd and Co are already occurring as evidenced by groundwater data from delineation wells. Therefore, MNA is a potentially viable corrective measure for Co and Cd in groundwater at Plant Branch and will be retained for further evaluation.
<b>PRB</b>	Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.	None expected at this point. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Because there is limited space available downgradient of wells where COCs exceed groundwater protection standards, PRB has been removed from further consideration.
<b>Phyto Remediation (TreeWell®)</b>	Deed restrictions may be necessary for groundwater areas upgradient of the TreeWell system. No other institutional requirements are expected at this time.	None expected at this point. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements	Not retained for further analysis; due to the depth of groundwater and the limited physical space for installation of a phytoremediation system between the AP-BCD and the adjacent surface water bodies, phytoremediation has been removed from consideration for groundwater corrective action at AP-BCD.
<b>Subsurface Vertical Barrier Wells</b>	Deed restrictions may be necessary until groundwater concentrations are below GWPS. No other institutional requirements that may limit application of this technology are expected at this time.	Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Because there is limited space available downgradient of wells where COCs exceed groundwater protection standards, Subsurface Vertical Barrier Walls have been removed from further consideration.

**TABLE 2**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
<b>AP-BCD ASSESSMENT WELLS</b>												
BRGWA-2S	PZ-2S	Upgradient BCD & E	Saprolite	33.205940	-83.338294	440.4	443.20	44.6	406.20	396.20	10.0	4/2/2014
BRGWA-2I	PZ -2I	Upgradient BCD & E	Amphibolite Gneiss	33.205913	-83.338279	440.5	443.14	64.3	386.60	376.60	10.0	3/14/2014
BRGWA-5S	PZ-5S	Upgradient BCD & E	Saprolite	33.214300	-83.339971	440.8	443.86	40.0	411.20	401.20	10.0	4/3/2014
BRGWA-5I	PZ - 5I	Upgradient BCD & E	Amphibolite Gneiss	33.214317	-83.339996	441.1	443.79	61.2	390.30	380.30	10.0	4/3/2014
BRGWA-6S	PZ-6S	Upgradient BCD & E	Saprolite	33.215780	-83.333008	455.8	458.96	49.7	416.50	406.50	10.0	4/1/2014
BRGWA-12S	PZ-12S	Upgradient BCD	Residuum	33.197941	-83.314864	431.6	434.64	58.3	383.70	373.70	10.0	3/4/2014
BRGWA-12I	PZ -12I	Upgradient BCD	Biotite Gneiss	33.197981	-83.314877	431.5	434.39	77.6	364.30	354.30	10.0	2/20/2014
BRGWA-23S	PZ-23S	Upgradient BCD	Saprolite/TWR	33.194311	-83.312528	425.5	428.24	40.8	394.70	384.70	10.0	7/26/2016
BRGWC-25I	PZ-25I	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.187670	-83.301326	355.0	357.37	20.5	344.50	334.50	10.0	7/25/2016
BRGWC-27I	PZ-27S	Downgradient C	Saprolite	33.185265	-83.306589	364.0	366.86	24.0	350.00	340.00	10.0	7/22/2016
BRGWC-29I	PZ-29I	Downgradient C	TWR	33.186890	-83.302200	350.6	353.23	20.0	340.60	330.60	10.0	7/23/2016
BRGWC-30I	PZ-30I	Downgradient D	Saprolite/TWR/Biotite Gneiss	33.190566	-83.313141	350.0	352.61	20.3	340.00	330.00	10.0	7/18/2016
BRGWC-32S	PZ-32S	Downgradient D	Saprolite	33.187992	-83.310531	403.6	406.39	45.0	368.60	358.60	10.0	7/20/2016
BRGWC-45	PZ-45	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.192199	-83.302065	381.6	384.58	57.0	335.00	325.00	10.0	2/3/2018
BRGWC-47	PZ-47	Downgradient D	TWR	33.193530	-83.307343	408.8	411.20	92.0	327.20	317.20	10.0	1/25/2018
BRGWC-50	PZ-50	Downgradient B	Residuum/Biotite Gneiss	33.190421	-83.297841	378.8	381.35	65.0	324.20	314.20	10.0	1/31/2018
BRGWC-52I	PZ-52	Downgradient B	Biotite Gneiss	33.189551	-83.298594	381.2	383.87	73.9	317.30	307.30	10.0	8/6/2018
PZ-50D	NA	Downgradient	Biotite Gneiss	33.190410	-83.297817	378.3	380.86	106.0	282.30	272.30	10.0	10/8/2020
PZ-51I	NA	Downgradient	Saprolite/TWR/Biotite Gneiss	33.190523	-83.297623	378.0	380.52	65.0	323.10	313.10	10.0	8/1/2018
PZ-61I	NA	Downgradient	Saprolite/TWR/Biotite Gneiss	33.190498	-83.297655	377.7	380.64	76.0	312.00	302.00	10.0	3/30/2021

**TABLE 2**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
<b>AP-E ASSESSMENT WELLS</b>												
BRGWA-2S	PZ-2S	Upgradient E	Saprolite	33.205940	-83.338294	440.4	443.20	44.6	406.20	396.20	10.0	4/2/2014
BRGWA-2I	PZ -2I	Upgradient E	Amphibolite Gneiss	33.205913	-83.338279	440.5	443.14	64.3	386.60	376.60	10.0	3/14/2014
BRGWA-5S	PZ-5S	Upgradient E	Saprolite	33.214300	-83.339971	440.8	443.86	40.0	411.20	401.20	10.0	4/3/2014
BRGWA-5I	PZ - 5I	Upgradient E	Amphibolite Gneiss	33.214317	-83.339996	441.1	443.79	61.2	390.30	380.30	10.0	4/3/2014
BRGWA-6S	PZ-6S	Upgradient E	Saprolite	33.215780	-83.333008	455.8	458.96	49.7	416.50	406.50	10.0	4/1/2014
BRGWC-17S	PZ-17S	Downgradient E	Alluvium	33.203532	-83.322836	362.2	365.32	7.1	360.50	355.50	5.0	3/13/2014
BRGWC-33S	PZ-33S	Downgradient E	Saprolite/TWR/Biotite Gneiss	33.208371	-83.324826	414.2	416.68	26.4	398.20	388.20	10.0	7/26/2016
BRGWC-34S	PZ-34S	Downgradient E	Saprolite	33.206518	-83.324300	389.2	391.96	23.0	376.20	366.20	10.0	7/25/2016
BRGWC-35S	PZ-35S	Downgradient E	Saprolite	33.204484	-83.323519	363.7	366.31	27.4	346.70	336.70	10.0	7/23/2016
BRGWC-36S	PZ-36S	Downgradient E	Saprolite	33.201997	-83.322833	383.1	389.84	28.7	364.40	354.40	10.0	7/26/2016
BRGWC-37S	PZ-37S	Downgradient E	Saprolite/TWR	33.200205	-83.321914	444.4	447.05	63.6	390.80	380.80	10.0	7/24/2016
BRGWC-38S	PZ-38S	Downgradient E	Saprolite/TWR	33.198277	-83.321812	429.8	432.24	38.2	402.00	392.00	10.0	7/22/2016
<b>AP-BCD DELINEATION PIEZOMETERS</b>												
PZ-51S	NA	Downgradient B	Residuum	33.190474	-83.297644	377.9	380.27	45.4	337.90	332.90	5.0	8/1/2018
PZ-51D	NA	Downgradient B	Biotite Gneiss	33.190548	-83.297643	378.1	380.75	106.0	282.10	272.10	10.0	10/9/2020
PZ-57I	NA	Downgradient B	Saprolite/TWR	33.190395	-83.298504	379.4	382.50	75.9	313.80	303.80	10.0	3/24/2021
PZ-58I	NA	Downgradient B	Saprolite/TWR	33.190383	-83.298087	379.3	382.27	63.9	325.70	315.70	10.0	3/27/2021
PZ-60I	NA	Downgradient B	Saprolite/TWR	33.190407	-83.297979	379.5	382.61	60.8	329.00	319.00	10.0	3/29/2021
<b>PIEZOMETERS</b>												
PZ-1D	NA	Upgradient	Biotite Gneiss	33.219259	-83.332788	462.9	463.41	160.0	NA	302.90	94.5	4/4/2014
PZ-1I	NA	Upgradient	Biotite Gneiss	33.219250	-83.332855	461.9	464.71	79.5	392.80	382.80	10.0	3/10/2014
PZ-1S	NA	Upgradient	Saprolite	33.219251	-83.332821	462.4	465.07	65.0	407.80	397.80	10.0	3/20/2014
PZ-3D	NA	Upgradient	Biotite Gneiss	33.201356	-83.337283	486.7	487.50	130.0	NA	358.59	82.0	3/27/2014
PZ-3I	NA	Upgradient	Biotite Gneiss	33.201412	-83.337289	486.5	489.49	54.6	442.30	432.30	10.0	3/11/2014
PZ-3S	NA	Upgradient	Saprolite	33.201384	-83.337284	487	490.53	39.9	457.50	447.50	10.0	3/11/2014
PZ-4I	NA	Upgradient	Biotite Gneiss	33.195212	-83.334049	479.9	482.98	46.8	443.50	433.50	10.0	3/11/2014
PZ-4S	NA	Upgradient	Saprolite	33.195216	-83.334088	479.9	482.87	30.0	460.30	450.30	10.0	3/10/2014
PZ-7S	NA	Downgradient	Saprolite	33.212137	-83.328090	449	451.57	44.5	414.90	404.90	10.0	4/1/2014
PZ-8S	NA	Upgradient	Saprolite	33.207731	-83.334235	450.5	453.08	49.5	411.40	401.40	10.0	4/1/2014
PZ-9S	NA	Upgradient	Saprolite	33.193487	-83.328157	466.1	469.28	48.0	428.50	418.50	10.0	3/5/2014
PZ-10S	NA	Downgradient	Saprolite	33.197260	-83.321907	431	433.85	39.0	402.40	392.40	10.0	3/5/2014
PZ-11S	NA	Downgradient	Saprolite	33.192944	-83.315371	390.9	393.99	24.5	376.80	366.80	10.0	2/20/2014
PZ-12D	PZD-12D	Downgradient	Biotite Gneiss	33.198010	-83.314885	431.4	434.09	141.7	350.10	290.10	60.0	4/14/2014
PZ-13S	NA	Downgradient	Saprolite	33.208218	-83.320866	406.5	409.97	34.7	382.20	372.20	10.0	3/19/2014
PZ-14I	NA	Downgradient	Biotite Gneiss	33.209302	-83.323834	419.9	422.71	53.8	376.50	366.50	10.0	3/20/2014

**TABLE 2**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
PZ-14S	NA	Downgradient	Saprolite	33.209303	-83.323855	420.2	423.31	37.6	393.00	383.00	10.0	3/20/2014
PZ-15I	NA	Downgradient	Biotite Gneiss/Amphibolite	33.207440	-83.323742	400.2	403.06	88.7	321.90	311.90	10.0	3/25/2014
PZ-15S	NA	Downgradient	Saprolite	33.207438	-83.323759	400.1	402.90	39.9	370.20	360.20	10.0	3/27/2014
PZ-16I	NA	Downgradient	Amphibolite Gneiss	33.205401	-83.323146	379.5	382.45	38.6	351.30	341.30	10.0	3/14/2014
PZ-16S	NA	Downgradient	Saprolite	33.205393	-83.323166	379.3	382.52	19.1	370.60	360.60	10.0	3/18/2014
PZ-17I	NA	Downgradient	Amphibolite Gneiss	33.203566	-83.322788	362.3	365.33	43.5	329.20	319.20	10.0	3/17/2014
PZ-18I	NA	Downgradient	Biotite Gneiss	33.188252	-83.312988	359.6	362.55	38.4	331.30	321.30	10.0	2/26/2014
PZ-18S	NA	Downgradient	Saprolite	33.188228	-83.312982	359.7	362.82	24.2	345.00	335.00	10.0	3/26/2014
PZ-19I	NA	Downgradient	Biotite Gneiss	33.185563	-83.309241	368.9	371.74	43.7	335.60	325.60	10.0	3/4/2014
PZ-19S	NA	Downgradient	Saprolite	33.185586	-83.309258	368.4	371.42	28.0	350.80	340.80	10.0	3/4/2014
PZ-20I	NA	Downgradient	Biotite Gneiss	33.184705	-83.305130	362.2	365.34	29.5	343.10	333.10	10.0	3/5/2014
PZ-20S	NA	Downgradient	Saprolite	33.184691	-83.305140	362.2	365.41	15.3	357.30	347.30	10.0	3/5/2014
PZ-21I	NA	Downgradient	Biotite Gneiss	33.187691	-83.301283	355.8	358.92	24.4	341.80	331.80	10.0	3/10/2014
PZ-21S	NA	Downgradient	Residuum/Saprolite	33.187694	-83.301305	355.5	358.52	9.8	351.10	346.10	5.0	3/11/2014
PZ-23I	NA	Downgradient	Biotite Gneiss	33.194321	-83.312497	425.1	427.74	66.5	368.60	358.60	10.0	7/29/2016
PZ-24S	BRGWC-24S	Downgradient A	Saprolite	33.192629	-83.296220	351.4	354.10	42.0	319.90	309.90	10.0	7/27/2016
PZ-26I	NA	Downgradient	Biotite Gneiss	33.187898	-83.300306	368	370.63	30.5	347.50	337.50	10.0	7/26/2016
PZ-28I	NA	Downgradient	TWR/Biotite Gneiss	33.184732	-83.305158	362.5	364.81	24.0	348.50	338.50	10.0	7/24/2016
PZ-31S	NA	Downgradient	TWR	33.188716	-83.312244	374.3	376.77	39.5	344.80	334.80	10.0	7/26/2016
PZ-39	NA	Downgradient	Saprolite	33.196254	-83.313842	432	434.78	44.7	397.30	387.30	10.0	7/30/2016
PZ-40S	NA	Downgradient A	Residuum	33.192669	-83.296398	353.2	355.96	40.2	324.40	314.40	10.0	2/14/2017
PZ-41S	NA	Downgradient A	Saprolite	33.192716	-83.296555	354.3	357.17	44.2	320.50	310.50	10.0	2/14/2017
PZ-42S	NA	Downgradient A	Residuum	33.193854	-83.296624	359	361.66	32.2	337.20	327.20	10.0	2/9/2017
PZ-43	NA	Downgradient A	Residuum/Biotite Gneiss	33.191985	-83.298942	381.0	383.71	40.4	351.00	341.00	10.0	2/7/2018
PZ-44	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.190799	-83.300405	380.5	383.04	57.0	333.90	323.90	10.0	2/2/2018
PZ-46	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.193658	-83.303739	382.1	384.64	45.6	346.50	336.50	10.0	2/5/2018
PZ-48	NA	Downgradient D	Saprolite/TWR/Amphibolite	33.194504	-83.310642	418.3	420.90	67.0	361.70	351.70	10.0	1/24/2018
PZ-49	NA	Downgradient B	Residuum/Biotite Gneiss	33.195198	-83.301871	382.2	384.99	17.0	375.60	365.60	10.0	1/30/2018
PZ-50D	NA	Downgradient B	Biotite Gneiss	33.190410	-83.297817	378.3	380.86	106.0	282.30	272.30	10.0	10/8/2020
PZ-51S	NA	Downgradient B	Residuum	33.190474	-83.297644	377.9	380.27	45.4	337.90	332.90	5.0	8/1/2018
PZ-51I	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.190523	-83.297623	378	380.52	65.0	323.10	313.10	10.0	8/1/2018

**TABLE 2**  
**SUMMARY OF MONITORING WELL, ASSESSMENT AND PIEZOMETER CONSTRUCTION**  
 Georgia Power Company - Plant Branch

Well-ID	Old Well-ID	Location	Hydrogeologic Unit Screened <sup>(3)</sup>	Latitude	Longitude	Ground Surface Elevation (feet NAVD88) <sup>(1)</sup>	Top of Casing Elevation (feet NAVD88) <sup>(1)</sup>	Total Depth (feet bgs) <sup>(2)</sup>	Top of Screen Elevation (feet NAVD88) <sup>(1)</sup>	Screen Tip Elevation (feet NAVD88) <sup>(1)</sup>	Screen Length	Date of Installation
PZ-51D	NA	Downgradient B	Biotite Gneiss	33.190548	-83.297643	378.1	380.75	106.0	282.10	272.10	10.0	10/9/2020
PZ-52D	NA	Downgradient E	Biotite Gneiss	33.208362	-83.324870	414.3	417.03	59.5	364.80	354.80	10.0	5/14/2020
PZ-53D	NA	Downgradient E	Saprolite/TWR/Biotite Gneiss	33.198283	-83.321917	431.6	434.68	139.4	302.20	292.20	10.0	5/17/2020
PZ-54	NA	Downgradient E	Saprolite/TWR	33.199468	-83.320356	440.8	443.86	52.0	398.80	388.80	10.0	5/15/2020
PZ-55	NA	Downgradient E	Saprolite/TWR/Biotite Gneiss	33.195029	-83.322604	450.2	453.07	49.3	410.90	400.90	10.0	5/19/2020
PZ-56	NA	Downgradient B	Saprolite/TWR/Biotite Gneiss	33.194377	-83.324890	416.2	418.84	29.3	396.90	386.90	10.0	5/20/2020
PZ-57I	NA	Downgradient B	Saprolite/TWR	33.190395	-83.298504	379.4	382.50	75.9	313.80	303.80	10.0	3/24/2021
PZ-58I	NA	Downgradient B	Saprolite/TWR	33.190383	-83.298087	379.3	382.27	63.9	325.70	315.70	10.0	3/27/2021
PZ-59I	NA	Downgradient B	Saprolite/TWR	33.190591	-83.297981	379.9	383.49	65.9	324.30	314.30	10.0	3/31/2021
PZ-60I	NA	Downgradient B	Saprolite/TWR	33.190407	-83.297979	379.5	382.61	60.8	329.00	319.00	10.0	3/29/2021
PZ-61I	NA	Downgradient B	Saprolite/TWR	33.190498	-83.297655	377.7	380.64	76.0	312.00	302.00	10.0	3/30/2021
PB-1S	NA	Downgradient	Saprolite/PWR	33.199673	-83.317420	400.4	403.16	38.0	372.40	362.40	10.0	1/22/2019
PB-2D	NA	Downgradient	Gneiss	33.199504	-83.315596	414.9	416.71	57.0	367.90	357.90	10.0	12/4/2018
PB-4S	NA	Downgradient	Saprolite/PWR	33.198098	-83.318372	409.3	411.15	48.0	371.30	361.30	10.0	1/16/2019
PB-4D	NA	Downgradient	Gneiss	33.198110	-83.318400	409.0	412.12	114.5	304.50	294.50	10.0	1/16/2019
PB-7S	NA	Downgradient	Saprolite/PWR	33.196710	-83.318003	399.7	402.88	33.0	376.70	366.70	10.0	1/14/2019
PB-8S	NA	Downgradient	Saprolite/PWR	33.194463	-83.316044	398.6	401.82	35.0	373.60	363.60	10.0	1/8/2018
PB-8D	NA	Downgradient	Gneiss	33.194480	-83.316062	398.2	401.74	106.0	304.20	294.20	10.0	1/8/2018
PB-10S	NA	Downgradient	Saprolite	33.195992	-83.310279	397.6	400.91	33.0	374.60	364.60	10.0	1/16/2019
PB-10D	NA	Downgradient	Gneiss	33.196004	-83.310294	397.5	400.31	85.0	322.50	312.50	10.0	1/16/2019
PB-13S	NA	Downgradient	Saprolite	33.191900	-83.316612	370.8	373.31	50.0	330.80	320.80	10.0	12/10/2018
PB-13D	NA	Downgradient	Gneiss	33.191900	-83.316570	371.1	373.77	97.0	284.10	274.10	10.0	12/10/2018

**Notes:**

1. feet NAVD88 = feet North American Vertical Datum 1988 feet NAD83 = North American Datum 1983
2. feet bgs = feet below ground surface
3. TWR = Transitionally Weathered Rock
4. NA = Not applicable
5. Piezometers may be used to collect waters levels. They are not considered compliance monitoring locations

**TABLE 3**  
**ANALYTICAL DATA SUMMARY - AP-BCD (March and April 2021)**  
 Georgia Power Company - Plant Branch

Analyte	Units	Well ID											
		BRGWA-2S	BRGWA-2I	BRGWA-5S	BRGWA-5I	BRGWA-6S	BRGWA-12S	BRGWA-12I	BRGWA-23S	BRGWC-25I	BRGWC-27I	BRGWC-29I	BRGWC-30I
		3/2/2021	3/1/2021	3/2/2021	3/2/2021	3/1/2021	3/2/2021	3/2/2021	3/2/2021	3/2/2021	3/2/2021	3/3/2021	3/3/2021
<b>Appendix III</b>													
BORON, TOTAL	mg/L	< 0.0052	< 0.0052	0.0071 J	0.0053 J	< 0.0052	< 0.0052	0.0057 J	0.042	1.1	0.91	1.0	1.4
CALCIUM, TOTAL	mg/L	4.0	15.4	16.8	13.2	4.2	5.4	11.7	11.6	44.1	58.2	73.3	122
CHLORIDE, TOTAL	mg/L	1.7	1.8	3.7	3.8	2.1	3.7	2.6	3.5	4.5	4.5	5.6	4.0
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.061 J	< 0.050	0.15	0.24	0.13	0.13
pH	S.U.	6.20	6.66	6.42	6.47	6.70	5.92	6.11	5.75	6.10	5.90	4.46	6.29
SULFATE, TOTAL	mg/L	< 0.50	4.7	< 0.50	2.2	0.74 J	0.51 J	1.7	54.0	139	172	341	371
TOTAL DISSOLVED SOLIDS	mg/L	43.0	98.0	96.0	80.0	39.0	43.0	93.0	105	280	288	515	690
<b>Appendix IV</b>													
ANTIMONY, TOTAL	mg/L	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028	0.0095	< 0.00028	< 0.00028	< 0.00028	< 0.00028	< 0.00028
ARSENIC, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.0015 J	< 0.00078
BARIUM, TOTAL	mg/L	0.0094	0.0074	0.037	0.023	0.016	0.063	0.053	0.097	0.026	0.016	0.021	0.028
BERYLLIUM, TOTAL	mg/L	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.000071 J	0.00094	< 0.000046
CADMIUM, TOTAL	mg/L	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012
CHROMIUM, TOTAL	mg/L	0.0074	< 0.00055	0.0044 J	0.0064	0.011	0.0021 J	0.0020 J	0.0020 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055
COBALT, TOTAL	mg/L	0.0010 J	< 0.00038	< 0.00038	0.00053 J	< 0.00038	< 0.00038	< 0.00038	< 0.00038	0.0030 J	0.0062	0.0095	0.0015 J
FLUORIDE, TOTAL	mg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.061 J	< 0.050	0.15	0.24	0.13	0.13
LEAD, TOTAL	mg/L	< 0.000036	< 0.000036	< 0.000036	0.000037 J	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	0.00033 J	< 0.000036
LITHIUM, TOTAL	mg/L	< 0.00081	0.027 J	< 0.00081	0.00081 J	0.0036 J	< 0.00081	0.0045 J	0.0093 J	< 0.00081	0.0012 J	0.0032 J	0.014 J
MERCURY, TOTAL	mg/L	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078
MOLYBDENUM, TOTAL	mg/L	< 0.00069	< 0.00069	< 0.00069	0.0015 J	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.0010 J	< 0.00069	< 0.00069	< 0.00069
RADIUM (226 + 228)	pCi/L	0.342 U	0.127 U	0.362 U	0.409 U	0.215 U	0.925	0.901	1.12	0.161 U	0.829 U	1.31 U	0.415 U
SELENIUM, TOTAL	mg/L	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0060	0.0021 J	0.0031 J	0.0042 J	< 0.0016
THALLIUM, TOTAL	mg/L	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	0.00018 J	< 0.00014

**Notes:**

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
6. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed as less than the MDC and considered an undetected result (U qualified). The MDC varies depending upon the sample amount and elapsed time of the measurement.
7. NM indicates the substance was not analyzed or required for this event.



**TABLE 3**  
**ANALYTICAL DATA SUMMARY - AP-BCD (March and April 2021)**  
 Georgia Power Company - Plant Branch

Analyte	Units	Well ID													
		BRGWC-32S	BRGWC-45	BRGWC-47	BRGWC-50	PZ-50D	PZ-51D	PZ-51I	PZ-51S	BRGWC-52I	PZ-57I	PZ-58I	PZ-60I	PZ-61I	PZ-61I
		3/4/2021	3/2/2021	3/2/2021	3/4/2021	3/5/2021	3/3/2021	3/4/2021	3/3/2021	3/4/2021	4/12/2021	4/12/2021	4/12/2021	4/12/2021	5/19/2021
<b>Appendix III</b>															
BORON, TOTAL	mg/L	1.1	0.044	0.58	0.31	0.20	0.028 J	0.36	0.0096 J	1.4	0.49	0.33	0.25	0.26	0.31
CALCIUM, TOTAL	mg/L	35.7	33.9	353	214	207	119	182	7.9	47.5	52	94.6	262	228	NM
CHLORIDE, TOTAL	mg/L	4.6	25.8	4.8	18.9	8.0	18.9	12.2	4.5	5.6	7.2	11	29.6	21.9	NM
FLUORIDE, TOTAL	mg/L	< 0.050	0.067 J	< 0.050	0.60	0.16	0.28	0.061 J	0.083 J	0.28	0.085 J	0.56	1.3	0.055 J	NM
pH	S.U.	5.98	6.17	5.59	4.34	7.06	7.10	4.57	5.41	5.87	5.35	5.15	5.05	5.4	5.36
SULFATE, TOTAL	mg/L	185	98.3	1360	1250	698	360	909	0.66 J	114	272	559	1740	1550	NM
TOTAL DISSOLVED SOLIDS	mg/L	350	264	1680	1520	1210	598	830	76.0	383	500	890	2550	2110	NM
<b>Appendix IV</b>															
ANTIMONY, TOTAL	mg/L	< 0.00028	0.0014 J	< 0.00028	0.00092 J	0.00056 J	0.0013 J	0.00079 J	0.0018 J	0.00091 J	NM	NM	NM	NM	NM
ARSENIC, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.00087 J	0.0014 J	< 0.00078	< 0.00078	0.0030 J	NM	NM	NM	NM	NM
BARIUM, TOTAL	mg/L	0.024	0.061	0.036	0.025	0.043	0.080	0.016	0.037	0.019	NM	NM	NM	NM	NM
BERYLLIUM, TOTAL	mg/L	< 0.000046	< 0.000046	< 0.000046	0.0059	< 0.000046	< 0.000046	0.000097 J	< 0.000046	< 0.000046	NM	NM	NM	NM	NM
CADMIUM, TOTAL	mg/L	< 0.00012	0.00020 J	< 0.00012	0.019	< 0.00012	0.017	< 0.00012	< 0.00012	< 0.00012	< 0.00012	0.0024	0.017	< 0.00012	NM
CHROMIUM, TOTAL	mg/L	0.0020 J	< 0.00055	< 0.00055	0.0010 J	< 0.00055	< 0.00055	0.00080 J	< 0.00055	< 0.00055	NM	NM	NM	NM	NM
COBALT, TOTAL	mg/L	< 0.00038	0.0057	0.00050 J	1.4	0.0038 J	0.00040 J	0.019	0.0050	< 0.00038	0.037	0.33	3.2	0.42	0.44
FLUORIDE, TOTAL	mg/L	< 0.050	0.067 J	< 0.050	0.60	0.16	0.28	0.061 J	0.083 J	0.28	NM	NM	NM	NM	NM
LEAD, TOTAL	mg/L	< 0.000036	< 0.000036	< 0.000036	0.00016 J	0.000056 J	0.00013 J	0.00017 J	< 0.000036	0.000042 J	NM	NM	NM	NM	NM
LITHIUM, TOTAL	mg/L	0.0020 J	0.0043 J	0.044	0.050	0.019 J	0.0093 J	0.026 J	< 0.00081	0.0030 J	NM	NM	NM	NM	NM
MERCURY, TOTAL	mg/L	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	< 0.000078	NM	NM	NM	NM	NM
MOLYBDENUM, TOTAL	mg/L	< 0.00069	< 0.00069	< 0.00069	< 0.00069	0.0017 J	0.0068 J	< 0.00069	< 0.00069	0.0010 J	NM	NM	NM	NM	NM
RADIUM (226 + 228)	pCi/L	0.320 U	0.107 U	0.571 U	1.22	2.11	2.54	0.966 U	0.599 U	2.04	NM	NM	NM	NM	NM
SELENIUM, TOTAL	mg/L	0.14	< 0.0016	0.0028 J	0.0039 J	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	NM	NM	NM	NM	NM
THALLIUM, TOTAL	mg/L	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	< 0.00014	NM	NM	NM	NM	NM

**Notes:**

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
6. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed as less than the MDC and considered an undetected result (U qualified). The MDC varies depending upon the sample amount and elapsed time of the measurement.
7. NM indicates the substance was not analyzed or required for this event.



**TABLE 4**  
**ANALYTICAL DATA SUMMARY - SOIL SAMPLES AP-BCD (March 2021)**  
 Georgia Power Company - Plant Branch

Analyte	Units	Well ID									
		B-10	B-11	B-12	B-13	B-14	PZ-57I	PZ-58I	PZ-59I	PZ-60I	PZ-61I
		3/27/2021	3/27/2021	3/27/2021	3/27/2021	3/27/2021	3/24/2021	3/25/2021	3/31/2021	3/27/2021	3/29/2021
		32'	31.5'	32'	32'	32'	72'-73'	59'-60'	60'-61'	54'-53'	70'-71'
<b>Appendix IV</b>											
CADMIUM, TOTAL	mg/kg	< 0.039	< 0.042	< 0.045	< 0.038	< 0.038	< 0.043	< 0.038	< 0.036	< 0.20	< 0.035
COBALT, TOTAL	mg/kg	8.7	7.5	9.2	6.4	7.8	5.4	1.4	5.1	12.2	3.5
<b>Moisture, Percent</b>											
PERCENT MOISTURE	%	16.1	15.6	15.4	15.0	12.7	5.1	10.9	7.9	4.5	8.5

**Notes:**

1. mg/Kg - milligrams per Kilograms
2. % - Soil percent moisture
3. ' - Depth of soil sample in feet
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.

**TABLE 5**  
**SUMMARY OF AQUIFER TEST DATA - AP-BCD**  
 Georgia Power Company - Plant Branch

Piezometer ID	Hydrogeologic Unit Screened	Saturated Aquifer Thickness (feet)	Screen Length (feet)	Transmissivity (cm <sup>2</sup> /sec)	Storativity (unitless)	Aquifer Test Type	Hydraulic Conductivity (cm/sec)
BRGWC-50	Residuum/Biotite Gneiss	24	10	3.331	8.81E-04	Falling	1.85E-03
						Rising	1.89E-03
PZ-50D	Biotite Gneiss	53	10	NA	NA	Falling	1.22E-05
				NA	NA	Rising	1.30E-06
PZ-51S	Residuum	48	10	NA	NA	Falling	1.16E-04
				NA	NA	Rising	7.59E-05
				NA	NA	Falling	6.62E-05
				NA	NA	Rising	9.25E-05
PZ-51I	Saprolite/TWR/Biotite Gneiss	48	10	NA	NA	Falling	3.39E-04
				NA	NA	Rising	3.44E-04
				NA	NA	Falling	3.26E-04
				NA	NA	Rising	3.33E-04
PZ-51D	Biotite Gneiss	64	10	NA	NA	Falling	7.89E-06
				NA	NA	Rising	4.78E-06
PB-10D	Gneiss	100	10	NA	NA	Falling	3.47E-06
				NA	NA	Rising	9.01E-06

**Notes:**

1. cm/sec = centimeters per second; cm<sup>2</sup>/sec = square centimeters per second
2. Hydraulic conductivity for BRGWC-50 from 2020 Geosyntec Hydrogeologic Assessment Report Revision 01
3. Transmissivity and storativity data from limited pumping test from BRGWC-50.
4. NA = Not available

**TABLE 6**  
**PROPOSED ACM SUPPLEMENTARY DATA COLLECTION TASKS FOR 2021 – AP-BCD**  
 Georgia Power Company – Plant Branch

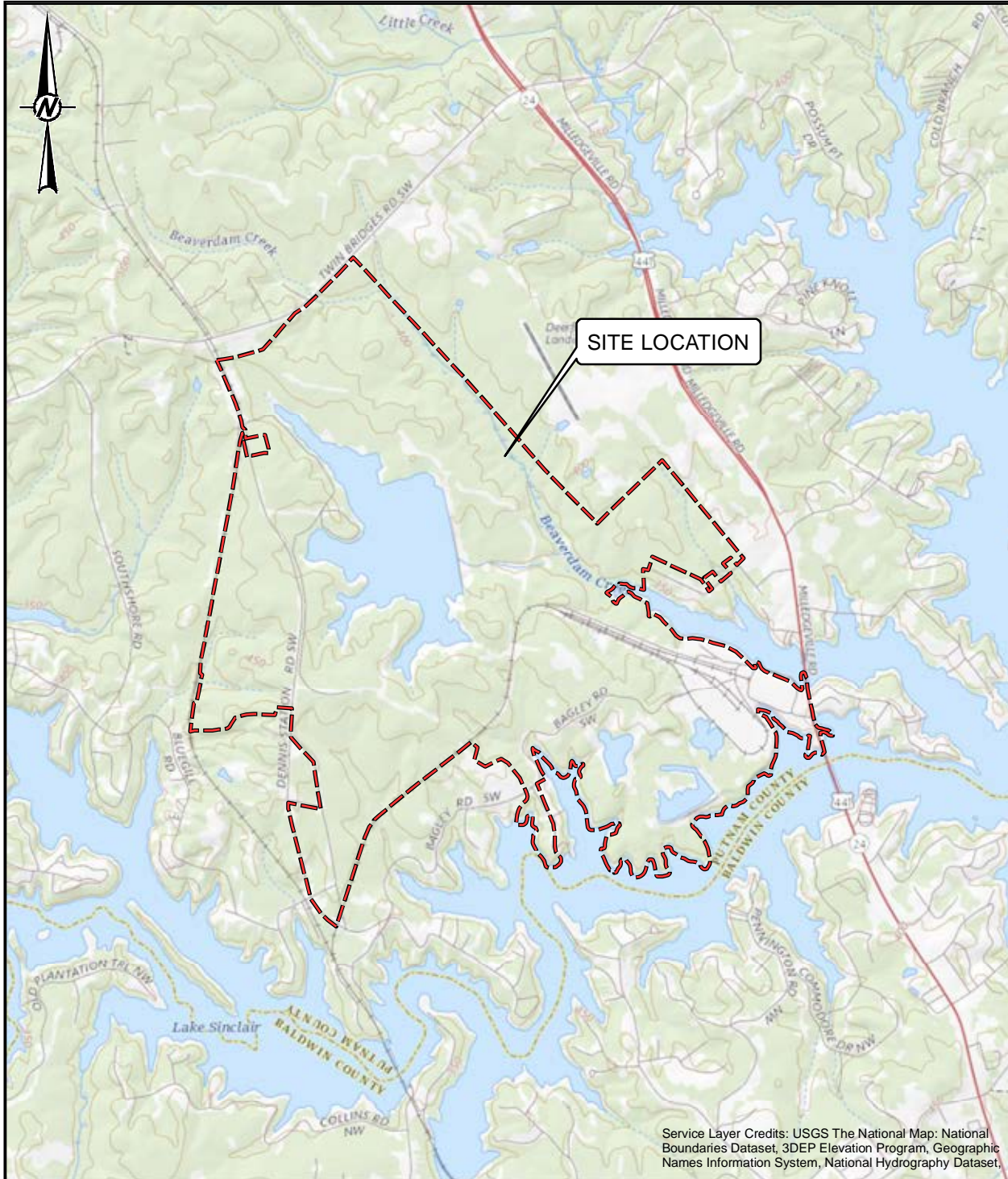
Data Collection Event	Applicable CMs	Applicability / Rationale	Field Component	Parameters of Interest (POI)
<b>Evaluation of the analytical results from specialized analysis of collected saturated unconsolidated aquifer matrix samples</b>	ISI P&T MNA	Evaluation of aquifer matrix for: (i) attenuation mechanisms and rates, and aquifer capacity for attenuation; and (ii) mineralogical characterization.	No Field Component: Aquifer matrix samples collected and submitted to the lab in May 2021.	Conceptually identify attenuation rates and aquifer capacity for cadmium (Cd) and cobalt (Co). Evaluate long term stability of attenuation.
<b>Perform a conceptual-level feasibility study of applied corrective measures using limited groundwater flow model</b>	ISI MNA	Evaluate potential radius of influence for geochemical injections; determine conceptual layouts to achieve injection radius of influence in target areas.	No Field Component (Desktop Study)	Conceptually determine layouts for selected remedies.
<b>Phase II &amp; Phase III Geochemical Modeling</b>	ISI MNA	MNA as a component of Final Remedy Selection	No Field Component: Phase II & III geochemical modeling and assessment.	Geochemical modeling to determine mechanism and rate of attenuation, adsorption capacity, and long-term stability for Cd and Co.

Notes:

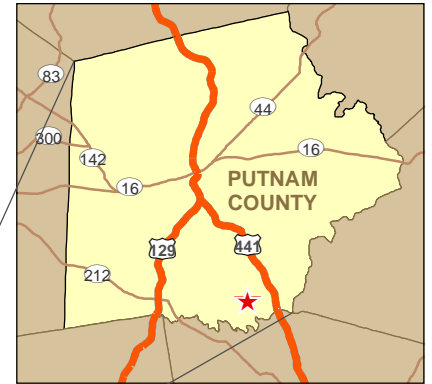
Applicable Corrective Measures (CM) Retained:

- ISI - Geochemical Approaches (In-Situ Injection)
- P&T - Hydraulic Containment (Pump and Treat)
- MNA - Monitored Natural Attenuation

Figures



Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH



PROJECT  
**SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS**  
 REPORT - AP-BCD

TITLE  
**SITE LOCATION MAP**

CONSULTANT



YYYY-MM-DD	2019-03-15
PREPARED	DJC
DESIGN	DLP
CHECKED	RK
REVIEW/APPROVED	DLP

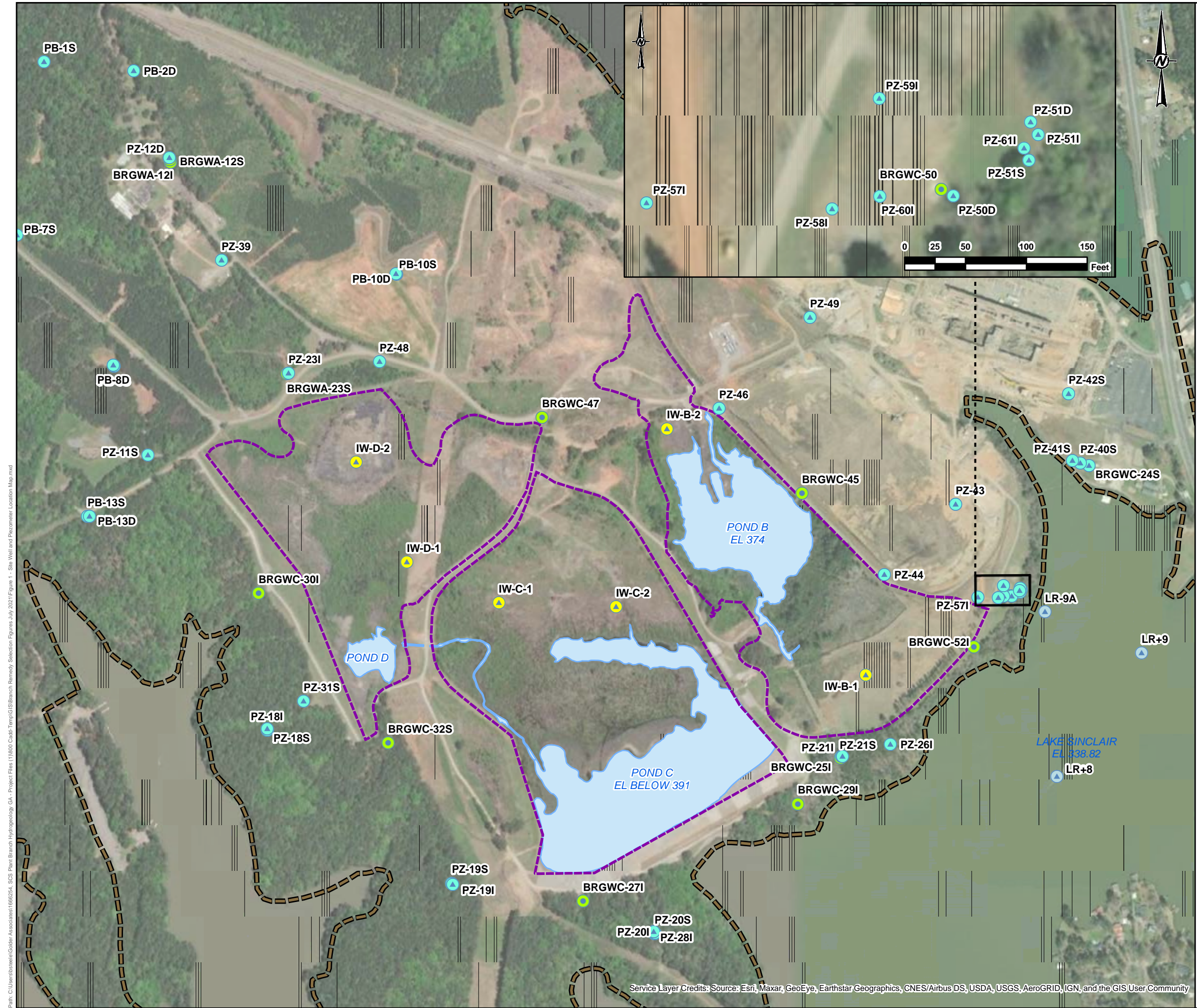
PROJECT No.  
 166625421

CONTROL  
 1666254A000-GIS.mxd

Rev.  
 0

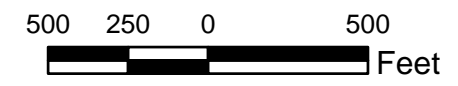
FIGURE  
 1





- LEGEND**
- MONITORING WELL
  - ▲ PIEZOMETER
  - INTERSTITIAL WELL
  - ▲ SURFACE WATER SAMPLE
  - PROPERTY BOUNDARY
  - APPROXIMATE ASH POND BOUNDARY
  - APPROXIMATE SURFACE WATER LIMITS

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES. WELL AND PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
**SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT - AP-BCD**

TITLE  
**MONITORING WELL, PIEZOMETER AND SURFACE WATER LOCATION MAP**

CONSULTANT	DATE	REVISION
<b>GOLDER</b> MEMBER OF WSP	YYYY-MM-DD	2020-01-12
	PREPARED	BAS
	DESIGN	BAS
	CHECKED	RK/DP
	REVIEW/APPROVED	RK/DP

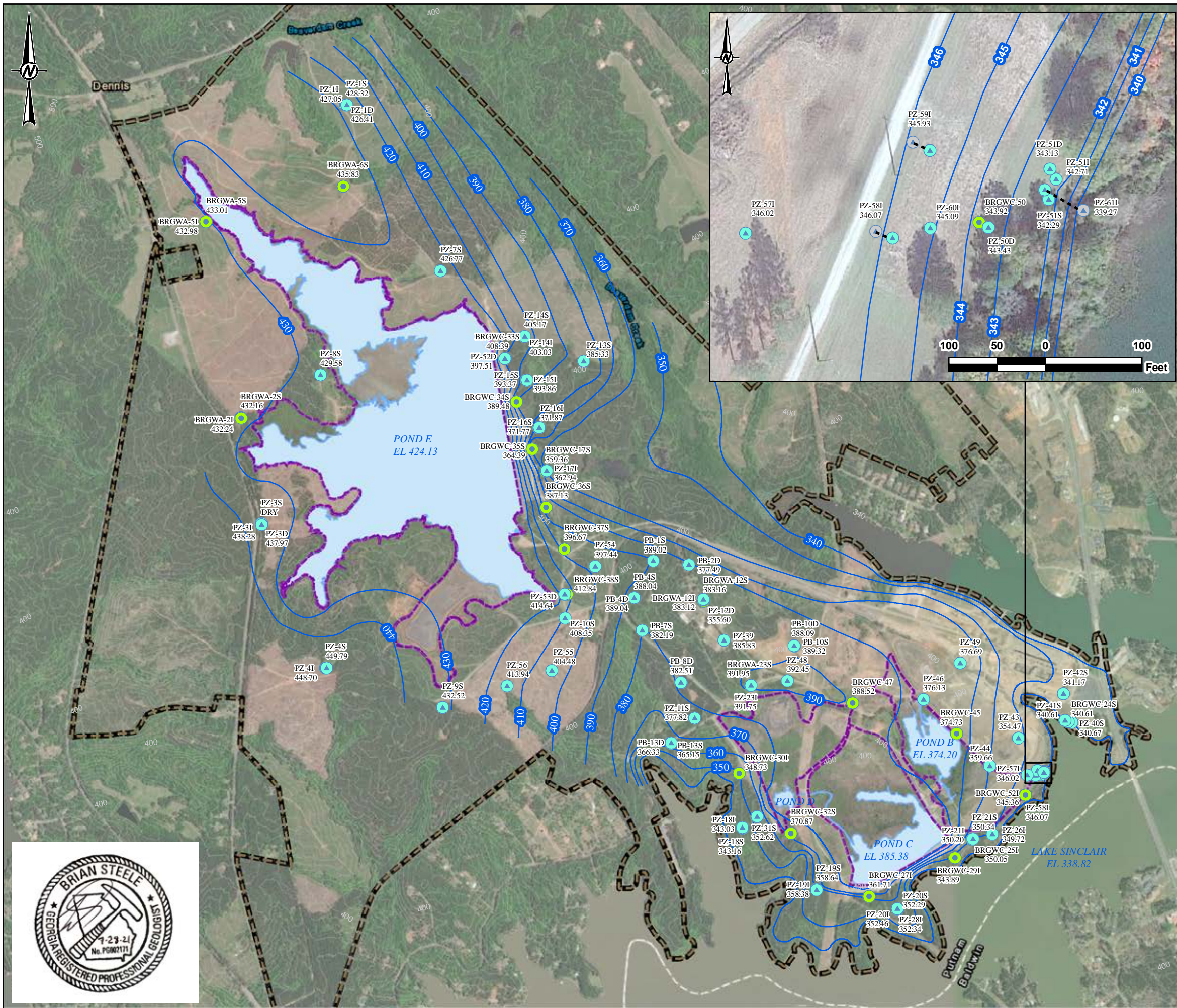
PROJECT No. 166625421 CONTROL 1666254Q002-GIS.mxd Rev. 1 FIGURE 2

Path: C:\Users\hshelton\OneDrive\Documents\1666254 - SCS Plant Branch Hydrology\GA - Project Files\1666254\Temp\GIS\Branch Remedy Selection Figures\July 2021\Figure 1 - Site Well and Piezometer Location Map.mxd

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

1 in. IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB

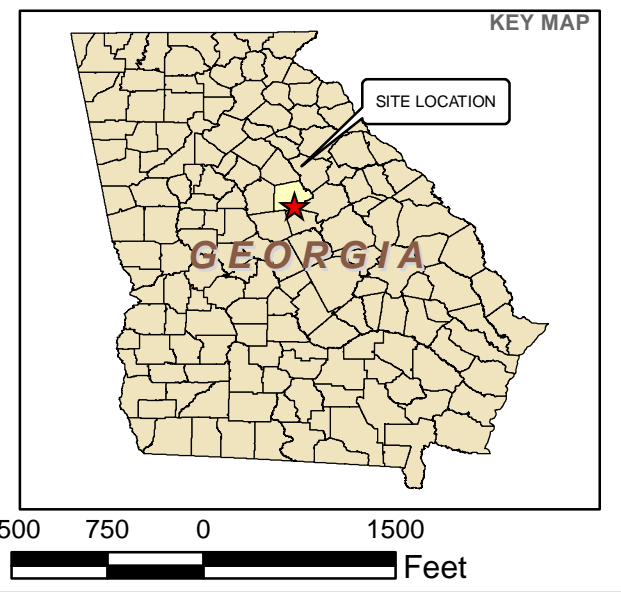




- LEGEND**
- ANGLED WELL SCREEN
  - MONITORING WELL
  - PIEZOMETER
  - INFERRED POTENTIOMETRIC SURFACE (NAVD88)
  - PROPERTY BOUNDARY
  - APPROXIMATE ASH POND BOUNDARY
  - APPROXIMATE SURFACE WATER LIMITS

- NOTES**
1. GROUNDWATER SURFACE CONTOUR INTERVAL = 10 FEET
  2. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATA, AND TOPOGRAPHIC CONTOURS. THEREFORE, CONTOURS MAY NOT REFLECT ACTUAL CONDITIONS.
  3. DEEP (D) AND INTERMEDIATE (I) WELL ELEVATIONS WERE NOT USED FOR GROUNDWATER CONTOURING.
  4. NAVD88=NORTH AMERICAN VERTICAL DATUM 88
  5. GROUNDWATER AND POND ELEVATIONS RECORDED MARCH 1, 2021, EXCEPT PZ-57I, PZ-58I, PZ-59I, PZ-60I AND PZ-61I WHICH ARE FROM APRIL 5 THROUGH APRIL 7, 2021.

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY ESRI, HERE, GARMIN, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. BORING/PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING & SURVEYING CO., INC.
  4. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
**SEMI-ANNUAL REMEDY SELECTION AND DESIGN**  
 PROGRESS REPORT - AP-BCD

TITLE  
**POTENTIOMETRIC SURFACE CONTOUR MAP**  
 MARCH 1, 2021

CONSULTANT	DATE	REVISION
 <b>GOLDER</b> MEMBER OF WSP	YYYY-MM-DD	2021-06-30
	PREPARED	BAS
	DESIGN	DC
	CHECKED	BS
	REVIEW/APPROVED	RK

PROJECT No. 166625421 CONTROL 1666254V001-GIS.mxd Rev. 1 FIGURE 3



Path: C:\GIS\Southern Company\Plant Branch\Environmental - CCR\Figures\Potentiometric Surface Map\Figure 3 - BCD March 2021 Potentiometric Surface Map.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSB





**LEGEND**

- ANGLED WELL SCREEN
- SURFACE WATER SAMPLE
- MONITORING WELL
- PIEZOMETER
- 0.005 CADMIUM GWPS ISOCONTOUR
- PROPERTY BOUNDARY
- INFERRED POTENTIOMETRIC SURFACE (MAR 2021)
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS

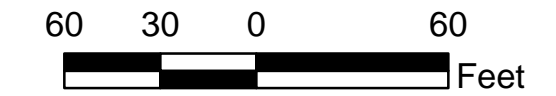
**NOTES**

1. GROUNDWATER CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L). GWPS = GROUNDWATER PROTECTION STANDARD.
2. ISOCONTOURS SHOWN REPRESENT GROUNDWATER PROTECTION STANDARD
3. DATA SHOWN REPRESENT THE MARCH SEMI-ANNUAL MONITORING EVENT RESULTS AS WELL AS APPLICABLE DELINEATION DATA. SAMPLE RESULTS FROM PZ-571, PZ-581, PZ-601, AND PZ-611 FROM APRIL 2021.
4. SURFACE WATER SAMPLE COLLECTED BY ARCADIS IN FEBRUARY 2021
5. PIEZOMETERS PZ-581, PZ-591, AND PZ-611 ARE ANGLED PIEZOMETERS. THE HORIZONTAL LOCATIONS FOR WHERE THE RESPECTIVE WELL SCREENS ARE SPATIALLY LOCATED WERE MARKED WITH CONCRETE PADS, WITH LOCATIONS PROVIDED BY METRO ENGINEERING.

Analyte	Units	GWPS
Cadmium	mg/L	0.005

**REFERENCE**

1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY AND GOOGLE EARTH 2021
2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
3. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES. WELL AND PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT - AP-BCD

TITLE  
**CADMIUM ISOCONCENTRATION CONTOUR MAP**  
**POND BCD**  
**MARCH AND APRIL 2021**

CONSULTANT	YYYY-MM-DD	2021-07-02
<b>GOLDER</b> MEMBER OF WSP	PREPARED	BAS
	DESIGN	BAS
	CHECKED	RK/DP
	REVIEW/APPROVED	RK/DP

PROJECT No. 166625421 CONTROL 1666254Q002-GIS.mxd Rev. 1 FIGURE 4

Path: C:\Users\jrodol\Golder\Associates\1666254\_SCS\_Plant Branch Hydrogeology\_GA - 800\_Cloud-Temp\GIS\Branch Remedial Selection Figures July 2021\Figure X - March and April 2021 AP-BCD - Cadmium Isoconcentration Map.mxd

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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**LEGEND**

- ANGLED WELL SCREEN
- SURFACE WATER SAMPLE
- MONITORING WELL
- PIEZOMETER
- 0.0135 COBALT GWPS ISOCONTOUR
- 0.0135 COBALT GWPS ISOCONTOUR (INFERRED)
- PROPERTY BOUNDARY
- INFERRED POTENTIOMETRIC SURFACE (MAR 2021)
- APPROXIMATE ASH POND BOUNDARY
- APPROXIMATE SURFACE WATER LIMITS

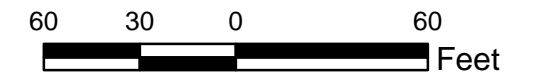
**NOTES**

1. GROUNDWATER CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L). GWPS = GROUNDWATER PROTECTION STANDARD. RSL = FEDERAL REGIONAL SCREENING LEVEL. J = ESTIMATED VALUE.
2. ISOCONTOURS SHOWN REPRESENT GROUNDWATER PROTECTION STANDARD
3. DATA SHOWN REPRESENT THE MARCH SEMI-ANNUAL MONITORING EVENT RESULTS AS WELL AS APPLICABLE DELINEATION DATA. SAMPLE RESULTS FROM PZ-57I, PZ-58I, PZ-60I, AND PZ-61I FROM APRIL 2021.
4. GWPS IS EQUAL TO SITE SPECIFIC BACKGROUND CONCENTRATION AS THERE IS NO MCL AND THE RSL IS BELOW SITE SPECIFIC BACKGROUND
5. SURFACE WATER SAMPLE COLLECTED BY ARCADIS IN FEBRUARY 2021
6. PIEZOMETERS PZ-58I, PZ-59I, AND PZ-61I ARE ANGLED PIEZOMETERS. THE HORIZONTAL LOCATIONS FOR WHERE THE RESPECTIVE WELL SCREENS ARE SPATIALLY LOCATED WERE MARKED WITH CONCRETE PADS, WITH LOCATIONS PROVIDED BY METRO ENGINEERING.

Analyte	Units	GWPS
Cobalt	mg/L	0.0135

**REFERENCE**

1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY AND GOOGLE EARTH 2021
2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
3. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES. WELL AND PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH



PROJECT  
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN  
 PROGRESS REPORT - AP-BCD

TITLE  
**COBALT ISOCONCENTRATION CONTOUR MAP**  
**POND BCD**  
**SEPTEMBER 2020**

CONSULTANT	YYYY-MM-DD	2021-07-02
<b>GOLDER</b> MEMBER OF WSP	PREPARED	BAS
	DESIGN	BAS
	CHECKED	RK/DP
	REVIEW/APPROVED	RK/DP

PROJECT No. 166625418 CONTROL 1666254Q002-GIS.mxd Rev. 0 FIGURE 5

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Path: C:\Users\jdoyle\Golder\Associates\1666254\_SCS\_Plant\_Branch\GIS\Branch\Remedy\_Selection\Figures\July\_2021\Figure\_X\_March\_2021\_AP-BCD\_Cobalt\_Isoconcentration\_Map.mxd

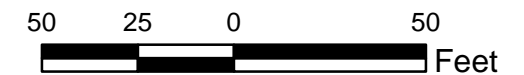
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSB





- LEGEND**
- SOIL BORING
  - MONITORING WELL
  - PIEZOMETER
  - PROPERTY BOUNDARY
  - INFERRED POTENTIOMETRIC SURFACE (MAR 2021)
  - APPROXIMATE ASH POND BOUNDARY
  - APPROXIMATE SURFACE WATER LIMITS

- REFERENCE**
1. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY
  2. COORDINATE SYSTEM: NAD 1983 STATE PLAN GEORGIA WEST (U.S. FEET).
  3. PROPERTY LINE PROVIDED BY SOUTHERN COMPANY SERVICES. WELL AND PIEZOMETER LOCATIONS PROVIDED BY METRO ENGINEERING.



CLIENT  
**GEORGIA POWER COMPANY**  
 PLANT BRANCH

PROJECT  
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS  
 REPORT - AP-BCD

TITLE  
**SOIL BORING LOCATION MAP**

CONSULTANT	YYYY-MM-DD	2021-07-02
	PREPARED	BAS
MEMBER OF WSP	DESIGN	BAS
	CHECKED	RK/DP
	REVIEW/APPROVED	RK/DP

Path: C:\Users\jdozier\Golder\Associates\1666254\_SCS\_Plant Branch Hydrogeology\_GA\_800\_Cloud-Temp\GIS\Branch Remedy Selection\_Figures July 2021\Figure X\_Soil Boring Location\_Map.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSB



**APPENDIX A**

Soil Sample Laboratory

Analytical Results

April 14, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH  
Pace Project No.: 92530942

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 02, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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### CERTIFICATIONS

Project: BRANCH

Pace Project No.: 92530942

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**Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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**Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRANCH  
Pace Project No.: 92530942

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92530942001	PZ-571-72-73	Solid	03/24/21 10:13	04/02/21 09:00
92530942002	PZ-581-59-60	Solid	03/25/21 14:30	04/02/21 09:00
92530942003	PZ-591-60-61	Solid	03/31/21 07:40	04/02/21 09:00
92530942004	PZ-601-54-53	Solid	03/27/21 10:00	04/02/21 09:00
92530942005	PZ-611-70-71	Solid	03/29/21 17:10	04/02/21 09:00
92530942006	B-10-32'	Solid	03/27/21 14:35	04/02/21 09:00
92530942007	B-11-31.5'	Solid	03/27/21 12:32	04/02/21 09:00
92530942008	B-12-32'	Solid	03/27/21 15:52	04/02/21 09:00
92530942009	B-13-32'	Solid	03/27/21 11:05	04/02/21 09:00
92530942010	B-14-32'	Solid	03/27/21 09:45	04/02/21 09:00
92530942011	DUP-1	Solid	04/02/21 00:00	04/02/21 09:00

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH  
Pace Project No.: 92530942

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92530942001	PZ-571-72-73	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942002	PZ-581-59-60	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942003	PZ-591-60-61	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942004	PZ-601-54-53	EPA 6010D	SH1	2
		SW-846	KDF	1
92530942005	PZ-611-70-71	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942006	B-10-32'	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942007	B-11-31.5'	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942008	B-12-32'	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942009	B-13-32'	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942010	B-14-32'	EPA 6010D	KQ	2
		SW-846	KDF	1
92530942011	DUP-1	EPA 6010D	KQ	2
		SW-846	KDF	1

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte

### REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: BRANCH

Pace Project No.: 92530942

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92530942001</b>	<b>PZ-57I-72-73</b>					
EPA 6010D	Cobalt	5.4	mg/kg	0.43	04/12/21 18:54	
SW-846	Percent Moisture	5.1	%	0.10	04/05/21 13:46	N2
<b>92530942002</b>	<b>PZ-58I-59-60</b>					
EPA 6010D	Cobalt	1.4	mg/kg	0.38	04/12/21 19:07	
SW-846	Percent Moisture	10.9	%	0.10	04/05/21 13:46	N2
<b>92530942003</b>	<b>PZ-59I-60-61</b>					
EPA 6010D	Cobalt	5.1	mg/kg	0.36	04/12/21 19:10	
SW-846	Percent Moisture	7.9	%	0.10	04/05/21 13:46	N2
<b>92530942004</b>	<b>PZ-60I-54-53</b>					
EPA 6010D	Cobalt	12.2	mg/kg	2.0	04/13/21 21:35	
SW-846	Percent Moisture	4.5	%	0.10	04/05/21 13:46	N2
<b>92530942005</b>	<b>PZ-61I-70-71</b>					
EPA 6010D	Cobalt	3.5	mg/kg	0.35	04/12/21 19:24	
SW-846	Percent Moisture	8.5	%	0.10	04/05/21 13:46	N2
<b>92530942006</b>	<b>B-10-32'</b>					
EPA 6010D	Cobalt	8.7	mg/kg	0.39	04/12/21 19:27	
SW-846	Percent Moisture	16.1	%	0.10	04/05/21 13:46	N2
<b>92530942007</b>	<b>B-11-31.5'</b>					
EPA 6010D	Cobalt	7.5	mg/kg	0.42	04/12/21 19:30	
SW-846	Percent Moisture	15.6	%	0.10	04/05/21 17:29	N2
<b>92530942008</b>	<b>B-12-32'</b>					
EPA 6010D	Cobalt	9.2	mg/kg	0.45	04/12/21 19:33	
SW-846	Percent Moisture	15.4	%	0.10	04/05/21 17:29	N2
<b>92530942009</b>	<b>B-13-32'</b>					
EPA 6010D	Cobalt	6.4	mg/kg	0.38	04/12/21 19:36	
SW-846	Percent Moisture	15.0	%	0.10	04/05/21 17:29	N2
<b>92530942010</b>	<b>B-14-32'</b>					
EPA 6010D	Cobalt	7.8	mg/kg	0.38	04/12/21 19:39	
SW-846	Percent Moisture	12.7	%	0.10	04/05/21 17:29	N2
<b>92530942011</b>	<b>DUP-1</b>					
EPA 6010D	Cobalt	8.7	mg/kg	0.41	04/12/21 19:43	
SW-846	Percent Moisture	14.6	%	0.10	04/05/21 17:29	N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH  
Pace Project No.: 92530942

**Sample: PZ-571-72-73**      **Lab ID: 92530942001**      Collected: 03/24/21 10:13      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.086	0.043	1	04/09/21 09:38	04/12/21 18:54	7440-43-9	
Cobalt	5.4	mg/kg	0.43	0.22	1	04/09/21 09:38	04/12/21 18:54	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	5.1	%	0.10	0.10	1		04/05/21 13:46		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: PZ-581-59-60**      **Lab ID: 92530942002**      Collected: 03/25/21 14:30      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.077	0.038	1	04/09/21 09:38	04/12/21 19:07	7440-43-9	
Cobalt	1.4	mg/kg	0.38	0.19	1	04/09/21 09:38	04/12/21 19:07	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	10.9	%	0.10	0.10	1		04/05/21 13:46		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: PZ-591-60-61**      **Lab ID: 92530942003**      Collected: 03/31/21 07:40      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.072	0.036	1	04/09/21 09:38	04/12/21 19:10	7440-43-9	
Cobalt	5.1	mg/kg	0.36	0.18	1	04/09/21 09:38	04/12/21 19:10	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	7.9	%	0.10	0.10	1		04/05/21 13:46		N2

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## ANALYTICAL RESULTS

Project: BRANCH  
Pace Project No.: 92530942

**Sample: PZ-60I-54-53**      **Lab ID: 92530942004**      Collected: 03/27/21 10:00      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.40	0.20	5	04/09/21 09:38	04/13/21 21:35	7440-43-9	D3
Cobalt	12.2	mg/kg	2.0	1.0	5	04/09/21 09:38	04/13/21 21:35	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	4.5	%	0.10	0.10	1		04/05/21 13:46		N2

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: PZ-611-70-71**      **Lab ID: 92530942005**      Collected: 03/29/21 17:10      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.070	0.035	1	04/09/21 09:38	04/12/21 19:24	7440-43-9	
Cobalt	3.5	mg/kg	0.35	0.18	1	04/09/21 09:38	04/12/21 19:24	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	8.5	%	0.10	0.10	1		04/05/21 13:46		N2

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: B-10-32'**      **Lab ID: 92530942006**      Collected: 03/27/21 14:35      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.078	0.039	1	04/09/21 09:38	04/12/21 19:27	7440-43-9	
Cobalt	<b>8.7</b>	mg/kg	0.39	0.20	1	04/09/21 09:38	04/12/21 19:27	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	<b>16.1</b>	%	0.10	0.10	1		04/05/21 13:46		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH  
Pace Project No.: 92530942

**Sample: B-11-31.5'**      **Lab ID: 92530942007**      Collected: 03/27/21 12:32      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.083	0.042	1	04/09/21 09:38	04/12/21 19:30	7440-43-9	
Cobalt	7.5	mg/kg	0.42	0.21	1	04/09/21 09:38	04/12/21 19:30	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	15.6	%	0.10	0.10	1		04/05/21 17:29		N2

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: B-12-32'**      **Lab ID: 92530942008**      Collected: 03/27/21 15:52      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.091	0.045	1	04/09/21 09:38	04/12/21 19:33	7440-43-9	
Cobalt	<b>9.2</b>	mg/kg	0.45	0.23	1	04/09/21 09:38	04/12/21 19:33	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	<b>15.4</b>	%	0.10	0.10	1		04/05/21 17:29		N2

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## ANALYTICAL RESULTS

Project: BRANCH  
Pace Project No.: 92530942

**Sample: B-13-32'**      **Lab ID: 92530942009**      Collected: 03/27/21 11:05      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.076	0.038	1	04/09/21 09:38	04/12/21 19:36	7440-43-9	
Cobalt	<b>6.4</b>	mg/kg	0.38	0.19	1	04/09/21 09:38	04/12/21 19:36	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	<b>15.0</b>	%	0.10	0.10	1		04/05/21 17:29		N2

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: B-14-32'**      **Lab ID: 92530942010**      Collected: 03/27/21 09:45      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.076	0.038	1	04/09/21 09:38	04/12/21 19:39	7440-43-9	
Cobalt	<b>7.8</b>	mg/kg	0.38	0.19	1	04/09/21 09:38	04/12/21 19:39	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	<b>12.7</b>	%	0.10	0.10	1		04/05/21 17:29		N2

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## ANALYTICAL RESULTS

Project: BRANCH

Pace Project No.: 92530942

**Sample: DUP-1**      **Lab ID: 92530942011**      Collected: 04/02/21 00:00      Received: 04/02/21 09:00      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3050B									
Pace Analytical Services - Asheville									
Cadmium	ND	mg/kg	0.082	0.041	1	04/09/21 09:38	04/12/21 19:43	7440-43-9	
Cobalt	<b>8.7</b>	mg/kg	0.41	0.21	1	04/09/21 09:38	04/12/21 19:43	7440-48-4	
<b>Percent Moisture</b>									
Analytical Method: SW-846									
Pace Analytical Services - Charlotte									
Percent Moisture	<b>14.6</b>	%	0.10	0.10	1		04/05/21 17:29		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH  
Pace Project No.: 92530942

QC Batch: 612386 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3050B Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92530942001, 92530942002, 92530942003, 92530942004, 92530942005, 92530942006, 92530942007, 92530942008, 92530942009, 92530942010, 92530942011

METHOD BLANK: 3223435 Matrix: Solid  
Associated Lab Samples: 92530942001, 92530942002, 92530942003, 92530942004, 92530942005, 92530942006, 92530942007, 92530942008, 92530942009, 92530942010, 92530942011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cadmium	mg/kg	ND	0.10	0.050	04/12/21 18:48	
Cobalt	mg/kg	ND	0.50	0.25	04/12/21 18:48	

LABORATORY CONTROL SAMPLE: 3223436

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	mg/kg	50	48.4	97	80-120	
Cobalt	mg/kg	50	49.4	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3223437 3223438

Parameter	Units	3223437		3223438		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92530942001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Cadmium	mg/kg	ND	43.2	43.9	37.8	37.0	88	84	75-125	2	20
Cobalt	mg/kg	5.4	43.2	43.9	42.2	41.4	85	82	75-125	2	20

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### QUALITY CONTROL DATA

Project: BRANCH  
Pace Project No.: 92530942

QC Batch: 611469      Analysis Method: SW-846  
QC Batch Method: SW-846      Analysis Description: Dry Weight/Percent Moisture  
Laboratory: Pace Analytical Services - Charlotte  
Associated Lab Samples: 92530942001, 92530942002, 92530942003, 92530942004, 92530942005, 92530942006

SAMPLE DUPLICATE: 3218990

Parameter	Units	92529046001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.9	22.0	0	25	N2

SAMPLE DUPLICATE: 3218991

Parameter	Units	92530942006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.1	16.2	1	25	N2

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### QUALITY CONTROL DATA

Project: BRANCH

Pace Project No.: 92530942

QC Batch: 611483

Analysis Method: SW-846

QC Batch Method: SW-846

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92530942007, 92530942008, 92530942009, 92530942010, 92530942011

SAMPLE DUPLICATE: 3219069

Parameter	Units	92531051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.0	14.8	5	25	N2

SAMPLE DUPLICATE: 3219561

Parameter	Units	92531229002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.0	20.6	6	25	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## QUALIFIERS

Project: BRANCH  
Pace Project No.: 92530942

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH  
Pace Project No.: 92530942

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92530942001	PZ-57I-72-73	EPA 3050B	612386	EPA 6010D	612849
92530942002	PZ-58I-59-60	EPA 3050B	612386	EPA 6010D	612849
92530942003	PZ-59I-60-61	EPA 3050B	612386	EPA 6010D	612849
92530942004	PZ-60I-54-53	EPA 3050B	612386	EPA 6010D	612849
92530942005	PZ-61I-70-71	EPA 3050B	612386	EPA 6010D	612849
92530942006	B-10-32'	EPA 3050B	612386	EPA 6010D	612849
92530942007	B-11-31.5'	EPA 3050B	612386	EPA 6010D	612849
92530942008	B-12-32'	EPA 3050B	612386	EPA 6010D	612849
92530942009	B-13-32'	EPA 3050B	612386	EPA 6010D	612849
92530942010	B-14-32'	EPA 3050B	612386	EPA 6010D	612849
92530942011	DUP-1	EPA 3050B	612386	EPA 6010D	612849
92530942001	PZ-57I-72-73	SW-846	611469		
92530942002	PZ-58I-59-60	SW-846	611469		
92530942003	PZ-59I-60-61	SW-846	611469		
92530942004	PZ-60I-54-53	SW-846	611469		
92530942005	PZ-61I-70-71	SW-846	611469		
92530942006	B-10-32'	SW-846	611469		
92530942007	B-11-31.5'	SW-846	611483		
92530942008	B-12-32'	SW-846	611483		
92530942009	B-13-32'	SW-846	611483		
92530942010	B-14-32'	SW-846	611483		
92530942011	DUP-1	SW-846	611483		

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.





Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 1 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: G. Spomer Golden Associates Project #: \_\_\_\_\_

**WO# : 92530942**



Courier:  Fed Ex  UPS  USPS  Other  
 Commercial  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: MT 9/21/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other  
 Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: 5.1 Correction Factor: ±0  
 Add/Subtract (°C)

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.1

USDA Regulated Soil (  N/A, water sample)  
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hq/d Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>SL</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY \_\_\_\_\_ Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

**CLIENT NOTIFICATION/RESOLUTION**

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
Sample Condition Upon Receipt (SCUR)

Document Revised: October 23, 2020  
Page 2 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

**WO#: 92530942**

PM: KLH1

Due Date: 04/13/21

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3M-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFLU-White-identified Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3V-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber MIBCl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA HNO4 (N/A)	VOAK (6 vials per kit)-675 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP9T-1.25 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG0U-40 mL Amber Unpreserved vials (N/A)		
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**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DE-NR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A: Client Information: **Section B: Required Project Information:** **Section C: Invoice Information:**

Client Information: **Face Analytical**  
 5170 Peachtree Road  
 Atlanta, GA 30341  
 (770) 496-1893

Required Project Information:  
 Report To: Brian Steele  
 Copy To:  
 Project Name: Branch  
 Project #: 16075421

Invoice Information:  
 Attention: Kevin Herring  
 Company Name: Pace Quade  
 Address: Pace Project Manager: kevin.herring@pacequade.com  
 Pace Profile #: 10038

Regulatory Agency: **GA**

SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analytes Test	Y/N	Cd, Co	Residual Chlorine (Y/N)
			START	END					H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other				
PZ-57I-72-73	SL6	324	1013				1 X												
PZ-58I-59-60	SL6	325	1430				1 X												
PZ-59I-60-61	SL6	331	0740				1 X												
PZ-60I-54-53	SL6	324	1000				1 X												
PZ-61I-70-71	SL6	324	1210				1 X												
B-10-32'	SL6	1.272	1135				1 X												
B-11-31.5'	SL6	324	1232				1 X												
B-12-32'	SL6	324	1552				1 X												
B-13-32'	SL6	324	1105				1 X												
B-14-32'	SL6	324	0945				1 X												
Dup-1	SL6	3					1 X												

ADDITIONAL COMMENTS	REQUISITED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Kevin Steele	4-2-21	0900	Kevin Steele	4-2-21	0900	Y Y Y Y

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: **Brian Steele**  
 SIGNATURE OF SAMPLER: *Brian Steele*  
 DATE signed: **4-2-21**

TEMP in C: \_\_\_\_\_  
 Received on Ice (Y/N): \_\_\_\_\_  
 Custody Sealed (Y/N): \_\_\_\_\_  
 Cooler (Y/N): \_\_\_\_\_  
 Samples Intact (Y/N): \_\_\_\_\_

**APPENDIX A**

Sequential Extraction

Procedure Results

## ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville  
5815 Middlebrook Pike  
Knoxville, TN 37921  
Tel: (865)291-3000

Laboratory Job ID: 140-22369-1  
Client Project/Site: SCS Site, Plant Branch  
Revision: 1

For:  
Golder Associates Inc.  
5170 Peachtree Road  
Building 100, Suite 300  
Atlanta, Georgia 30341

Attn: Brian Steele



Authorized for release by:  
4/29/2021 9:06:10 AM

Ryan Henry, Project Manager I  
(865)291-3000  
[williamr.henry@eurofinset.com](mailto:williamr.henry@eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Sample Summary . . . . .	7
Client Sample Results . . . . .	8
Default Detection Limits . . . . .	10
QC Sample Results . . . . .	13
QC Association Summary . . . . .	23
Lab Chronicle . . . . .	27
Certification Summary . . . . .	35
Method Summary . . . . .	36
Chain of Custody . . . . .	37



# Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Job ID: 140-22369-1**

**Laboratory: Eurofins TestAmerica, Knoxville**

## Narrative

### Job Narrative 140-22369-1 Revised

This report has been revised to add cadmium as requested by the client.

## Receipt

The sample was received on 3/20/2021 at 9:40am and arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.6° C.

## Metals

### 7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

- Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO<sub>4</sub>), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO<sub>3</sub>-H<sub>2</sub>O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO<sub>3</sub>, HCl and H<sub>3</sub>BO<sub>3</sub>. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO<sub>3</sub>, HCl and H<sub>3</sub>BO<sub>3</sub>. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

$$\text{Result, } \mu\text{g/g or mg/Kg, dry weight} = (C \times V \times V1 \times D) / (W \times S \times V2)$$

Where:

- C = Concentration from instrument readout,  $\mu\text{g/mL}$
- V = Final volume of digestate, mL
- D = Instrument dilution factor
- V1 = Total volume of leachate, mL
- V2 = Volume of leachate digested, mL
- W = Wet weight of sample, g
- S = Percent solids/100



# Case Narrative

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Job ID: 140-22369-1 (Continued)

### Laboratory: Eurofins TestAmerica, Knoxville (Continued)

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

#### SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

Magnesium was not reported for step 1 because the extraction solution for this step (magnesium sulfate) contains high levels of magnesium. Sodium was not reported for steps 2 and 5 since the extraction solutions for these steps contain high levels of sodium. The sum of steps 1 through 7 is much higher than the total result for sodium and magnesium due to the magnesium and sodium introduced by the extraction solutions.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Methods 6010B, 6010B SEP: The serial dilution performed for the following samples associated with batch 140-49029 were outside control limits: (140-22369-A-1-A SD ^10), (140-22369-A-1-A SD ^25) and (140-22369-A-1-Y SD ^5)

Method 6010B: The sample duplicate (DUP) precision for preparation batch 140-48595 and analytical batch 140-49029 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Methods 6010B, 6010B SEP: The following samples were diluted due to the presence of titanium which interferes with Cobalt: PZ-51S-40-45' (140-22369-1), (140-22369-A-1-B DU) and (140-22369-A-1-Z DU). Elevated reporting limits (RLs) are provided.

Method 6010B: The following samples were diluted due to the presence of Iron which interferes with Selenium: PZ-51S-40-45' (140-22369-1) and (140-22369-A-1-B DU). Elevated reporting limits (RLs) are provided.

Method 6010B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: PZ-51S-40-45' (140-22369-1) and (140-22369-A-1-B DU). The internal standard was very high for the samples affected. The samples were reanalyzed at 1:1 and 1:5.

Methods 6010B, 6010B SEP: The following samples were diluted due to the nature of the sample matrix: PZ-51S-40-45' (140-22369-1), (140-22369-A-1-B DU) and (140-22369-A-1-Z DU). Elevated reporting limits (RLs) are provided for Aluminum.

Method 6010B SEP: The serial dilution performed for the following sample associated with batch 140-48970 was outside control limits: (140-22369-A-1-W SD ^5)

Method 6010B SEP: The following samples were diluted due to the presence of titanium which interferes with Cobalt: PZ-51S-40-45' (140-22369-1) and (140-22369-A-1-X DU). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

% Moisture: The samples were analyzed for percent moisture using SOP number KNOX-WC-0012 (based on Modified MCAWW 160.3

# Case Narrative

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

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## Job ID: 140-22369-1 (Continued)

---

### Laboratory: Eurofins TestAmerica, Knoxville (Continued)

and SM2540B and on the percent moisture determinations described in methods 3540C and 3550B).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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# Sample Summary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-22369-1	PZ-51S-40-45'	Solid	03/19/21 09:21	03/20/21 09:40	

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# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1**

Date Collected: 03/19/21 09:21

Matrix: Solid

Date Received: 03/20/21 09:40

Percent Solids: 96.1

**Method: 6010B SEP - SEP Metals (ICP) - Step 1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		42	6.7	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
Beryllium	ND		1.0	0.32	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
Cadmium	ND		1.0	0.067	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
Cobalt	ND		10	0.19	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
Iron	ND		21	12	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
Lithium	ND		10	0.62	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
<b>Manganese</b>	<b>11</b>		3.1	0.13	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4
Selenium	ND		2.1	0.71	mg/Kg	✱	04/09/21 08:00	04/15/21 11:56	4

**Method: 6010B SEP - SEP Metals (ICP) - Step 2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aluminum</b>	<b>9.6</b>	<b>J</b>	31	5.0	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
Beryllium	ND		0.78	0.050	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
Cadmium	ND		0.78	0.034	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
Cobalt	ND		7.8	0.20	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
Iron	ND		16	9.0	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
Lithium	ND		7.8	0.47	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
<b>Manganese</b>	<b>4.3</b>		2.3	0.87	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3
Selenium	ND		1.6	0.53	mg/Kg	✱	04/12/21 08:00	04/15/21 12:26	3

**Method: 6010B SEP - SEP Metals (ICP) - Step 3**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aluminum</b>	<b>100</b>		10	2.2	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
<b>Beryllium</b>	<b>0.055</b>	<b>J</b>	0.26	0.016	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
<b>Cadmium</b>	<b>0.015</b>	<b>J B</b>	0.26	0.011	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
<b>Cobalt</b>	<b>2.3</b>	<b>J</b>	2.6	0.047	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
<b>Iron</b>	<b>210</b>		5.2	3.0	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
Lithium	ND		2.6	0.16	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
<b>Manganese</b>	<b>85</b>	<b>B</b>	0.78	0.028	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1
Selenium	ND		0.52	0.18	mg/Kg	✱	04/13/21 08:00	04/15/21 13:04	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aluminum</b>	<b>1700</b>		10	1.7	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
<b>Beryllium</b>	<b>0.44</b>		0.26	0.017	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
Cadmium	ND		0.26	0.011	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
<b>Cobalt</b>	<b>2.5</b>	<b>J</b>	2.6	0.055	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
<b>Iron</b>	<b>6400</b>		5.2	3.0	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
<b>Lithium</b>	<b>0.70</b>	<b>J</b>	2.6	0.16	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
<b>Manganese</b>	<b>120</b>		0.78	0.14	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1
<b>Selenium</b>	<b>0.61</b>		0.52	0.49	mg/Kg	✱	04/14/21 08:00	04/15/21 13:43	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aluminum</b>	<b>260</b>	<b>B</b>	160	24	mg/Kg	✱	04/16/21 08:00	04/19/21 13:44	5
Beryllium	ND		3.9	0.33	mg/Kg	✱	04/16/21 08:00	04/19/21 13:44	5
Cadmium	ND		3.9	0.17	mg/Kg	✱	04/16/21 08:00	04/19/21 13:44	5
Cobalt	ND		39	0.62	mg/Kg	✱	04/16/21 08:00	04/19/21 13:44	5
Iron	ND		78	46	mg/Kg	✱	04/16/21 08:00	04/19/21 13:44	5
<b>Lithium</b>	<b>5.0</b>	<b>J B</b>	39	2.3	mg/Kg	✱	04/16/21 08:00	04/19/21 13:44	5

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# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1**

Date Collected: 03/19/21 09:21

Matrix: Solid

Date Received: 03/20/21 09:40

Percent Solids: 96.1

**Method: 6010B SEP - SEP Metals (ICP) - Step 5 (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		12	1.9	mg/Kg	☼	04/16/21 08:00	04/19/21 13:44	5
Selenium	ND		7.8	2.7	mg/Kg	☼	04/16/21 08:00	04/19/21 13:44	5

**Method: 6010B SEP - SEP Metals (ICP) - Step 6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	15000		10	1.7	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1
Beryllium	0.22	J	0.26	0.012	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1
Cadmium	ND		0.26	0.011	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1
Cobalt	5.9		5.2	0.096	mg/Kg	☼	04/16/21 08:00	04/19/21 14:40	2
Iron	14000		5.2	3.0	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1
Li	7.5		2.6	0.16	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1
Manganese	170		0.78	0.26	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1
Selenium	0.38	J	0.52	0.18	mg/Kg	☼	04/16/21 08:00	04/19/21 14:23	1

**Method: 6010B SEP - SEP Metals (ICP) - Step 7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8600	B	100	17	mg/Kg	☼	04/19/21 08:00	04/20/21 15:11	10
Beryllium	0.44		0.26	0.0078	mg/Kg	☼	04/19/21 08:00	04/20/21 15:49	1
Cadmium	ND		0.26	0.011	mg/Kg	☼	04/19/21 08:00	04/20/21 15:49	1
Cobalt	6.4	J	13	0.14	mg/Kg	☼	04/19/21 08:00	04/20/21 16:46	5
Iron	18000		5.2	4.3	mg/Kg	☼	04/19/21 08:00	04/20/21 15:49	1
Lithium	1.7	J	2.6	0.16	mg/Kg	☼	04/19/21 08:00	04/20/21 15:49	1
Manganese	390	B	0.78	0.11	mg/Kg	☼	04/19/21 08:00	04/20/21 15:49	1
Selenium	0.67		0.52	0.18	mg/Kg	☼	04/19/21 08:00	04/20/21 15:49	1

**Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	25000		10	1.6	mg/Kg			04/21/21 13:55	1
Beryllium	1.2		0.25	0.0075	mg/Kg			04/21/21 13:55	1
Cadmium	0.015	J	0.25	0.011	mg/Kg			04/21/21 13:55	1
Cobalt	17		2.5	0.023	mg/Kg			04/21/21 13:55	1
Iron	39000		5.0	4.1	mg/Kg			04/21/21 13:55	1
Lithium	15		2.5	0.15	mg/Kg			04/21/21 13:55	1
Manganese	780		0.75	0.052	mg/Kg			04/21/21 13:55	1
Selenium	1.7		0.50	0.17	mg/Kg			04/21/21 13:55	1

**Method: 6010B - SEP Metals (ICP) - Total**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	72000		100	17	mg/Kg	☼	04/08/21 08:00	04/20/21 15:35	10
Beryllium	1.2		0.52	0.016	mg/Kg	☼	04/08/21 08:00	04/20/21 17:00	2
Cadmium	ND		1.3	0.057	mg/Kg	☼	04/08/21 08:00	04/20/21 17:15	5
Cobalt	18		13	0.14	mg/Kg	☼	04/08/21 08:00	04/20/21 17:15	5
Iron	42000		26	21	mg/Kg	☼	04/08/21 08:00	04/20/21 17:15	5
Lithium	15		13	0.78	mg/Kg	☼	04/08/21 08:00	04/20/21 17:15	5
Manganese	660		1.6	0.23	mg/Kg	☼	04/08/21 08:00	04/20/21 17:00	2
Selenium	1.6	J	2.6	0.88	mg/Kg	☼	04/08/21 08:00	04/20/21 17:15	5

# Default Detection Limits

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) - Step 1

Prep: 3010A

SEP: Exchangeable

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.077	mg/Kg
Cadmium	0.25	0.016	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.031	mg/Kg
Selenium	0.50	0.17	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 2

Prep: 3010A

SEP: Carbonate

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.016	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.063	mg/Kg
Iron	5.0	2.9	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.28	mg/Kg
Selenium	0.50	0.17	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 3

Prep: 3010A

SEP: Non-Crystalline

Analyte	RL	MDL	Units
Aluminum	10	2.1	mg/Kg
Beryllium	0.25	0.015	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.045	mg/Kg
Iron	5.0	2.9	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.027	mg/Kg
Selenium	0.50	0.17	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 4

Prep: 3010A

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.016	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.053	mg/Kg
Iron	5.0	2.9	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.13	mg/Kg
Selenium	0.50	0.47	mg/Kg

## Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

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## Default Detection Limits

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

### Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Aluminum	30	4.7	mg/Kg
Beryllium	0.75	0.063	mg/Kg
Cadmium	0.75	0.032	mg/Kg
Cobalt	7.5	0.12	mg/Kg
Iron	15	8.8	mg/Kg
Lithium	7.5	0.44	mg/Kg
Manganese	2.3	0.37	mg/Kg
Selenium	1.5	0.52	mg/Kg

### Method: 6010B SEP - SEP Metals (ICP) - Step 6

SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.012	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.046	mg/Kg
Iron	5.0	2.9	mg/Kg
Li	2.5	0.15	mg/Kg
Manganese	0.75	0.25	mg/Kg
Selenium	0.50	0.17	mg/Kg

### Method: 6010B SEP - SEP Metals (ICP) - Step 7

Prep: Residual

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.0075	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.026	mg/Kg
Iron	5.0	4.1	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.11	mg/Kg
Selenium	0.50	0.17	mg/Kg

### Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.0075	mg/Kg
Cadmium	0.25	0.011	mg/Kg
Cobalt	2.5	0.023	mg/Kg
Iron	5.0	4.1	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.052	mg/Kg
Selenium	0.50	0.17	mg/Kg

### Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Aluminum	10	1.6	mg/Kg
Beryllium	0.25	0.0075	mg/Kg
Cadmium	0.25	0.011	mg/Kg

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# Default Detection Limits

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B - SEP Metals (ICP) - Total (Continued)

### Prep: Total

Analyte	RL	MDL	Units
Cobalt	2.5	0.026	mg/Kg
Iron	5.0	4.1	mg/Kg
Lithium	2.5	0.15	mg/Kg
Manganese	0.75	0.11	mg/Kg
Selenium	0.50	0.17	mg/Kg

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# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B - SEP Metals (ICP) - Total

**Lab Sample ID: MB 140-48595/3-A**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 48595**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Beryllium	ND		0.25	0.0075	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Cadmium	ND		0.25	0.011	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Cobalt	ND		2.5	0.026	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Iron	ND		5.0	4.1	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Lithium	ND		2.5	0.15	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Manganese	ND		0.75	0.11	mg/Kg		04/08/21 08:00	04/20/21 14:46	1
Selenium	ND		0.50	0.17	mg/Kg		04/08/21 08:00	04/20/21 14:46	1

**Lab Sample ID: LCS 140-48595/4-A**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 48595**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	99.9		mg/Kg		100	80 - 120
Beryllium	2.50	2.51		mg/Kg		101	80 - 120
Cadmium	2.50	2.56		mg/Kg		102	80 - 125
Cobalt	5.00	5.11		mg/Kg		102	80 - 125
Iron	50.0	52.7		mg/Kg		105	80 - 120
Lithium	5.00	4.88		mg/Kg		98	80 - 120
Manganese	5.00	5.15		mg/Kg		103	80 - 120
Selenium	7.50	7.22		mg/Kg		96	80 - 120

**Lab Sample ID: LCSD 140-48595/5-A**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 48595**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	98.4		mg/Kg		98	80 - 120	1	30
Beryllium	2.50	2.49		mg/Kg		99	80 - 120	1	30
Cadmium	2.50	2.55		mg/Kg		102	80 - 125	0	30
Cobalt	5.00	5.09		mg/Kg		102	80 - 125	0	30
Iron	50.0	51.2		mg/Kg		102	80 - 120	3	30
Lithium	5.00	4.78		mg/Kg		96	80 - 120	2	30
Manganese	5.00	5.09		mg/Kg		102	80 - 120	1	30
Selenium	7.50	7.26		mg/Kg		97	80 - 120	0	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Total/NA**  
**Prep Batch: 48595**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	72000		70700		mg/Kg	✱	2	30

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B - SEP Metals (ICP) - Total (Continued)

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Total/NA**  
**Prep Batch: 48595**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Beryllium	1.2		1.18		mg/Kg	☼	2	30
Manganese	660		673		mg/Kg	☼	2	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Total/NA**  
**Prep Batch: 48595**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Cadmium	ND		ND		mg/Kg	☼	NC	30
Cobalt	18		18.1		mg/Kg	☼	2	30
Iron	42000		42500		mg/Kg	☼	0.6	30
Lithium	15		14.9		mg/Kg	☼	0.5	30
Selenium	1.6 J		1.01 J F5		mg/Kg	☼	42	30

## Method: 6010B SEP - SEP Metals (ICP)

**Lab Sample ID: MB 140-48597/3-B ^4**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Method Blank**  
**Prep Type: Step 1**  
**Prep Batch: 48654**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	ND		40	6.4	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Beryllium	ND		1.0	0.31	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Cadmium	ND		1.0	0.064	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Cobalt	ND		10	0.18	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Iron	ND		20	12	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Lithium	ND		10	0.60	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Manganese	ND		3.0	0.12	mg/Kg		04/09/21 08:00	04/15/21 11:42	4
Selenium	ND		2.0	0.68	mg/Kg		04/09/21 08:00	04/15/21 11:42	4

**Lab Sample ID: LCS 140-48597/4-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 1**  
**Prep Batch: 48654**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	2.50	2.57		mg/Kg		103	80 - 120
Cadmium	2.50	2.41		mg/Kg		97	80 - 120
Cobalt	5.00	4.91 J		mg/Kg		98	80 - 120
Iron	50.0	52.6		mg/Kg		105	80 - 120
Lithium	5.00	5.27 J		mg/Kg		105	80 - 120
Manganese	5.00	5.13		mg/Kg		103	80 - 120
Selenium	7.50	7.57		mg/Kg		101	80 - 120

**Lab Sample ID: LCSD 140-48597/5-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 1**  
**Prep Batch: 48654**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit

Eurofins TestAmerica, Knoxville

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: LCSD 140-48597/5-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 1**  
**Prep Batch: 48654**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	2.50	2.61		mg/Kg		104	80 - 120	1	30
Cadmium	2.50	2.44		mg/Kg		98	80 - 120	1	30
Cobalt	5.00	4.90	J	mg/Kg		98	80 - 120	0	30
Iron	50.0	51.6		mg/Kg		103	80 - 120	2	30
Lithium	5.00	5.15	J	mg/Kg		103	80 - 120	2	30
Manganese	5.00	5.21		mg/Kg		104	80 - 120	2	30
Selenium	7.50	7.71		mg/Kg		103	80 - 120	2	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 1**  
**Prep Batch: 48654**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	ND		ND		mg/Kg	✖	NC	30
Beryllium	ND		ND		mg/Kg	✖	NC	30
Cadmium	ND		ND		mg/Kg	✖	NC	30
Cobalt	ND		ND		mg/Kg	✖	NC	30
Iron	ND		ND		mg/Kg	✖	NC	30
Lithium	ND		ND		mg/Kg	✖	NC	30
Manganese	11		11.3		mg/Kg	✖	3	30
Selenium	ND		ND		mg/Kg	✖	NC	30

**Lab Sample ID: MB 140-48655/3-B ^3**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Method Blank**  
**Prep Type: Step 2**  
**Prep Batch: 48695**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		30	4.8	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Beryllium	ND		0.75	0.048	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Cadmium	ND		0.75	0.033	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Cobalt	ND		7.5	0.19	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Iron	ND		15	8.7	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Lithium	ND		7.5	0.45	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Manganese	ND		2.3	0.84	mg/Kg		04/12/21 08:00	04/15/21 12:11	3
Selenium	ND		1.5	0.51	mg/Kg		04/12/21 08:00	04/15/21 12:11	3

**Lab Sample ID: LCS 140-48655/4-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 2**  
**Prep Batch: 48695**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	ND		mg/Kg		-4	
Beryllium	2.50	1.27	J	mg/Kg		51	40 - 70
Cadmium	2.50	2.27		mg/Kg		91	80 - 120
Cobalt	5.00	4.46	J	mg/Kg		89	80 - 120
Iron	50.0	ND		mg/Kg		2	
Lithium	5.00	4.57	J	mg/Kg		91	80 - 120
Manganese	5.00	4.67		mg/Kg		93	80 - 120
Selenium	7.50	6.78		mg/Kg		90	70 - 120

Eurofins TestAmerica, Knoxville

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: LCSD 140-48655/5-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 2**  
**Prep Batch: 48695**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	ND		mg/Kg		-4		4	
Beryllium	2.50	1.22	J	mg/Kg		49	40 - 70	4	30
Cadmium	2.50	2.19		mg/Kg		88	80 - 120	4	30
Cobalt	5.00	4.32	J	mg/Kg		86	80 - 120	3	30
Iron	50.0	ND		mg/Kg		4		52	
Lithium	5.00	4.56	J	mg/Kg		91	80 - 120	0	30
Manganese	5.00	4.54		mg/Kg		91	80 - 120	3	30
Selenium	7.50	5.46		mg/Kg		73	70 - 120	22	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 2**  
**Prep Batch: 48695**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	9.6	J	8.45	J	mg/Kg	☼	12	
Beryllium	ND		ND		mg/Kg	☼	NC	30
Cadmium	ND		ND		mg/Kg	☼	NC	30
Cobalt	ND		ND		mg/Kg	☼	NC	30
Iron	ND		ND		mg/Kg	☼	NC	
Lithium	ND		0.541	J	mg/Kg	☼	NC	30
Manganese	4.3		4.41		mg/Kg	☼	2	30
Selenium	ND		ND		mg/Kg	☼	NC	30

**Lab Sample ID: MB 140-48696/3-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Method Blank**  
**Prep Type: Step 3**  
**Prep Batch: 48739**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	2.1	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Beryllium	ND		0.25	0.015	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Cadmium	0.0685	J	0.25	0.011	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Cobalt	ND		2.5	0.045	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Iron	ND		5.0	2.9	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Lithium	ND		2.5	0.15	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Manganese	0.112	J	0.75	0.027	mg/Kg		04/13/21 08:00	04/15/21 12:50	1
Selenium	ND		0.50	0.17	mg/Kg		04/13/21 08:00	04/15/21 12:50	1

**Lab Sample ID: LCS 140-48696/4-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 3**  
**Prep Batch: 48739**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	96.2		mg/Kg		96	80 - 120
Beryllium	2.50	2.53		mg/Kg		101	80 - 120
Cadmium	2.50	0.656		mg/Kg		26	10 - 120
Cobalt	5.00	4.82		mg/Kg		96	80 - 120
Iron	50.0	49.8		mg/Kg		100	80 - 120
Lithium	5.00	4.72		mg/Kg		94	80 - 120
Manganese	5.00	5.13		mg/Kg		103	80 - 120

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# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: LCS 140-48696/4-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 3**  
**Prep Batch: 48739**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	7.50	7.16		mg/Kg		95	80 - 120

**Lab Sample ID: LCSD 140-48696/5-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 3**  
**Prep Batch: 48739**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	95.4		mg/Kg		95	80 - 120	1	30
Beryllium	2.50	2.52		mg/Kg		101	80 - 120	1	30
Cadmium	2.50	0.649		mg/Kg		26	10 - 120	1	30
Cobalt	5.00	4.78		mg/Kg		96	80 - 120	1	30
Iron	50.0	49.2		mg/Kg		98	80 - 120	1	30
Lithium	5.00	4.69		mg/Kg		94	80 - 120	1	30
Manganese	5.00	4.94		mg/Kg		99	80 - 120	4	30
Selenium	7.50	7.04		mg/Kg		94	80 - 120	2	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 3**  
**Prep Batch: 48739**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	100		105		mg/Kg	⊛	3	30
Beryllium	0.055	J	0.0541	J	mg/Kg	⊛	1	30
Cadmium	0.015	J B	0.0161	J	mg/Kg	⊛	7	30
Cobalt	2.3	J	2.31	J	mg/Kg	⊛	0.5	30
Iron	210		204		mg/Kg	⊛	0.6	30
Lithium	ND		ND		mg/Kg	⊛	NC	30
Manganese	85	B	84.5		mg/Kg	⊛	0.4	30
Selenium	ND		ND		mg/Kg	⊛	NC	30

**Lab Sample ID: MB 140-48740/3-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Method Blank**  
**Prep Type: Step 4**  
**Prep Batch: 48783**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Beryllium	ND		0.25	0.016	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Cadmium	ND		0.25	0.011	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Cobalt	ND		2.5	0.053	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Iron	ND		5.0	2.9	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Lithium	ND		2.5	0.15	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Manganese	ND		0.75	0.13	mg/Kg		04/14/21 08:00	04/15/21 13:29	1
Selenium	ND		0.50	0.47	mg/Kg		04/14/21 08:00	04/15/21 13:29	1

**Lab Sample ID: LCS 140-48740/4-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 4**  
**Prep Batch: 48783**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	96.3		mg/Kg		96	80 - 120

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# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: LCS 140-48740/4-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 4**  
**Prep Batch: 48783**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	2.50	2.59		mg/Kg		103	80 - 120
Cadmium	2.50	2.47		mg/Kg		99	80 - 120
Cobalt	5.00	4.93		mg/Kg		99	80 - 120
Iron	50.0	49.9		mg/Kg		100	80 - 120
Lithium	5.00	4.80		mg/Kg		96	80 - 120
Manganese	5.00	5.02		mg/Kg		100	80 - 120
Selenium	7.50	ND		mg/Kg		4	

**Lab Sample ID: LCSD 140-48740/5-B**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 4**  
**Prep Batch: 48783**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	97.2		mg/Kg		97	80 - 120	1	30
Beryllium	2.50	2.59		mg/Kg		104	80 - 120	0	30
Cadmium	2.50	2.45		mg/Kg		98	80 - 120	1	30
Cobalt	5.00	4.88		mg/Kg		98	80 - 120	1	30
Iron	50.0	50.0		mg/Kg		100	80 - 120	0	30
Lithium	5.00	4.84		mg/Kg		97	80 - 120	1	30
Manganese	5.00	5.16		mg/Kg		103	80 - 120	3	30
Selenium	7.50	ND		mg/Kg		5		16	

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48880**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 4**  
**Prep Batch: 48783**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	1700		1740		mg/Kg	✖	2	30
Beryllium	0.44		0.442		mg/Kg	✖	0.6	30
Cadmium	ND		ND		mg/Kg	✖	NC	30
Cobalt	2.5 J		2.38 J		mg/Kg	✖	6	30
Iron	6400		6410		mg/Kg	✖	0.2	30
Lithium	0.70 J		0.642 J		mg/Kg	✖	9	30
Manganese	120		112		mg/Kg	✖	7	30
Selenium	0.61		ND		mg/Kg	✖	NC	

**Lab Sample ID: MB 140-48784/3-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Method Blank**  
**Prep Type: Step 5**  
**Prep Batch: 48867**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	33.2 J		150	24	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Beryllium	ND		3.8	0.32	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Cadmium	ND		3.8	0.16	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Cobalt	ND		38	0.60	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Iron	ND		75	44	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Lithium	5.37 J		38	2.2	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Manganese	ND		11	1.9	mg/Kg		04/16/21 08:00	04/19/21 13:29	5
Selenium	ND		7.5	2.6	mg/Kg		04/16/21 08:00	04/19/21 13:29	5

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# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: LCS 140-48784/4-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 5**  
**Prep Batch: 48867**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	300	48.5	J	mg/Kg		16	
Beryllium	7.50	3.37	J	mg/Kg		45	40 - 70
Cadmium	7.50	7.15		mg/Kg		95	80 - 130
Cobalt	15.0	2.64	J	mg/Kg		18	1 - 60
Iron	150	ND		mg/Kg		1	
Lithium	15.0	18.3	J	mg/Kg		122	80 - 150
Manganese	15.0	2.69	J	mg/Kg		18	1 - 60
Selenium	22.5	21.7		mg/Kg		96	80 - 140

**Lab Sample ID: LCSD 140-48784/5-B ^5**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 5**  
**Prep Batch: 48867**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	300	30.4	J	mg/Kg		10		46	
Beryllium	7.50	3.35	J	mg/Kg		45	40 - 70	1	30
Cadmium	7.50	7.18		mg/Kg		96	80 - 130	0	30
Cobalt	15.0	2.71	J	mg/Kg		18	1 - 60	3	30
Iron	150	ND		mg/Kg		5		127	
Lithium	15.0	17.9	J	mg/Kg		119	80 - 150	2	30
Manganese	15.0	2.84	J	mg/Kg		19	1 - 60	5	30
Selenium	22.5	21.6		mg/Kg		96	80 - 140	0	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 5**  
**Prep Batch: 48867**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	260	B	238		mg/Kg	✱	8	
Beryllium	ND		ND		mg/Kg	✱	NC	30
Cadmium	ND		ND		mg/Kg	✱	NC	30
Cobalt	ND		ND		mg/Kg	✱	NC	30
Iron	ND		ND		mg/Kg	✱	NC	
Lithium	5.0	J B	5.13	J	mg/Kg	✱	3	30
Manganese	ND		ND		mg/Kg	✱	NC	30
Selenium	ND		ND		mg/Kg	✱	NC	30

**Lab Sample ID: MB 140-48875/3-A**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Method Blank**  
**Prep Type: Step 6**  
**Prep Batch: 48875**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	1.6	mg/Kg		04/16/21 08:00	04/19/21 14:09	1
Beryllium	ND		0.25	0.012	mg/Kg		04/16/21 08:00	04/19/21 14:09	1
Cadmium	ND		0.25	0.011	mg/Kg		04/16/21 08:00	04/19/21 14:09	1
Cobalt	ND		2.5	0.046	mg/Kg		04/16/21 08:00	04/19/21 14:09	1
Iron	ND		5.0	2.9	mg/Kg		04/16/21 08:00	04/19/21 14:09	1
Li	ND		2.5	0.15	mg/Kg		04/16/21 08:00	04/19/21 14:09	1
Manganese	ND		0.75	0.25	mg/Kg		04/16/21 08:00	04/19/21 14:09	1

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# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: MB 140-48875/3-A**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Method Blank**  
**Prep Type: Step 6**  
**Prep Batch: 48875**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.50	0.17	mg/Kg		04/16/21 08:00	04/19/21 14:09	1

**Lab Sample ID: LCS 140-48875/4-A**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 6**  
**Prep Batch: 48875**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	100	99.7		mg/Kg		100	80 - 120
Beryllium	2.50	2.62		mg/Kg		105	80 - 120
Cadmium	2.50	2.51		mg/Kg		100	80 - 120
Cobalt	5.00	4.93		mg/Kg		99	80 - 120
Iron	50.0	50.1		mg/Kg		100	80 - 120
Li	5.00	4.78		mg/Kg		96	80 - 120
Manganese	5.00	5.07		mg/Kg		101	80 - 120
Selenium	7.50	7.42		mg/Kg		99	80 - 120

**Lab Sample ID: LCSD 140-48875/5-A**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 6**  
**Prep Batch: 48875**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	100	97.2		mg/Kg		97	80 - 120	3	30
Beryllium	2.50	2.54		mg/Kg		102	80 - 120	3	30
Cadmium	2.50	2.43		mg/Kg		97	80 - 120	3	30
Cobalt	5.00	4.76		mg/Kg		95	80 - 120	3	30
Iron	50.0	48.6		mg/Kg		97	80 - 120	3	30
Li	5.00	4.60		mg/Kg		92	80 - 120	4	30
Manganese	5.00	4.92		mg/Kg		98	80 - 120	3	30
Selenium	7.50	7.11		mg/Kg		95	80 - 120	4	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 6**  
**Prep Batch: 48875**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	15000		14000		mg/Kg	⊛	5	30
Beryllium	0.22	J	0.210	J	mg/Kg	⊛	5	30
Cadmium	ND		ND		mg/Kg	⊛	NC	30
Iron	14000		13900		mg/Kg	⊛	2	30
Li	7.5		7.55		mg/Kg	⊛	1	30
Manganese	170		166		mg/Kg	⊛	3	30
Selenium	0.38	J	0.434	J	mg/Kg	⊛	14	30

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 48970**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 6**  
**Prep Batch: 48875**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cobalt	5.9		5.81		mg/Kg	⊛	1	30

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# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: MB 140-48911/3-A**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: Method Blank**  
**Prep Type: Step 7**  
**Prep Batch: 48911**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	1.75	J	10	1.6	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Beryllium	ND		0.25	0.0075	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Cadmium	ND		0.25	0.011	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Cobalt	ND		2.5	0.026	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Iron	ND		5.0	4.1	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Lithium	ND		2.5	0.15	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Manganese	0.139	J	0.75	0.11	mg/Kg		04/19/21 08:00	04/20/21 14:32	1
Selenium	ND		0.50	0.17	mg/Kg		04/19/21 08:00	04/20/21 14:32	1

**Lab Sample ID: LCS 140-48911/4-A**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Step 7**  
**Prep Batch: 48911**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Aluminum	100	100		mg/Kg		100	80 - 120	
Beryllium	2.50	2.51		mg/Kg		100	80 - 120	
Cadmium	2.50	2.56		mg/Kg		102	80 - 125	
Cobalt	5.00	5.10		mg/Kg		102	80 - 125	
Iron	50.0	52.8		mg/Kg		106	80 - 120	
Lithium	5.00	4.83		mg/Kg		97	80 - 120	
Manganese	5.00	5.15		mg/Kg		103	80 - 120	
Selenium	7.50	7.26		mg/Kg		97	80 - 120	

**Lab Sample ID: LCSD 140-48911/5-A**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Step 7**  
**Prep Batch: 48911**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits		RPD	Limit
Aluminum	100	99.4		mg/Kg		99	80 - 120	1	30	
Beryllium	2.50	2.49		mg/Kg		100	80 - 120	1	30	
Cadmium	2.50	2.55		mg/Kg		102	80 - 125	0	30	
Cobalt	5.00	5.07		mg/Kg		101	80 - 125	1	30	
Iron	50.0	51.5		mg/Kg		103	80 - 120	2	30	
Lithium	5.00	4.74		mg/Kg		95	80 - 120	2	30	
Manganese	5.00	5.15		mg/Kg		103	80 - 120	0	30	
Selenium	7.50	7.16		mg/Kg		95	80 - 120	1	30	

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 7**  
**Prep Batch: 48911**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD	
								RPD	Limit
Aluminum	8600	B	7880		mg/Kg	☼	9	30	

# QC Sample Results

Client: Golder Associates Inc.  
 Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Method: 6010B SEP - SEP Metals (ICP) (Continued)

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 7**  
**Prep Batch: 48911**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Beryllium	0.44		0.519		mg/Kg	☼	17	30	
Cadmium	ND		ND		mg/Kg	☼	NC	30	
Iron	18000		17900		mg/Kg	☼	0.5	30	
Lithium	1.7	J	1.46	J	mg/Kg	☼	14	30	
Manganese	390	B	392		mg/Kg	☼	2	30	
Selenium	0.67		0.614		mg/Kg	☼	9	30	

**Lab Sample ID: 140-22369-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 49029**

**Client Sample ID: PZ-51S-40-45'**  
**Prep Type: Step 7**  
**Prep Batch: 48911**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Cobalt	6.4	J	6.43	J	mg/Kg	☼	0.2	30	



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Metals

### Prep Batch: 48595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Total/NA	Solid	Total	
MB 140-48595/3-A	Method Blank	Total/NA	Solid	Total	
LCS 140-48595/4-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-48595/5-A	Lab Control Sample Dup	Total/NA	Solid	Total	
140-22369-1 DU	PZ-51S-40-45'	Total/NA	Solid	Total	

### SEP Batch: 48597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 1	Solid	Exchangeable	
MB 140-48597/3-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-48597/4-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-48597/5-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	
140-22369-1 DU	PZ-51S-40-45'	Step 1	Solid	Exchangeable	

### Prep Batch: 48654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 1	Solid	3010A	48597
MB 140-48597/3-B ^4	Method Blank	Step 1	Solid	3010A	48597
LCS 140-48597/4-B ^5	Lab Control Sample	Step 1	Solid	3010A	48597
LCSD 140-48597/5-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	48597
140-22369-1 DU	PZ-51S-40-45'	Step 1	Solid	3010A	48597

### SEP Batch: 48655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 2	Solid	Carbonate	
MB 140-48655/3-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-48655/4-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-48655/5-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	
140-22369-1 DU	PZ-51S-40-45'	Step 2	Solid	Carbonate	

### Prep Batch: 48695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 2	Solid	3010A	48655
MB 140-48655/3-B ^3	Method Blank	Step 2	Solid	3010A	48655
LCS 140-48655/4-B ^5	Lab Control Sample	Step 2	Solid	3010A	48655
LCSD 140-48655/5-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	48655
140-22369-1 DU	PZ-51S-40-45'	Step 2	Solid	3010A	48655

### SEP Batch: 48696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 3	Solid	Non-Crystalline	
MB 140-48696/3-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-48696/4-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-48696/5-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	
140-22369-1 DU	PZ-51S-40-45'	Step 3	Solid	Non-Crystalline	

### Prep Batch: 48739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 3	Solid	3010A	48696
MB 140-48696/3-B	Method Blank	Step 3	Solid	3010A	48696
LCS 140-48696/4-B	Lab Control Sample	Step 3	Solid	3010A	48696

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# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Metals (Continued)

### Prep Batch: 48739 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 140-48696/5-B	Lab Control Sample Dup	Step 3	Solid	3010A	48696
140-22369-1 DU	PZ-51S-40-45'	Step 3	Solid	3010A	48696

### SEP Batch: 48740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 4	Solid	Metal Hydroxide	
MB 140-48740/3-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-48740/4-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-48740/5-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	
140-22369-1 DU	PZ-51S-40-45'	Step 4	Solid	Metal Hydroxide	

### Prep Batch: 48783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 4	Solid	3010A	48740
MB 140-48740/3-B	Method Blank	Step 4	Solid	3010A	48740
LCS 140-48740/4-B	Lab Control Sample	Step 4	Solid	3010A	48740
LCSD 140-48740/5-B	Lab Control Sample Dup	Step 4	Solid	3010A	48740
140-22369-1 DU	PZ-51S-40-45'	Step 4	Solid	3010A	48740

### SEP Batch: 48784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 5	Solid	Organic-Bound	
MB 140-48784/3-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-48784/4-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-48784/5-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	
140-22369-1 DU	PZ-51S-40-45'	Step 5	Solid	Organic-Bound	

### Prep Batch: 48867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 5	Solid	3010A	48784
MB 140-48784/3-B ^5	Method Blank	Step 5	Solid	3010A	48784
LCS 140-48784/4-B ^5	Lab Control Sample	Step 5	Solid	3010A	48784
LCSD 140-48784/5-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	48784
140-22369-1 DU	PZ-51S-40-45'	Step 5	Solid	3010A	48784

### SEP Batch: 48875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 6	Solid	Acid/Sulfide	
MB 140-48875/3-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-48875/4-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-48875/5-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	
140-22369-1 DU	PZ-51S-40-45'	Step 6	Solid	Acid/Sulfide	

### Analysis Batch: 48880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 1	Solid	6010B SEP	48654
140-22369-1	PZ-51S-40-45'	Step 2	Solid	6010B SEP	48695
140-22369-1	PZ-51S-40-45'	Step 3	Solid	6010B SEP	48739
140-22369-1	PZ-51S-40-45'	Step 4	Solid	6010B SEP	48783
MB 140-48597/3-B ^4	Method Blank	Step 1	Solid	6010B SEP	48654
MB 140-48655/3-B ^3	Method Blank	Step 2	Solid	6010B SEP	48695

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# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Metals (Continued)

### Analysis Batch: 48880 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-48696/3-B	Method Blank	Step 3	Solid	6010B SEP	48739
MB 140-48740/3-B	Method Blank	Step 4	Solid	6010B SEP	48783
LCS 140-48597/4-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	48654
LCS 140-48655/4-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	48695
LCS 140-48696/4-B	Lab Control Sample	Step 3	Solid	6010B SEP	48739
LCS 140-48740/4-B	Lab Control Sample	Step 4	Solid	6010B SEP	48783
LCSD 140-48597/5-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	48654
LCSD 140-48655/5-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	48695
LCSD 140-48696/5-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	48739
LCSD 140-48740/5-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	48783
140-22369-1 DU	PZ-51S-40-45'	Step 1	Solid	6010B SEP	48654
140-22369-1 DU	PZ-51S-40-45'	Step 2	Solid	6010B SEP	48695
140-22369-1 DU	PZ-51S-40-45'	Step 3	Solid	6010B SEP	48739
140-22369-1 DU	PZ-51S-40-45'	Step 4	Solid	6010B SEP	48783

### Prep Batch: 48911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 7	Solid	Residual	
MB 140-48911/3-A	Method Blank	Step 7	Solid	Residual	
LCS 140-48911/4-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-48911/5-A	Lab Control Sample Dup	Step 7	Solid	Residual	
140-22369-1 DU	PZ-51S-40-45'	Step 7	Solid	Residual	

### Analysis Batch: 48970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 5	Solid	6010B SEP	48867
140-22369-1	PZ-51S-40-45'	Step 6	Solid	6010B SEP	48875
140-22369-1	PZ-51S-40-45'	Step 6	Solid	6010B SEP	48875
MB 140-48784/3-B ^5	Method Blank	Step 5	Solid	6010B SEP	48867
MB 140-48875/3-A	Method Blank	Step 6	Solid	6010B SEP	48875
LCS 140-48784/4-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	48867
LCS 140-48875/4-A	Lab Control Sample	Step 6	Solid	6010B SEP	48875
LCSD 140-48784/5-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	48867
LCSD 140-48875/5-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	48875
140-22369-1 DU	PZ-51S-40-45'	Step 5	Solid	6010B SEP	48867
140-22369-1 DU	PZ-51S-40-45'	Step 6	Solid	6010B SEP	48875
140-22369-1 DU	PZ-51S-40-45'	Step 6	Solid	6010B SEP	48875

### Analysis Batch: 49029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Step 7	Solid	6010B SEP	48911
140-22369-1	PZ-51S-40-45'	Step 7	Solid	6010B SEP	48911
140-22369-1	PZ-51S-40-45'	Step 7	Solid	6010B SEP	48911
140-22369-1	PZ-51S-40-45'	Total/NA	Solid	6010B	48595
140-22369-1	PZ-51S-40-45'	Total/NA	Solid	6010B	48595
140-22369-1	PZ-51S-40-45'	Total/NA	Solid	6010B	48595
MB 140-48595/3-A	Method Blank	Total/NA	Solid	6010B	48595
MB 140-48911/3-A	Method Blank	Step 7	Solid	6010B SEP	48911
LCS 140-48595/4-A	Lab Control Sample	Total/NA	Solid	6010B	48595
LCS 140-48911/4-A	Lab Control Sample	Step 7	Solid	6010B SEP	48911
LCSD 140-48595/5-A	Lab Control Sample Dup	Total/NA	Solid	6010B	48595

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# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Metals (Continued)

### Analysis Batch: 49029 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 140-48911/5-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	48911
140-22369-1 DU	PZ-51S-40-45'	Step 7	Solid	6010B SEP	48911
140-22369-1 DU	PZ-51S-40-45'	Step 7	Solid	6010B SEP	48911
140-22369-1 DU	PZ-51S-40-45'	Step 7	Solid	6010B SEP	48911
140-22369-1 DU	PZ-51S-40-45'	Total/NA	Solid	6010B	48595
140-22369-1 DU	PZ-51S-40-45'	Total/NA	Solid	6010B	48595
140-22369-1 DU	PZ-51S-40-45'	Total/NA	Solid	6010B	48595

### Analysis Batch: 49056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Sum of Steps 1-7	Solid	6010B SEP	

## General Chemistry

### Analysis Batch: 48557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22369-1	PZ-51S-40-45'	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1**

**Date Collected: 03/19/21 09:21**

**Matrix: Solid**

**Date Received: 03/20/21 09:40**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			49056	04/21/21 13:55	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			48557	04/06/21 14:48	BKD	TAL KNX
	Instrument ID: NOEQUIP									

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1**

**Date Collected: 03/19/21 09:21**

**Matrix: Solid**

**Date Received: 03/20/21 09:40**

**Percent Solids: 96.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			49029	04/20/21 15:35	KNC	TAL KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			49029	04/20/21 17:00	KNC	TAL KNX
	Instrument ID: DUO									
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			49029	04/20/21 17:15	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	48597	04/08/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	48654	04/09/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			48880	04/15/21 11:56	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	48655	04/09/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	48695	04/12/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			48880	04/15/21 12:26	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	48696	04/12/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	48739	04/13/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48880	04/15/21 13:04	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	48740	04/13/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	48783	04/14/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48880	04/15/21 13:43	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	48784	04/14/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	48867	04/16/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48970	04/19/21 13:44	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48970	04/19/21 14:23	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		2			48970	04/19/21 14:40	KNC	TAL KNX
	Instrument ID: DUO									

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# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1**

Date Collected: 03/19/21 09:21

Matrix: Solid

Date Received: 03/20/21 09:40

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			49029	04/20/21 15:11	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49029	04/20/21 15:49	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			49029	04/20/21 16:46	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-48595/3-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49029	04/20/21 14:46	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-48597/3-B ^4**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	48597	04/08/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	48654	04/09/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			48880	04/15/21 11:42	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-48655/3-B ^3**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	48655	04/09/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	48695	04/12/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			48880	04/15/21 12:11	KNC	TAL KNX
Instrument ID: DUO										



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Client Sample ID: Method Blank

Lab Sample ID: MB 140-48696/3-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	48696	04/12/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	48739	04/13/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48880	04/15/21 12:50	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Method Blank

Lab Sample ID: MB 140-48740/3-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	48740	04/13/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	48783	04/14/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48880	04/15/21 13:29	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Method Blank

Lab Sample ID: MB 140-48784/3-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	48784	04/14/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	48867	04/16/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48970	04/19/21 13:29	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Method Blank

Lab Sample ID: MB 140-48875/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48970	04/19/21 14:09	KNC	TAL KNX
Instrument ID: DUO										

## Client Sample ID: Method Blank

Lab Sample ID: MB 140-48911/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49029	04/20/21 14:32	KNC	TAL KNX
Instrument ID: DUO										

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48595/4-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49029	04/20/21 14:51	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48597/4-B ^5**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	48597	04/08/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	48654	04/09/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			48880	04/15/21 11:47	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48655/4-B ^5**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	48655	04/09/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	48695	04/12/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			48880	04/15/21 12:16	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48696/4-B**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	48696	04/12/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	48739	04/13/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48880	04/15/21 12:55	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48740/4-B**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	48740	04/13/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	48783	04/14/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48880	04/15/21 13:34	KNC	TAL KNX
Instrument ID: DUO										

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48784/4-B ^5**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	48784	04/14/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	48867	04/16/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48970	04/19/21 13:34	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48875/4-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48970	04/19/21 14:14	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-48911/4-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49029	04/20/21 14:37	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48595/5-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			49029	04/20/21 14:56	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48597/5-B ^5**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	48597	04/08/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	48654	04/09/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			48880	04/15/21 11:52	KNC	TAL KNX
Instrument ID: DUO										

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48655/5-B ^5**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	48655	04/09/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	48695	04/12/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			48880	04/15/21 12:21	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48696/5-B**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	48696	04/12/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	48739	04/13/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48880	04/15/21 13:00	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48740/5-B**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	48740	04/13/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	48783	04/14/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48880	04/15/21 13:38	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48784/5-B ^5**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	48784	04/14/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	48867	04/16/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48970	04/19/21 13:39	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48875/5-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48970	04/19/21 14:18	KNC	TAL KNX
Instrument ID: DUO										

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-48911/5-A**

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49029	04/20/21 14:41	KNC	TAL KNX
Instrument ID: DUO										

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1 DU**

Date Collected: 03/19/21 09:21

Matrix: Solid

Date Received: 03/20/21 09:40

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		10			49029	04/20/21 15:39	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			49029	04/20/21 17:05	KNC	TAL KNX
Instrument ID: DUO										
Total/NA	Prep	Total			1.000 g	50 mL	48595	04/08/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			49029	04/20/21 17:20	KNC	TAL KNX
Instrument ID: DUO										
Step 1	SEP	Exchangeable			5.000 g	25 mL	48597	04/08/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	48654	04/09/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			48880	04/15/21 12:01	KNC	TAL KNX
Instrument ID: DUO										
Step 2	SEP	Carbonate			5.000 g	25 mL	48655	04/09/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	48695	04/12/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			48880	04/15/21 12:40	KNC	TAL KNX
Instrument ID: DUO										
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	48696	04/12/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	48739	04/13/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			48880	04/15/21 13:09	KNC	TAL KNX
Instrument ID: DUO										
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	48740	04/13/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	48783	04/14/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			48880	04/15/21 13:48	KNC	TAL KNX
Instrument ID: DUO										
Step 5	SEP	Organic-Bound			5.000 g	75 mL	48784	04/14/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	48867	04/16/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			48970	04/19/21 13:49	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			48970	04/19/21 14:28	KNC	TAL KNX
Instrument ID: DUO										
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	48875	04/16/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		2			48970	04/19/21 14:45	KNC	TAL KNX
Instrument ID: DUO										

Eurofins TestAmerica, Knoxville

# Lab Chronicle

Client: Golder Associates Inc.  
 Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

**Client Sample ID: PZ-51S-40-45'**

**Lab Sample ID: 140-22369-1 DU**

**Date Collected: 03/19/21 09:21**

**Matrix: Solid**

**Date Received: 03/20/21 09:40**

**Percent Solids: 96.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		10			49029	04/20/21 15:30	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			49029	04/20/21 15:54	KNC	TAL KNX
Instrument ID: DUO										
Step 7	Prep	Residual			1.000 g	50 mL	48911	04/19/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		5			49029	04/20/21 16:50	KNC	TAL KNX
Instrument ID: DUO										

**Laboratory References:**

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

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# Accreditation/Certification Summary

Client: Golder Associates Inc.  
 Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

## Laboratory: Eurofins TestAmerica, Knoxville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	TNI0189	01-01-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6010B	Total	Solid	Aluminum
6010B	Total	Solid	Beryllium
6010B	Total	Solid	Cadmium
6010B	Total	Solid	Cobalt
6010B	Total	Solid	Iron
6010B	Total	Solid	Lithium
6010B	Total	Solid	Manganese
6010B	Total	Solid	Selenium
6010B SEP		Solid	Aluminum
6010B SEP		Solid	Beryllium
6010B SEP		Solid	Cadmium
6010B SEP		Solid	Cobalt
6010B SEP		Solid	Iron
6010B SEP		Solid	Lithium
6010B SEP		Solid	Manganese
6010B SEP		Solid	Selenium
6010B SEP	3010A	Solid	Aluminum
6010B SEP	3010A	Solid	Beryllium
6010B SEP	3010A	Solid	Cadmium
6010B SEP	3010A	Solid	Cobalt
6010B SEP	3010A	Solid	Iron
6010B SEP	3010A	Solid	Lithium
6010B SEP	3010A	Solid	Manganese
6010B SEP	3010A	Solid	Selenium
6010B SEP	Acid/Sulfide	Solid	Aluminum
6010B SEP	Acid/Sulfide	Solid	Beryllium
6010B SEP	Acid/Sulfide	Solid	Cadmium
6010B SEP	Acid/Sulfide	Solid	Cobalt
6010B SEP	Acid/Sulfide	Solid	Iron
6010B SEP	Acid/Sulfide	Solid	Li
6010B SEP	Acid/Sulfide	Solid	Manganese
6010B SEP	Acid/Sulfide	Solid	Selenium
6010B SEP	Residual	Solid	Aluminum
6010B SEP	Residual	Solid	Beryllium
6010B SEP	Residual	Solid	Cadmium
6010B SEP	Residual	Solid	Cobalt
6010B SEP	Residual	Solid	Iron
6010B SEP	Residual	Solid	Lithium
6010B SEP	Residual	Solid	Manganese
6010B SEP	Residual	Solid	Selenium
Moisture		Solid	Percent Moisture

# Method Summary

Client: Golder Associates Inc.  
Project/Site: SCS Site, Plant Branch

Job ID: 140-22369-1

Method	Method Description	Protocol	Laboratory
6010B	SEP Metals (ICP) - Total	SW846	TAL KNX
6010B SEP	SEP Metals (ICP)	SW846	TAL KNX
Moisture	Percent Moisture	EPA	TAL KNX
3010A	Preparation, Total Metals	SW846	TAL KNX
Acid/Sulfide	Sequential Extraction Procedure, Acid/Sulfide Fraction	TAL-KNOX	TAL KNX
Carbonate	Sequential Extraction Procedure, Carbonate Fraction	TAL-KNOX	TAL KNX
Exchangeable	Sequential Extraction Procedure, Exchangeable Fraction	TAL-KNOX	TAL KNX
Metal Hydroxide	Sequential Extraction Procedure, Metal Hydroxide Fraction	TAL-KNOX	TAL KNX
Non-Crystalline	Sequential Extraction Procedure, Non-crystalline Materials	TAL-KNOX	TAL KNX
Organic-Bound	Sequential Extraction Procedure, Organic Bound Fraction	TAL-KNOX	TAL KNX
Residual	Sequential Extraction Procedure, Residual Fraction	TAL-KNOX	TAL KNX
Total	Preparation, Total Material	TAL-KNOX	TAL KNX

#### Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

#### Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000



Chain of Custody Record

<b>Client Information</b> Client Contact: Brian Steele Phone: 470-512-3923 Company: Golder Associates Inc. Address: 5170 Peachtree Road Building 100, Suite 300 City: Atlanta State: GA, Zip: 30341 Phone: 470-512-3923 Email: Brian_Steale@golder.com Project Name: SCS Site, Plant Branch Site: Plant Branch		Sampler: Brian Steele, Chris Isbell Lab PM: Henry, Ryan Phone: 470-512-3923 E-Mail: williamr.henry@eurofinset.com PWSID:		Carmer Tracking No(s): State of Origin:		COC No: 140-9065-2761.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard Compliance Project: Yes No PO #: Purchase Order not required WO #:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No 6010B_SEP - SEP - Metals		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Identification PE-SIS-40-45		Sample Date: 3-19-21 Sample Time: 09:21 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=water/Oil, BT=Tissue, A=Air): S		Total Number of Containers:		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: <input checked="" type="checkbox"/> I, <input type="checkbox"/> II, <input type="checkbox"/> IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Date: 3-19-21 13:05 Date/Time: 3/19/21 13:43 Date/Time: 3/19/21 13:43		Method of Shipment:	
Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Received by: [Signature] Date/Time: 3/19/21 13:05 Company: EETA Received by: [Signature] Date/Time: 3/19/21 13:43 Company: EETA Received by: [Signature] Date/Time: 3/20/21 09:46 Company: EETA	



EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/				
2. Were ambient air containers received intact?				<input type="checkbox"/> Containers, Broken	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Checked in lab <input type="checkbox"/> Yes <input type="checkbox"/> NA	RT: 1.9°C, 67.1, 6°C, Cooler #1516 9328 8777 Fedex Swiss Seal intact KWS 2/27/21
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: SC79 Correction factor: -0.3	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received <input type="checkbox"/> COC; No Date/Time; Client Contacted	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> Sampler Not Listed on COC <input type="checkbox"/> COC Incorrect/Incomplete	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> COC No tests on COC <input type="checkbox"/> COC Incorrect/Incomplete	
11. Is the client and project name/# identified?	/				
12. Are tests/parameters listed for each sample?	/				
13. Is the matrix of the samples noted?	/				
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	/			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?	/			<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:	/				
19. For 1613B water samples is pH<9?	/			<input type="checkbox"/> If no, notify lab to adjust <input type="checkbox"/> Project missing info	
20. For rad samples was sample activity info. Provided?	/				
Project #: 19005864 PM Instructions:					
Sample Receiving Associate: <u>He W</u> Date: <u>2/20/21</u>					

QA026R32.doc, 062719



**APPENDIX A**

Groundwater

Analytical Results

May 03, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 02, 2021 and March 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tyler Forney for  
Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.

Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92524842001	BRGWA-6S	Water	03/01/21 16:30	03/02/21 10:05
92524842002	BRGWA-2I	Water	03/01/21 16:39	03/02/21 10:05
92524842003	BRGWA-5S	Water	03/02/21 09:29	03/03/21 10:03
92524842004	BRGWA-5I	Water	03/02/21 10:11	03/03/21 10:03
92524842005	BRGWA-2S	Water	03/02/21 12:05	03/03/21 10:03

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92524842001	BRGWA-6S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	JKG	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842002	BRGWA-2I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	JKG	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842003	BRGWA-5S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842004	BRGWA-5I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92524842005	BRGWA-2S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92524842001</b>	<b>BRGWA-6S</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.70	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.094	mg/L	0.040	03/03/21 17:44	
EPA 6010D	Manganese	0.0051J	mg/L	0.040	03/03/21 17:44	
EPA 6010D	Potassium	1.3	mg/L	0.20	03/03/21 17:44	
EPA 6010D	Sodium	3.0	mg/L	1.0	03/03/21 17:44	
EPA 6010D	Magnesium	3.8	mg/L	0.050	03/03/21 17:44	
EPA 6010D	Hardness, Total(SM 2340B)	26.1	mg/L	2.7	03/03/21 17:44	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	27.6	mg/L	5.0	03/12/21 16:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	27.6	mg/L	5.0	03/12/21 16:01	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.57	mg/L	0.040	03/06/21 12:19	
<b>92524842002</b>	<b>BRGWA-2I</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.66	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.64	mg/L	0.040	03/03/21 17:49	
EPA 6010D	Manganese	0.024J	mg/L	0.040	03/03/21 17:49	
EPA 6010D	Potassium	6.6	mg/L	0.20	03/03/21 17:49	
EPA 6010D	Sodium	5.9	mg/L	1.0	03/03/21 17:49	
EPA 6010D	Magnesium	7.0	mg/L	0.050	03/03/21 17:49	
EPA 6010D	Hardness, Total(SM 2340B)	67.6	mg/L	2.7	03/03/21 17:49	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.3	mg/L	5.0	03/12/21 16:08	
SM 2320B-2011	Alkalinity, Total as CaCO3	79.3	mg/L	5.0	03/12/21 16:08	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.15	mg/L	0.040	03/06/21 12:22	
<b>92524842003</b>	<b>BRGWA-5S</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.42	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.14	mg/L	0.040	03/19/21 04:33	
EPA 6010D	Manganese	0.0063J	mg/L	0.040	03/19/21 04:33	
EPA 6010D	Potassium	0.49	mg/L	0.20	03/19/21 15:40	
EPA 6010D	Sodium	4.5	mg/L	1.0	03/19/21 04:33	
EPA 6010D	Magnesium	7.0	mg/L	0.050	03/19/21 04:33	
EPA 6010D	Hardness, Total(SM 2340B)	73.0	mg/L	2.7	03/19/21 04:33	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.4	mg/L	5.0	03/12/21 18:54	
SM 2320B-2011	Alkalinity, Total as CaCO3	79.4	mg/L	5.0	03/12/21 18:54	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.17	mg/L	0.040	03/08/21 11:30	
<b>92524842004</b>	<b>BRGWA-5I</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.47	Std. Units		03/22/21 11:45	
EPA 6010D	Potassium	0.99	mg/L	0.20	03/10/21 00:57	
EPA 6010D	Sodium	4.5	mg/L	1.0	03/10/21 00:57	
EPA 6010D	Magnesium	8.9	mg/L	0.050	03/10/21 00:57	
EPA 6010D	Hardness, Total(SM 2340B)	69.6	mg/L	2.7	03/10/21 00:57	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	79.3	mg/L	5.0	03/12/21 19:03	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92524842004</b>	<b>BRGWA-5I</b>					
SM 2320B-2011	Alkalinity, Total as CaCO <sub>3</sub>	79.3	mg/L	5.0	03/12/21 19:03	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	0.21	mg/L	0.040	03/08/21 11:35	
<b>92524842005</b>	<b>BRGWA-2S</b>					
	Performed by	CUSTOMER			03/22/21 11:45	
	pH	6.20	Std. Units		03/22/21 11:45	
EPA 6010D	Iron	0.19	mg/L	0.040	03/19/21 04:37	
EPA 6010D	Manganese	0.064	mg/L	0.040	03/19/21 04:37	
EPA 6010D	Potassium	0.36	mg/L	0.20	03/19/21 15:44	
EPA 6010D	Sodium	3.2	mg/L	1.0	03/19/21 04:37	
EPA 6010D	Magnesium	3.9	mg/L	0.050	03/19/21 04:37	
EPA 6010D	Hardness, Total(SM 2340B)	26.5	mg/L	2.7	03/19/21 04:37	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	31.9	mg/L	5.0	03/12/21 19:12	
SM 2320B-2011	Alkalinity, Total as CaCO <sub>3</sub>	31.9	mg/L	5.0	03/12/21 19:12	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO <sub>2</sub> plus NO <sub>3</sub>	0.23	mg/L	0.040	03/08/21 11:39	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-6S		Lab ID: 92524842001		Collected: 03/01/21 16:30		Received: 03/02/21 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.70</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.094</b>	mg/L	0.040	0.016	1	03/03/21 10:17	03/03/21 17:44	7439-89-6	
Manganese	<b>0.0051J</b>	mg/L	0.040	0.0017	1	03/03/21 10:17	03/03/21 17:44	7439-96-5	
Potassium	<b>1.3</b>	mg/L	0.20	0.056	1	03/03/21 10:17	03/03/21 17:44	7440-09-7	
Sodium	<b>3.0</b>	mg/L	1.0	0.26	1	03/03/21 10:17	03/03/21 17:44	7440-23-5	
Magnesium	<b>3.8</b>	mg/L	0.050	0.0076	1	03/03/21 10:17	03/03/21 17:44	7439-95-4	
Hardness, Total(SM 2340B)	<b>26.1</b>	mg/L	2.7	0.21	1	03/03/21 10:17	03/03/21 17:44		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>27.6</b>	mg/L	5.0	5.0	1		03/12/21 16:01		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/12/21 16:01		
Alkalinity, Total as CaCO3	<b>27.6</b>	mg/L	5.0	5.0	1		03/12/21 16:01		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.57</b>	mg/L	0.040	0.017	1		03/06/21 12:19		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/09/21 08:28		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-2I		Lab ID: 92524842002		Collected: 03/01/21 16:39		Received: 03/02/21 10:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.66</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.64</b>	mg/L	0.040	0.016	1	03/03/21 10:17	03/03/21 17:49	7439-89-6	
Manganese	<b>0.024J</b>	mg/L	0.040	0.0017	1	03/03/21 10:17	03/03/21 17:49	7439-96-5	
Potassium	<b>6.6</b>	mg/L	0.20	0.056	1	03/03/21 10:17	03/03/21 17:49	7440-09-7	
Sodium	<b>5.9</b>	mg/L	1.0	0.26	1	03/03/21 10:17	03/03/21 17:49	7440-23-5	
Magnesium	<b>7.0</b>	mg/L	0.050	0.0076	1	03/03/21 10:17	03/03/21 17:49	7439-95-4	
Hardness, Total(SM 2340B)	<b>67.6</b>	mg/L	2.7	0.21	1	03/03/21 10:17	03/03/21 17:49		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 16:08		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/12/21 16:08		
Alkalinity, Total as CaCO3	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 16:08		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.15</b>	mg/L	0.040	0.017	1		03/06/21 12:22		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/09/21 08:43		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: <b>BRGWA-5S</b> Lab ID: <b>92524842003</b> Collected: 03/02/21 09:29      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.42</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.14</b>	mg/L	0.040	0.016	1	03/15/21 14:10	03/19/21 04:33	7439-89-6	
Manganese	<b>0.0063J</b>	mg/L	0.040	0.0017	1	03/15/21 14:10	03/19/21 04:33	7439-96-5	
Potassium	<b>0.49</b>	mg/L	0.20	0.056	1	03/15/21 14:10	03/19/21 15:40	7440-09-7	
Sodium	<b>4.5</b>	mg/L	1.0	0.26	1	03/15/21 14:10	03/19/21 04:33	7440-23-5	
Magnesium	<b>7.0</b>	mg/L	0.050	0.0076	1	03/15/21 14:10	03/19/21 04:33	7439-95-4	
Hardness, Total(SM 2340B)	<b>73.0</b>	mg/L	2.7	0.21	1	03/15/21 14:10	03/19/21 04:33		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>79.4</b>	mg/L	5.0	5.0	1		03/12/21 18:54		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/12/21 18:54		
Alkalinity, Total as CaCO3	<b>79.4</b>	mg/L	5.0	5.0	1		03/12/21 18:54		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.17</b>	mg/L	0.040	0.017	1		03/08/21 11:30		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/16/21 04:13		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-5I		Lab ID: 92524842004		Collected: 03/02/21 10:11	Received: 03/03/21 10:03	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.47</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/05/21 10:53	03/10/21 00:57	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/05/21 10:53	03/10/21 00:57	7439-96-5	
Potassium	<b>0.99</b>	mg/L	0.20	0.056	1	03/05/21 10:53	03/10/21 00:57	7440-09-7	
Sodium	<b>4.5</b>	mg/L	1.0	0.26	1	03/05/21 10:53	03/10/21 00:57	7440-23-5	
Magnesium	<b>8.9</b>	mg/L	0.050	0.0076	1	03/05/21 10:53	03/10/21 00:57	7439-95-4	
Hardness, Total(SM 2340B)	<b>69.6</b>	mg/L	2.7	0.21	1	03/05/21 10:53	03/10/21 00:57		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 19:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/12/21 19:03		
Alkalinity, Total as CaCO3	<b>79.3</b>	mg/L	5.0	5.0	1		03/12/21 19:03		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.21</b>	mg/L	0.040	0.017	1		03/08/21 11:35		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 04:53		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

Sample: BRGWA-2S		Lab ID: 92524842005		Collected: 03/02/21 12:05		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/22/21 11:45		
pH	<b>6.20</b>	Std. Units			1		03/22/21 11:45		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.19</b>	mg/L	0.040	0.016	1	03/15/21 14:10	03/19/21 04:37	7439-89-6	
Manganese	<b>0.064</b>	mg/L	0.040	0.0017	1	03/15/21 14:10	03/19/21 04:37	7439-96-5	
Potassium	<b>0.36</b>	mg/L	0.20	0.056	1	03/15/21 14:10	03/19/21 15:44	7440-09-7	
Sodium	<b>3.2</b>	mg/L	1.0	0.26	1	03/15/21 14:10	03/19/21 04:37	7440-23-5	
Magnesium	<b>3.9</b>	mg/L	0.050	0.0076	1	03/15/21 14:10	03/19/21 04:37	7439-95-4	
Hardness, Total(SM 2340B)	<b>26.5</b>	mg/L	2.7	0.21	1	03/15/21 14:10	03/19/21 04:37		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>31.9</b>	mg/L	5.0	5.0	1		03/12/21 19:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/12/21 19:12		
Alkalinity, Total as CaCO3	<b>31.9</b>	mg/L	5.0	5.0	1		03/12/21 19:12		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.23</b>	mg/L	0.040	0.017	1		03/08/21 11:39		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:09		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 603832

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3180960

Matrix: Water

Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/03/21 17:08	
Iron	mg/L	ND	0.040	0.016	03/03/21 17:08	
Magnesium	mg/L	ND	0.050	0.0076	03/03/21 17:08	
Manganese	mg/L	ND	0.040	0.0017	03/03/21 17:08	
Potassium	mg/L	ND	0.20	0.056	03/03/21 17:08	
Sodium	mg/L	ND	1.0	0.26	03/03/21 17:08	

LABORATORY CONTROL SAMPLE: 3180961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.0	100	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3180962 3180963

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	72.7	6.6	6.6	82.1	84.5	141	178	75-125	3	20
Iron	mg/L	1.5	1	1	2.6	2.7	109	114	75-125	2	20
Magnesium	mg/L	3.5	1	1	4.7	4.8	112	125	75-125	3	20
Manganese	mg/L	0.35	1	1	1.3	1.4	98	100	75-125	2	20
Potassium	mg/L	4.0	1	1	5.1	5.2	110	123	75-125	3	20
Sodium	mg/L	7.5	1	1	8.8	9.0	137	150	75-125	2	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 604550

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524842004

METHOD BLANK: 3184771

Matrix: Water

Associated Lab Samples: 92524842004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/09/21 23:35	
Magnesium	mg/L	ND	0.050	0.0076	03/09/21 23:35	
Manganese	mg/L	ND	0.040	0.0017	03/09/21 23:35	
Potassium	mg/L	0.081J	0.20	0.056	03/09/21 23:35	
Sodium	mg/L	ND	1.0	0.26	03/09/21 23:35	

LABORATORY CONTROL SAMPLE: 3184772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.6	99	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	100	80-120	
Manganese	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	1.1	109	80-120	
Sodium	mg/L	1	1.2	117	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3184773 3184774

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92524831002 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	149	6.6	6.6	152	154	49	84	75-125	2	20
Iron	mg/L	0.53	1	1	2.3	1.6	178	110	75-125	35	20 M1,R1
Magnesium	mg/L	9.5	1	1	10.3	10.4	81	96	75-125	1	20
Manganese	mg/L	1.3	1	1	2.2	2.3	94	101	75-125	3	20
Potassium	mg/L	6.1	1	1	7.0	7.1	93	104	75-125	2	20
Sodium	mg/L	10.5	1	1	11.2	11.4	68	89	75-125	2	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 606634

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92524842003, 92524842005

METHOD BLANK: 3196175

Matrix: Water

Associated Lab Samples: 92524842003, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/19/21 03:10	
Iron	mg/L	ND	0.040	0.016	03/19/21 03:10	
Magnesium	mg/L	ND	0.050	0.0076	03/19/21 03:10	
Manganese	mg/L	ND	0.040	0.0017	03/19/21 03:10	
Potassium	mg/L	ND	0.20	0.056	03/19/21 03:10	
Sodium	mg/L	ND	1.0	0.26	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.1	113	80-120	
Sodium	mg/L	1	1.1	115	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031001 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	789	6.6	6.6	797	775	122	-204	75-125	3	20
Iron	mg/L	2.8	1	1	3.8	3.7	101	89	75-125	3	20
Magnesium	mg/L	66.1	1	1	67.0	65.6	86	-56	75-125	2	20 M1
Manganese	mg/L	1.1	1	1	2.1	2.0	99	91	75-125	4	20
Potassium	mg/L	14.1	1	1	15.3	15.0	122	90	75-125	2	20
Sodium	mg/L	51.4	1	1	52.6	51.1	123	-27	75-125	3	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 606220

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3193657

Matrix: Water

Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/12/21 12:40	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/12/21 12:40	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/12/21 12:40	

LABORATORY CONTROL SAMPLE: 3193658

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3193659 3193660

Parameter	Units	92526098001		3193660		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	496	50	506	510	20	28	80-120	1	25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3193661 3193662

Parameter	Units	92526099006		3193662		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	25.2	25.5	50	51	80-120	1	25	M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 606222

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524842003, 92524842004, 92524842005

METHOD BLANK: 3193668

Matrix: Water

Associated Lab Samples: 92524842003, 92524842004, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	03/12/21 16:41	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	03/12/21 16:41	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	03/12/21 16:41	

LABORATORY CONTROL SAMPLE: 3193669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.5	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3193670 3193671

Parameter	Units	92526099008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	ND	ND	0	0	80-120		25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3194100 3194101

Parameter	Units	92526099009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	50	50	51.4	51.6	103	103	80-120	0	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

QC Batch: 604635	Analysis Method: EPA 353.2 Rev 2.0 1993
QC Batch Method: EPA 353.2 Rev 2.0 1993	Analysis Description: 353.2 Nitrate + Nitrite, preserved
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3185368 Matrix: Water

Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/06/21 12:02	

LABORATORY CONTROL SAMPLE: 3185369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185370 3185371

Parameter	Units	92525704003		3185371		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.29	2.5	2.4	2.5	83	82	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3185372 3185373

Parameter	Units	92525704004		3185373		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.25	2.5	2.4	2.5	86	85	90-110	1	10	M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 604829 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

METHOD BLANK: 3186506 Matrix: Water  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 11:27	

LABORATORY CONTROL SAMPLE: 3186507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186508 3186509

Parameter	Units	3186508		3186509		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.17	2.5	2.6	2.6	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186510 3186511

Parameter	Units	3186510		3186511		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.21	2.5	2.6	2.6	97	96	90-110	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 710987 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92524842001, 92524842002

METHOD BLANK: 3874940 Matrix: Water  
Associated Lab Samples: 92524842001, 92524842002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/09/21 05:57	

LABORATORY CONTROL SAMPLE: 3874941

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3874942 3874943

Parameter	Units	35615972001		3874943		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Dissolved Organic Carbon	mg/L	7.0	20	25.6	25.7	93	93	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3874944 3874945

Parameter	Units	92524956002		3874945		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Dissolved Organic Carbon	mg/L	1.9		20.6	20.7				0	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

QC Batch: 712765 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

METHOD BLANK: 3886735 Matrix: Water  
Associated Lab Samples: 92524842003, 92524842004, 92524842005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/16/21 03:44	

LABORATORY CONTROL SAMPLE: 3886736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886737 3886738

Parameter	Units	92524842003		3886738		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Dissolved Organic Carbon	mg/L	ND	20	20	18.6	18.7	91	91	80-120	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886739 3886740

Parameter	Units	92525383006		3886740		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Dissolved Organic Carbon	mg/L	ND	20	20	18.8	18.8	93	93	80-120	0	20

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD/E BACKGROUND MISC

Pace Project No.: 92524842

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD/E BACKGROUND MISC  
Pace Project No.: 92524842

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92524842001	BRGWA-6S				
92524842002	BRGWA-2I				
92524842003	BRGWA-5S				
92524842004	BRGWA-5I				
92524842005	BRGWA-2S				
92524842001	BRGWA-6S	EPA 3010A	603832	EPA 6010D	603942
92524842002	BRGWA-2I	EPA 3010A	603832	EPA 6010D	603942
92524842003	BRGWA-5S	EPA 3010A	606634	EPA 6010D	606723
92524842004	BRGWA-5I	EPA 3010A	604550	EPA 6010D	604640
92524842005	BRGWA-2S	EPA 3010A	606634	EPA 6010D	606723
92524842001	BRGWA-6S	SM 2320B-2011	606220		
92524842002	BRGWA-2I	SM 2320B-2011	606220		
92524842003	BRGWA-5S	SM 2320B-2011	606222		
92524842004	BRGWA-5I	SM 2320B-2011	606222		
92524842005	BRGWA-2S	SM 2320B-2011	606222		
92524842001	BRGWA-6S	EPA 353.2 Rev 2.0 1993	604635		
92524842002	BRGWA-2I	EPA 353.2 Rev 2.0 1993	604635		
92524842003	BRGWA-5S	EPA 353.2 Rev 2.0 1993	604829		
92524842004	BRGWA-5I	EPA 353.2 Rev 2.0 1993	604829		
92524842005	BRGWA-2S	EPA 353.2 Rev 2.0 1993	604829		
92524842001	BRGWA-6S	SM 5310B	710987		
92524842002	BRGWA-2I	SM 5310B	710987		
92524842003	BRGWA-5S	SM 5310B	712765		
92524842004	BRGWA-5I	SM 5310B	712765		
92524842005	BRGWA-2S	SM 5310B	712765		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt (SCUR)  
Document No.:  
F-CAR-CS-033-Rev.07

Document Revised: October 23, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

Project

WO#: 92524842

Counter:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seal Intact?  Yes  No

Date/Initials Person Examining Contents: MT 3/2/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Time Frozen?

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 4.4 Correction Factor: Add/Subtract (°C) ± 0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.4

USDA Regulated Soil:  N/A, water sample

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>GW</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Company: Georgia Power - Coal Combustion Products  
 Address: 2460 Mosier Road  
 Atlanta, GA 30339

Report To: John Abraham  
 Email To: jbraham@powergen.com  
 Phone: (404) 506-2339

Project Name: Plant Branch BCO's Background  
 Project # CCH 4th Semi-Annual

Collected By: Jeffrey Travis Matthews  
 Quote #  
 Analyzed By: [Signature]

Matrix: GW  
 Collected Date: 3-1-21 1630  
 Composite End Date: 3-1-21 1639

Metals Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Solid (S), Oil (O), Wipe (W), Air (A), Tissue (T), Biossey (B), Water (WT), Other (OT)

Customer Sample ID	Matrix	Comp / Grab	Collected for Composite		Composite End		pH	M or Cms
			Start Date	Time	Date	Time		
PRGW-65	GW	6	3-1-21	1630			6.70	6
PRGW-01	GW	6	3-1-21	1639			6.66	6

Metals: Fe, K, Mg, Mn, Ni  
 Type of Ice Used:  Wet  Slice  Dry  None  
 Packing Material Used: *OHV*

Requisitioned by/Company: [Signature]  
 Date/Time: 3-2-21 10:15  
 Received by/Company: [Signature]

Container Filling/Prep Type \*\*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Analyses:  
 Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Lab Sample Received: [Signature]  
 Lab Sample # / Comments: 62224612

Lab Sample Temperature Info:  
 Temp. Storage: 4 NA  
 Temp. In Lab: 15.5 C  
 Cooling: 1 Therm Cool, 2 Ambient  
 Cooling: 1 Covered Temp, 1 AC

Requisitioned by/Company: [Signature]  
 Date/Time: 3-2-21 10:15  
 Received by/Company: [Signature]



May 03, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 03, 2021 and March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta

Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525383001	BRGWA-12S	Water	03/02/21 11:50	03/03/21 10:03
92525383002	BRGWA-12I	Water	03/02/21 08:56	03/03/21 10:03
92525383003	BRGWA-23S	Water	03/02/21 15:55	03/03/21 10:03
92525383004	BRGWC-45	Water	03/02/21 13:40	03/03/21 10:03
92525383005	BRGWC-47	Water	03/02/21 15:48	03/03/21 10:03
92525383006	BRGWC-25I	Water	03/02/21 17:08	03/03/21 10:03
92525383007	BRGWC-27I	Water	03/03/21 14:14	03/04/21 08:15
92525383008	BRGWC-29I	Water	03/03/21 16:12	03/04/21 08:15
92525383009	BRGWC-30I	Water	03/03/21 13:06	03/04/21 08:15
92525383010	DUP-1	Water	03/03/21 13:06	03/04/21 08:15
92525383011	BRGWC-32S	Water	03/04/21 11:11	03/05/21 11:30
92525383012	BRGWC-52I	Water	03/04/21 12:20	03/05/21 11:30
92525383013	FB-2	Water	03/04/21 12:40	03/05/21 11:30
92525383014	BRGWC-50	Water	03/04/21 17:07	03/05/21 11:30
92525383015	EB-1	Water	03/05/21 07:31	03/05/21 11:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525383001	BRGWA-12S	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383002	BRGWA-12I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383003	BRGWA-23S	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383004	BRGWC-45	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383005	BRGWC-47	EPA 6010D	DRB, KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383006	BRGWC-25I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383007	BRGWC-27I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383008	BRGWC-29I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383009	BRGWC-30I	EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525383010	DUP-1	EPA 6010D	KH	6	PASI-GA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525383011	BRGWC-32S	SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
92525383012	BRGWC-52I	SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
92525383013	FB-2	SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
92525383014	BRGWC-50	SM 5310B	AGS	1	PASI-O
		EPA 6010D	DRB, KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
92525383015	EB-1	SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
		EPA 6010D	KH	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525383001</b>	<b>BRGWA-12S</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.92	Std. Units		03/18/21 07:54	
EPA 6010D	Potassium	2.6	mg/L	0.20	03/10/21 01:21	
EPA 6010D	Sodium	5.0	mg/L	1.0	03/10/21 01:21	
EPA 6010D	Magnesium	3.1	mg/L	0.050	03/10/21 01:21	
EPA 6010D	Hardness, Total(SM 2340B)	26.4	mg/L	2.7	03/10/21 01:21	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	31.2	mg/L	5.0	03/15/21 17:31	
SM 2320B-2011	Alkalinity, Total as CaCO3	31.2	mg/L	5.0	03/15/21 17:31	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.97	mg/L	0.040	03/08/21 11:40	
<b>92525383002</b>	<b>BRGWA-12I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	6.11	Std. Units		03/18/21 07:54	
EPA 6010D	Manganese	0.0056J	mg/L	0.040	03/10/21 01:41	
EPA 6010D	Potassium	3.2	mg/L	0.20	03/10/21 01:41	
EPA 6010D	Sodium	10.0	mg/L	1.0	03/10/21 01:41	
EPA 6010D	Magnesium	3.4	mg/L	0.050	03/10/21 01:41	
EPA 6010D	Hardness, Total(SM 2340B)	43.4	mg/L	2.7	03/10/21 01:41	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	64.7	mg/L	5.0	03/15/21 17:40	
SM 2320B-2011	Alkalinity, Total as CaCO3	64.7	mg/L	5.0	03/15/21 17:40	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.64	mg/L	0.040	03/08/21 11:41	
<b>92525383003</b>	<b>BRGWA-23S</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.75	Std. Units		03/18/21 07:54	
EPA 6010D	Manganese	0.021J	mg/L	0.040	03/10/21 01:55	
EPA 6010D	Potassium	4.0	mg/L	0.20	03/10/21 01:55	
EPA 6010D	Sodium	11.3	mg/L	1.0	03/10/21 01:55	
EPA 6010D	Magnesium	6.5	mg/L	0.050	03/10/21 01:55	
EPA 6010D	Hardness, Total(SM 2340B)	55.8	mg/L	2.7	03/10/21 01:55	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	27.8	mg/L	5.0	03/15/21 17:52	
SM 2320B-2011	Alkalinity, Total as CaCO3	27.8	mg/L	5.0	03/15/21 17:52	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.13	mg/L	0.040	03/08/21 11:42	
<b>92525383004</b>	<b>BRGWC-45</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	6.17	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	1.2	mg/L	0.040	03/10/21 02:00	
EPA 6010D	Manganese	0.42	mg/L	0.040	03/10/21 02:00	
EPA 6010D	Potassium	4.1	mg/L	0.20	03/10/21 02:00	
EPA 6010D	Sodium	14.8	mg/L	1.0	03/10/21 02:00	
EPA 6010D	Magnesium	15.7	mg/L	0.050	03/10/21 02:00	
EPA 6010D	Hardness, Total(SM 2340B)	149	mg/L	2.7	03/10/21 02:00	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	50.6	mg/L	5.0	03/15/21 18:14	
SM 2320B-2011	Alkalinity, Total as CaCO3	50.6	mg/L	5.0	03/15/21 18:14	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.019J	mg/L	0.040	03/08/21 11:43	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525383004</b>	<b>BRGWC-45</b>					
SM 5310B	Dissolved Organic Carbon	1.2	mg/L	1.0	03/16/21 06:03	
<b>92525383005</b>	<b>BRGWC-47</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.59	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	0.58	mg/L	0.040	03/10/21 02:05	
EPA 6010D	Manganese	0.028J	mg/L	0.040	03/10/21 02:05	
EPA 6010D	Potassium	12.8	mg/L	0.20	03/10/21 02:05	
EPA 6010D	Sodium	42.9	mg/L	1.0	03/10/21 02:05	
EPA 6010D	Magnesium	135	mg/L	0.50	03/11/21 17:30	
EPA 6010D	Hardness, Total(SM 2340B)	1440	mg/L	27.0	03/11/21 17:30	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	26.5	mg/L	5.0	03/15/21 18:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	26.5	mg/L	5.0	03/15/21 18:24	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.076	mg/L	0.040	03/08/21 11:44	
<b>92525383006</b>	<b>BRGWC-25I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	6.10	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	1.7	mg/L	0.040	03/10/21 02:10	
EPA 6010D	Manganese	1.5	mg/L	0.040	03/10/21 02:10	
EPA 6010D	Potassium	4.3	mg/L	0.20	03/10/21 02:10	
EPA 6010D	Sodium	16.9	mg/L	1.0	03/10/21 02:10	
EPA 6010D	Magnesium	17.4	mg/L	0.050	03/10/21 02:10	
EPA 6010D	Hardness, Total(SM 2340B)	182	mg/L	2.7	03/10/21 02:10	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	74.9	mg/L	5.0	03/15/21 18:32	
SM 2320B-2011	Alkalinity, Total as CaCO3	74.9	mg/L	5.0	03/15/21 18:32	
<b>92525383007</b>	<b>BRGWC-27I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	5.90	Std. Units		03/18/21 07:54	
EPA 6010D	Manganese	0.52	mg/L	0.040	03/10/21 02:15	
EPA 6010D	Potassium	5.1	mg/L	0.20	03/10/21 02:15	
EPA 6010D	Sodium	14.9	mg/L	1.0	03/10/21 02:15	
EPA 6010D	Magnesium	4.9	mg/L	0.050	03/10/21 02:15	
EPA 6010D	Hardness, Total(SM 2340B)	165	mg/L	2.7	03/10/21 02:15	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	21.5	mg/L	5.0	03/16/21 22:17	
SM 2320B-2011	Alkalinity, Total as CaCO3	21.5	mg/L	5.0	03/16/21 22:17	
<b>92525383008</b>	<b>BRGWC-29I</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	4.46	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	35.4	mg/L	0.040	03/10/21 02:20	
EPA 6010D	Manganese	1.6	mg/L	0.040	03/10/21 02:20	
EPA 6010D	Potassium	10.6	mg/L	0.20	03/10/21 02:20	
EPA 6010D	Sodium	18.5	mg/L	1.0	03/10/21 02:20	
EPA 6010D	Magnesium	9.2	mg/L	0.050	03/10/21 02:20	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525383008</b>	<b>BRGWC-29I</b>					
EPA 6010D	Hardness, Total(SM 2340B)	221	mg/L	2.7	03/10/21 02:20	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.021J	mg/L	0.040	03/08/21 12:15	
<b>92525383009</b>	<b>BRGWC-30I</b>					
	Performed by	CUSTOMER			03/18/21 07:54	
	pH	6.29	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	1.8	mg/L	0.040	03/10/21 02:24	
EPA 6010D	Manganese	0.51	mg/L	0.040	03/10/21 02:24	
EPA 6010D	Potassium	4.3	mg/L	0.20	03/10/21 02:24	
EPA 6010D	Sodium	25.7	mg/L	1.0	03/10/21 02:24	
EPA 6010D	Magnesium	33.6	mg/L	0.050	03/10/21 02:24	
EPA 6010D	Hardness, Total(SM 2340B)	444	mg/L	2.7	03/10/21 02:24	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	109	mg/L	5.0	03/16/21 22:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	109	mg/L	5.0	03/16/21 22:24	
<b>92525383010</b>	<b>DUP-1</b>					
EPA 6010D	Manganese	0.51	mg/L	0.040	03/10/21 02:29	
EPA 6010D	Potassium	5.0	mg/L	0.20	03/10/21 02:29	
EPA 6010D	Sodium	14.6	mg/L	1.0	03/10/21 02:29	
EPA 6010D	Magnesium	4.8	mg/L	0.050	03/10/21 02:29	
EPA 6010D	Hardness, Total(SM 2340B)	162	mg/L	2.7	03/10/21 02:29	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	22.4	mg/L	5.0	03/16/21 22:34	
SM 2320B-2011	Alkalinity, Total as CaCO3	22.4	mg/L	5.0	03/16/21 22:34	
<b>92525383011</b>	<b>BRGWC-32S</b>					
	Performed by	CUSTOMER			03/18/21 07:54	
	pH	5.98	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	0.52	mg/L	0.040	03/10/21 07:25	
EPA 6010D	Manganese	0.0040J	mg/L	0.040	03/10/21 07:25	
EPA 6010D	Potassium	1.6	mg/L	0.20	03/10/21 07:25	
EPA 6010D	Sodium	24.3	mg/L	1.0	03/10/21 07:25	
EPA 6010D	Magnesium	25.4	mg/L	0.050	03/10/21 07:25	
EPA 6010D	Hardness, Total(SM 2340B)	194	mg/L	2.7	03/10/21 07:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	28.9	mg/L	5.0	03/17/21 20:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	28.9	mg/L	5.0	03/17/21 20:01	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.14	mg/L	0.040	03/08/21 12:56	
<b>92525383012</b>	<b>BRGWC-52I</b>					
	Performed by	CUSTOMER			03/18/21 07:54	
	pH	5.87	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	6.0	mg/L	0.040	03/10/21 07:55	
EPA 6010D	Manganese	0.95	mg/L	0.040	03/10/21 07:55	
EPA 6010D	Potassium	5.8	mg/L	0.20	03/10/21 07:55	
EPA 6010D	Sodium	20.9	mg/L	1.0	03/10/21 07:55	
EPA 6010D	Magnesium	19.3	mg/L	0.050	03/10/21 07:55	
EPA 6010D	Hardness, Total(SM 2340B)	198	mg/L	2.7	03/10/21 07:55	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	128	mg/L	5.0	03/17/21 20:16	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92525383012</b>	<b>BRGWC-52I</b>					
SM 2320B-2011	Alkalinity, Total as CaCO3	128	mg/L	5.0	03/17/21 20:16	
SM 5310B	Dissolved Organic Carbon	1.5	mg/L	1.0	03/12/21 17:26	
<b>92525383013</b>	<b>FB-2</b>					
EPA 6010D	Iron	0.29	mg/L	0.040	03/10/21 08:00	
EPA 6010D	Manganese	0.0022J	mg/L	0.040	03/10/21 08:00	
<b>92525383014</b>	<b>BRGWC-50</b>					
	Performed by	CUSTOME			03/18/21 07:54	
		R				
	pH	4.34	Std. Units		03/18/21 07:54	
EPA 6010D	Iron	0.36	mg/L	0.040	03/10/21 08:05	
EPA 6010D	Manganese	164	mg/L	0.40	03/11/21 18:02	
EPA 6010D	Potassium	11.0	mg/L	0.20	03/10/21 08:05	
EPA 6010D	Sodium	50.3	mg/L	1.0	03/10/21 08:05	
EPA 6010D	Magnesium	312	mg/L	0.50	03/11/21 18:02	
EPA 6010D	Hardness, Total(SM 2340B)	2430	mg/L	27.0	03/11/21 18:02	
SM 5310B	Dissolved Organic Carbon	0.91J	mg/L	1.0	03/12/21 17:51	
<b>92525383015</b>	<b>EB-1</b>					
EPA 6010D	Manganese	0.0027J	mg/L	0.040	03/10/21 08:10	
EPA 6010D	Magnesium	0.0087J	mg/L	0.050	03/10/21 08:10	
SM 5310B	Dissolved Organic Carbon	0.73J	mg/L	1.0	03/12/21 18:04	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWA-12S</b> Lab ID: <b>92525383001</b> Collected: 03/02/21 11:50      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.92</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 01:21	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 01:21	7439-96-5	
Potassium	<b>2.6</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 01:21	7440-09-7	
Sodium	<b>5.0</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 01:21	7440-23-5	
Magnesium	<b>3.1</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 01:21	7439-95-4	
Hardness, Total(SM 2340B)	<b>26.4</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 01:21		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>31.2</b>	mg/L	5.0	5.0	1		03/15/21 17:31		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 17:31		
Alkalinity, Total as CaCO3	<b>31.2</b>	mg/L	5.0	5.0	1		03/15/21 17:31		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.97</b>	mg/L	0.040	0.017	1		03/08/21 11:40		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:22		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: BRGWA-121      Lab ID: 92525383002      Collected: 03/02/21 08:56      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.11</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 01:41	7439-89-6	
Manganese	<b>0.0056J</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 01:41	7439-96-5	
Potassium	<b>3.2</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 01:41	7440-09-7	
Sodium	<b>10.0</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 01:41	7440-23-5	
Magnesium	<b>3.4</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 01:41	7439-95-4	
Hardness, Total(SM 2340B)	<b>43.4</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 01:41		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>64.7</b>	mg/L	5.0	5.0	1		03/15/21 17:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 17:40		
Alkalinity, Total as CaCO3	<b>64.7</b>	mg/L	5.0	5.0	1		03/15/21 17:40		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.64</b>	mg/L	0.040	0.017	1		03/08/21 11:41		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:36		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWA-23S</b> Lab ID: <b>92525383003</b> Collected: 03/02/21 15:55      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.75</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 01:55	7439-89-6	
Manganese	<b>0.021J</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 01:55	7439-96-5	
Potassium	<b>4.0</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 01:55	7440-09-7	
Sodium	<b>11.3</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 01:55	7440-23-5	
Magnesium	<b>6.5</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 01:55	7439-95-4	
Hardness, Total(SM 2340B)	<b>55.8</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 01:55		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>27.8</b>	mg/L	5.0	5.0	1		03/15/21 17:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 17:52		
Alkalinity, Total as CaCO3	<b>27.8</b>	mg/L	5.0	5.0	1		03/15/21 17:52		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.13</b>	mg/L	0.040	0.017	1		03/08/21 11:42		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 05:49		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWC-45</b> Lab ID: <b>92525383004</b> Collected: 03/02/21 13:40      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.17</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.2</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:00	7439-89-6	
Manganese	<b>0.42</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:00	7439-96-5	
Potassium	<b>4.1</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:00	7440-09-7	
Sodium	<b>14.8</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:00	7440-23-5	
Magnesium	<b>15.7</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:00	7439-95-4	
Hardness, Total(SM 2340B)	<b>149</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:00		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>50.6</b>	mg/L	5.0	5.0	1		03/15/21 18:14		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/15/21 18:14		
Alkalinity, Total as CaCO3	<b>50.6</b>	mg/L	5.0	5.0	1		03/15/21 18:14		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.019J</b>	mg/L	0.040	0.017	1		03/08/21 11:43		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.2</b>	mg/L	1.0	0.50	1		03/16/21 06:03		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-47</b> Lab ID: <b>92525383005</b> Collected: 03/02/21 15:48      Received: 03/03/21 10:03      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.59</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.58</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:05	7439-89-6	
Manganese	<b>0.028J</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:05	7439-96-5	
Potassium	<b>12.8</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:05	7440-09-7	
Sodium	<b>42.9</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:05	7440-23-5	
Magnesium	<b>135</b>	mg/L	0.50	0.076	10	03/09/21 11:14	03/11/21 17:30	7439-95-4	
Hardness, Total(SM 2340B)	<b>1440</b>	mg/L	27.0	2.1	10	03/09/21 11:14	03/11/21 17:30		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>26.5</b>	mg/L	5.0	5.0	1		03/15/21 18:24		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/15/21 18:24		
Alkalinity, Total as CaCO3	<b>26.5</b>	mg/L	5.0	5.0	1		03/15/21 18:24		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.076</b>	mg/L	0.040	0.017	1		03/08/21 11:44		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/16/21 06:16		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: BRGWC-25I		Lab ID: 92525383006		Collected: 03/02/21 17:08		Received: 03/03/21 10:03		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.10</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.7</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:10	7439-89-6	
Manganese	<b>1.5</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:10	7439-96-5	
Potassium	<b>4.3</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:10	7440-09-7	
Sodium	<b>16.9</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:10	7440-23-5	
Magnesium	<b>17.4</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:10	7439-95-4	
Hardness, Total(SM 2340B)	<b>182</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:10		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>74.9</b>	mg/L	5.0	5.0	1		03/15/21 18:32		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/15/21 18:32		
Alkalinity, Total as CaCO3	<b>74.9</b>	mg/L	5.0	5.0	1		03/15/21 18:32		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 11:48		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/16/21 06:30		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-271</b> Lab ID: <b>92525383007</b> Collected: 03/03/21 14:14      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.90</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:15	7439-89-6	
Manganese	<b>0.52</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:15	7439-96-5	
Potassium	<b>5.1</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:15	7440-09-7	
Sodium	<b>14.9</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:15	7440-23-5	
Magnesium	<b>4.9</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:15	7439-95-4	
Hardness, Total(SM 2340B)	<b>165</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:15		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>21.5</b>	mg/L	5.0	5.0	1		03/16/21 22:17		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:17		
Alkalinity, Total as CaCO3	<b>21.5</b>	mg/L	5.0	5.0	1		03/16/21 22:17		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:09		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 15:50		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-291</b> Lab ID: <b>92525383008</b> Collected: 03/03/21 16:12      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>4.46</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>35.4</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:20	7439-89-6	
Manganese	<b>1.6</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:20	7439-96-5	
Potassium	<b>10.6</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:20	7440-09-7	
Sodium	<b>18.5</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:20	7440-23-5	
Magnesium	<b>9.2</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:20	7439-95-4	
Hardness, Total(SM 2340B)	<b>221</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:20		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:22		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:22		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/16/21 22:22		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.021J</b>	mg/L	0.040	0.017	1		03/08/21 12:15		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 16:32		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-30I</b> Lab ID: <b>92525383009</b> Collected: 03/03/21 13:06      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>6.29</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.8</b>	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:24	7439-89-6	
Manganese	<b>0.51</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:24	7439-96-5	
Potassium	<b>4.3</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:24	7440-09-7	
Sodium	<b>25.7</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:24	7440-23-5	
Magnesium	<b>33.6</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:24	7439-95-4	
Hardness, Total(SM 2340B)	<b>444</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:24		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>109</b>	mg/L	5.0	5.0	1		03/16/21 22:24		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/16/21 22:24		
Alkalinity, Total as CaCO3	<b>109</b>	mg/L	5.0	5.0	1		03/16/21 22:24		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:16		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 16:46		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

**Sample:** DUP-1      **Lab ID:** 92525383010      Collected: 03/03/21 13:06      Received: 03/04/21 08:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/09/21 11:14	03/10/21 02:29	7439-89-6	
Manganese	<b>0.51</b>	mg/L	0.040	0.0017	1	03/09/21 11:14	03/10/21 02:29	7439-96-5	
Potassium	<b>5.0</b>	mg/L	0.20	0.056	1	03/09/21 11:14	03/10/21 02:29	7440-09-7	
Sodium	<b>14.6</b>	mg/L	1.0	0.26	1	03/09/21 11:14	03/10/21 02:29	7440-23-5	
Magnesium	<b>4.8</b>	mg/L	0.050	0.0076	1	03/09/21 11:14	03/10/21 02:29	7439-95-4	
Hardness, Total(SM 2340B)	<b>162</b>	mg/L	2.7	0.21	1	03/09/21 11:14	03/10/21 02:29		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>22.4</b>	mg/L	5.0	5.0	1		03/16/21 22:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:34		
Alkalinity, Total as CaCO3	<b>22.4</b>	mg/L	5.0	5.0	1		03/16/21 22:34		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:17		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 16:59		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: <b>BRGWC-32S</b>		Lab ID: <b>92525383011</b>		Collected: 03/04/21 11:11		Received: 03/05/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.98</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.52</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 07:25	7439-89-6	
Manganese	<b>0.0040J</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 07:25	7439-96-5	
Potassium	<b>1.6</b>	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 07:25	7440-09-7	
Sodium	<b>24.3</b>	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 07:25	7440-23-5	
Magnesium	<b>25.4</b>	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 07:25	7439-95-4	
Hardness, Total(SM 2340B)	<b>194</b>	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 07:25		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>28.9</b>	mg/L	5.0	5.0	1		03/17/21 20:01		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 20:01		
Alkalinity, Total as CaCO3	<b>28.9</b>	mg/L	5.0	5.0	1		03/17/21 20:01		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.14</b>	mg/L	0.040	0.017	1		03/08/21 12:56		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 17:12		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Sample: BRGWC-521      Lab ID: 92525383012      Collected: 03/04/21 12:20      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>5.87</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>6.0</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 07:55	7439-89-6	
Manganese	<b>0.95</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 07:55	7439-96-5	
Potassium	<b>5.8</b>	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 07:55	7440-09-7	
Sodium	<b>20.9</b>	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 07:55	7440-23-5	
Magnesium	<b>19.3</b>	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 07:55	7439-95-4	
Hardness, Total(SM 2340B)	<b>198</b>	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 07:55		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>128</b>	mg/L	5.0	5.0	1		03/17/21 20:16		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 20:16		
Alkalinity, Total as CaCO3	<b>128</b>	mg/L	5.0	5.0	1		03/17/21 20:16		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:58		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.5</b>	mg/L	1.0	0.50	1		03/12/21 17:26		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>FB-2</b>		Lab ID: <b>92525383013</b>		Collected: 03/04/21 12:40	Received: 03/05/21 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	<b>0.29</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 08:00	7439-89-6	
Manganese	<b>0.0022J</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 08:00	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 08:00	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 08:00	7440-23-5	
Magnesium	ND	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 08:00	7439-95-4	
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 08:00		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:28		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 20:28		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:59		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 17:37		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: <b>BRGWC-50</b> Lab ID: <b>92525383014</b> Collected: 03/04/21 17:07      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/18/21 07:54		
pH	<b>4.34</b>	Std. Units			1		03/18/21 07:54		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.36</b>	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 08:05	7439-89-6	
Manganese	<b>164</b>	mg/L	0.40	0.017	10	03/09/21 13:33	03/11/21 18:02	7439-96-5	
Potassium	<b>11.0</b>	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 08:05	7440-09-7	
Sodium	<b>50.3</b>	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 08:05	7440-23-5	
Magnesium	<b>312</b>	mg/L	0.50	0.076	10	03/09/21 13:33	03/11/21 18:02	7439-95-4	
Hardness, Total(SM 2340B)	<b>2430</b>	mg/L	27.0	2.1	10	03/09/21 13:33	03/11/21 18:02		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:31		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:31		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 20:31		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 13:00		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.91J</b>	mg/L	1.0	0.50	1		03/12/21 17:51		

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## ANALYTICAL RESULTS

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Sample: EB-1		Lab ID: 92525383015		Collected: 03/05/21 07:31	Received: 03/05/21 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.016	1	03/09/21 13:33	03/10/21 08:10	7439-89-6	
Manganese	<b>0.0027J</b>	mg/L	0.040	0.0017	1	03/09/21 13:33	03/10/21 08:10	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	03/09/21 13:33	03/10/21 08:10	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	03/09/21 13:33	03/10/21 08:10	7440-23-5	
Magnesium	<b>0.0087J</b>	mg/L	0.050	0.0076	1	03/09/21 13:33	03/10/21 08:10	7439-95-4	
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	03/09/21 13:33	03/10/21 08:10		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:36		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:36		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 20:36		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 13:01		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	<b>0.73J</b>	mg/L	1.0	0.50	1		03/12/21 18:04		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 605192 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006, 92525383007, 92525383008, 92525383009, 92525383010

METHOD BLANK: 3188292 Matrix: Water  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006, 92525383007, 92525383008, 92525383009, 92525383010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/10/21 01:11	
Iron	mg/L	ND	0.040	0.016	03/10/21 01:11	
Magnesium	mg/L	ND	0.050	0.0076	03/10/21 01:11	
Manganese	mg/L	ND	0.040	0.0017	03/10/21 01:11	
Potassium	mg/L	ND	0.20	0.056	03/10/21 01:11	
Sodium	mg/L	ND	1.0	0.26	03/10/21 01:11	

LABORATORY CONTROL SAMPLE: 3188293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.7	101	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.0	102	80-120	
Manganese	mg/L	1	1.0	100	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188294 3188295

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525375001 Result	Spike Conc.	Spike Conc.	Conc.								
Hardness, Total(SM 2340B)	mg/L	26.4	6.6	6.6	33.8	38.8	112	188	75-125	14	20		
Iron	mg/L	ND	1	1	1.3	2.0	130	202	75-125	43	20	M0, R1	
Magnesium	mg/L	3.1	1	1	4.2	5.1	111	195	75-125	18	20	M1	
Manganese	mg/L	ND	1	1	1.0	2.0	100	198	75-125	66	20	M1, R1	
Potassium	mg/L	2.6	1	1	3.7	4.5	113	198	75-125	21	20	M1, R1	
Sodium	mg/L	5.0	1	1	6.1	6.8	112	177	75-125	10	20	M1	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 605231 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3188482 Matrix: Water  
Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/10/21 07:16	
Iron	mg/L	ND	0.040	0.016	03/10/21 07:16	
Magnesium	mg/L	ND	0.050	0.0076	03/10/21 07:16	
Manganese	mg/L	ND	0.040	0.0017	03/10/21 07:16	
Potassium	mg/L	0.080J	0.20	0.056	03/10/21 07:16	
Sodium	mg/L	ND	1.0	0.26	03/10/21 07:16	

LABORATORY CONTROL SAMPLE: 3188483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.5	98	80-120	
Iron	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	0.99	99	80-120	
Manganese	mg/L	1	0.96	96	80-120	
Potassium	mg/L	1	1.0	105	80-120	
Sodium	mg/L	1	1.0J	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188484 3188485

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	194	6.6	6.6	201	196	111	39	75-125	2	20
Iron	mg/L	0.52	1	1	2.8	1.0	228	49	75-125	94	20 M1, R1
Magnesium	mg/L	25.4	1	1	26.5	25.8	117	45	75-125	3	20 M1
Manganese	mg/L	0.0040J	1	1	0.98	0.95	98	95	75-125	4	20
Potassium	mg/L	1.6	1	1	2.7	2.6	103	99	75-125	2	20
Sodium	mg/L	24.3	1	1	25.3	25.0	101	63	75-125	1	20 M1

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 606583 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

METHOD BLANK: 3195778 Matrix: Water

Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/15/21 16:33	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/15/21 16:33	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/15/21 16:33	

LABORATORY CONTROL SAMPLE: 3195779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	50.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195780 3195781

Parameter	Units	92526541001		3195781		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	42.6	50	50	91.9	91.7	99	98	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195782 3195783

Parameter	Units	92525478002		3195783		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	12.6	50	50	64.0	64.4	103	104	80-120	1	25

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 606874

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

METHOD BLANK: 3197235

Matrix: Water

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 19:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 19:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 19:52	

LABORATORY CONTROL SAMPLE: 3197236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	50.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197237 3197238

Parameter	Units	92527199002		3197237		3197238		% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	110	50	50	157	160	94	100	80-120	2	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197239 3197240

Parameter	Units	92527211001		3197239		3197240		% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	28.5	50	50	78.5	79.4	100	102	80-120	1	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 607154 Analysis Method: SM 2320B-2011  
 QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3198620 Matrix: Water  
 Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	03/17/21 17:52	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	03/17/21 17:52	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	03/17/21 17:52	

LABORATORY CONTROL SAMPLE: 3198621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198624 3198625

Parameter	Units	92525669006		3198625		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	57.3	50	50	110	109	106	104	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200194 3200195

Parameter	Units	3200194		3200195		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	28.9	50	50	80.0	81.0	102	104	80-120	1	25

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 604829 Analysis Method: EPA 353.2 Rev 2.0 1993  
 QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
 Laboratory: Pace Analytical Services - Asheville  
 Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

METHOD BLANK: 3186506 Matrix: Water  
 Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 11:27	

LABORATORY CONTROL SAMPLE: 3186507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186508 3186509

Parameter	Units	92524842003		3186509		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.17	2.5	2.6	2.6	97	97	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186510 3186511

Parameter	Units	92524842004		3186511		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.21	2.5	2.6	2.6	97	96	90-110	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 604832 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

METHOD BLANK: 3186513 Matrix: Water  
Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:03	

LABORATORY CONTROL SAMPLE: 3186514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186515 3186516

Parameter	Units	3186515		3186516		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.3	2.3	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186517 3186518

Parameter	Units	3186517		3186518		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.4	2.4	95	95	90-110	0	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch: 604834 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3186519

Matrix: Water

Associated Lab Samples: 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:37	

LABORATORY CONTROL SAMPLE: 3186520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186521 3186522

Parameter	Units	3186521		3186522		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.26	2.5	2.5	2.5	91	90	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186523 3186524

Parameter	Units	3186523		3186524		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.092	2.5	2.5	1.7	63	64	90-110	1	10 M1	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

QC Batch:	711998	Analysis Method:	SM 5310B
QC Batch Method:	SM 5310B	Analysis Description:	5310B Dissolved Organic Carbon
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010, 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

METHOD BLANK: 3881059 Matrix: Water

Associated Lab Samples: 92525383007, 92525383008, 92525383009, 92525383010, 92525383011, 92525383012, 92525383013, 92525383014, 92525383015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 15:23	

LABORATORY CONTROL SAMPLE: 3881060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881061 3881062

Parameter	Units	92525383007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	ND	20	20	18.7	18.7	93	93	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881063 3881064

Parameter	Units	92525677002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	0.89J	20	20	19.8	19.7	95	94	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

QC Batch: 712765 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

METHOD BLANK: 3886735 Matrix: Water  
Associated Lab Samples: 92525383001, 92525383002, 92525383003, 92525383004, 92525383005, 92525383006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/16/21 03:44	

LABORATORY CONTROL SAMPLE: 3886736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886737 3886738

Parameter	Units	92524842003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Dissolved Organic Carbon	mg/L	ND	20	20	18.6	18.7	91	91	80-120	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3886739 3886740

Parameter	Units	92525383006		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Dissolved Organic Carbon	mg/L	ND	20	20	18.8	18.8	93	93	80-120	0	20		

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK MISC

Pace Project No.: 92525383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525383001	BRGWA-12S				
92525383002	BRGWA-12I				
92525383003	BRGWA-23S				
92525383004	BRGWC-45				
92525383005	BRGWC-47				
92525383006	BRGWC-25I				
92525383007	BRGWC-27I				
92525383008	BRGWC-29I				
92525383009	BRGWC-30I				
92525383011	BRGWC-32S				
92525383012	BRGWC-52I				
92525383014	BRGWC-50				
92525383001	BRGWA-12S	EPA 3010A	605192	EPA 6010D	605250
92525383002	BRGWA-12I	EPA 3010A	605192	EPA 6010D	605250
92525383003	BRGWA-23S	EPA 3010A	605192	EPA 6010D	605250
92525383004	BRGWC-45	EPA 3010A	605192	EPA 6010D	605250
92525383005	BRGWC-47	EPA 3010A	605192	EPA 6010D	605250
92525383006	BRGWC-25I	EPA 3010A	605192	EPA 6010D	605250
92525383007	BRGWC-27I	EPA 3010A	605192	EPA 6010D	605250
92525383008	BRGWC-29I	EPA 3010A	605192	EPA 6010D	605250
92525383009	BRGWC-30I	EPA 3010A	605192	EPA 6010D	605250
92525383010	DUP-1	EPA 3010A	605192	EPA 6010D	605250
92525383011	BRGWC-32S	EPA 3010A	605231	EPA 6010D	605319
92525383012	BRGWC-52I	EPA 3010A	605231	EPA 6010D	605319
92525383013	FB-2	EPA 3010A	605231	EPA 6010D	605319
92525383014	BRGWC-50	EPA 3010A	605231	EPA 6010D	605319
92525383015	EB-1	EPA 3010A	605231	EPA 6010D	605319
92525383001	BRGWA-12S	SM 2320B-2011	606583		
92525383002	BRGWA-12I	SM 2320B-2011	606583		
92525383003	BRGWA-23S	SM 2320B-2011	606583		
92525383004	BRGWC-45	SM 2320B-2011	606583		
92525383005	BRGWC-47	SM 2320B-2011	606583		
92525383006	BRGWC-25I	SM 2320B-2011	606583		
92525383007	BRGWC-27I	SM 2320B-2011	606874		
92525383008	BRGWC-29I	SM 2320B-2011	606874		
92525383009	BRGWC-30I	SM 2320B-2011	606874		
92525383010	DUP-1	SM 2320B-2011	606874		
92525383011	BRGWC-32S	SM 2320B-2011	607154		
92525383012	BRGWC-52I	SM 2320B-2011	607154		
92525383013	FB-2	SM 2320B-2011	607154		
92525383014	BRGWC-50	SM 2320B-2011	607154		
92525383015	EB-1	SM 2320B-2011	607154		
92525383001	BRGWA-12S	EPA 353.2 Rev 2.0 1993	604829		
92525383002	BRGWA-12I	EPA 353.2 Rev 2.0 1993	604829		
92525383003	BRGWA-23S	EPA 353.2 Rev 2.0 1993	604829		
92525383004	BRGWC-45	EPA 353.2 Rev 2.0 1993	604829		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH BCD NETWORK MISC  
Pace Project No.: 92525383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525383005	BRGWC-47	EPA 353.2 Rev 2.0 1993	604829		
92525383006	BRGWC-25I	EPA 353.2 Rev 2.0 1993	604829		
92525383007	BRGWC-27I	EPA 353.2 Rev 2.0 1993	604832		
92525383008	BRGWC-29I	EPA 353.2 Rev 2.0 1993	604832		
92525383009	BRGWC-30I	EPA 353.2 Rev 2.0 1993	604832		
92525383010	DUP-1	EPA 353.2 Rev 2.0 1993	604832		
92525383011	BRGWC-32S	EPA 353.2 Rev 2.0 1993	604834		
92525383012	BRGWC-52I	EPA 353.2 Rev 2.0 1993	604834		
92525383013	FB-2	EPA 353.2 Rev 2.0 1993	604834		
92525383014	BRGWC-50	EPA 353.2 Rev 2.0 1993	604834		
92525383015	EB-1	EPA 353.2 Rev 2.0 1993	604834		
92525383001	BRGWA-12S	SM 5310B	712765		
92525383002	BRGWA-12I	SM 5310B	712765		
92525383003	BRGWA-23S	SM 5310B	712765		
92525383004	BRGWC-45	SM 5310B	712765		
92525383005	BRGWC-47	SM 5310B	712765		
92525383006	BRGWC-25I	SM 5310B	712765		
92525383007	BRGWC-27I	SM 5310B	711998		
92525383008	BRGWC-29I	SM 5310B	711998		
92525383009	BRGWC-30I	SM 5310B	711998		
92525383010	DUP-1	SM 5310B	711998		
92525383011	BRGWC-32S	SM 5310B	711998		
92525383012	BRGWC-52I	SM 5310B	711998		
92525383013	FB-2	SM 5310B	711998		
92525383014	BRGWC-50	SM 5310B	711998		
92525383015	EB-1	SM 5310B	711998		

### REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Simple Condition Upon Receipt

Client Name: GA Power

Project #:

WO#: 92525383



Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 7/3/24

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 3.3 Correction Factor: 0.0  
Add/Subtract (°C)

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil ( N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>GW</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

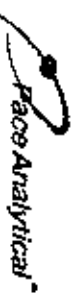
Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_

Project Manager SARF Review: \_\_\_\_\_ Date: \_\_\_\_\_



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields.

Company: Georgia Power - Coal Combustion Residuals
Address: 2480 Walker Road
Atlanta, GA 30339

Project Name: Plant Branch BCO Network
Project # CCR 4th Semi-Annual
Collector By (print): Tracy Martinak

State: Georgia City: Milledgeville Time Zone Collected:
Date/Time: 1/17/14 1:17 PM

Project Manager:
Price Project Manager:
Purchase Order #
Quote #
Turnaround Date Required:

Method:
[ ] Same Day [ ] Next Day
[ ] 1-2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
[ ] Expedite Charges Apply

Matrix:
Customer Sample ID

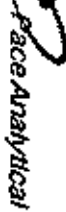
Table with columns: Matrix, Comp/Grab, Collected (or Composite Start) Date, Time, Composite End Date, Time, pH, # of Cons.

Requisitioned by/Company (Signature):
Date/Time:
Received by/Company (Signature):
Date/Time:

LAB USE ONLY - ADDS LABORATORY LOGS FROM OUR USE FOR COMPLIANCE PURPOSES OR
MTRIL Log#44 Number 1449
ALL SHADED AREAS are for LAB USE ONLY
Container Preparer Type:
Lab Project Manager:

Table with columns: Metals 6010/6020/7470 - see comments, Total Alkalinity and Bicarbonate/Carbonate Alkalinity, Dissolved Organic Carbon, NOX 353.2, Total Hardness SM 2304B

LAB Sample Received/Checked:
Candorly Salt Present/Inhibit: Y/N/NA
Operator Signature Present: Y/N/NA
Bottle Inhibit: Y/N/NA
Corrected Volume: Y/N/NA
Sufficient Volume: Y/N/NA
VDA - Reservoir Acceptable: Y/N/NA
VDA - Regulated Source: Y/N/NA
Sample in Holding Time: Y/N/NA
Metallic Chloride Present: Y/N/NA
CS Type:
Sample pH Acceptable: Y/N/NA
pH Stable: Y/N/NA
Sample Present: Y/N/NA
Leaf Acetate Strip:
LAB USE ONLY:
Lab Sample # / Comments:



CHAIN-OF-CUSTODY Analytical Request Document

Chain of Custody is a LEGAL DOCUMENT - Complete all relevant fields

Billing Information

Company: Georgia Power - Coal Combustion Residuals
Address: 2480 Asper Road
Atlanta, GA 30339

Client: Jop Abraham
Email: jop.abraham@southcoast.com

Phone: (404) 506-7239

State: Georgia City: Marietta Time Zone: Eastern

Email: j.abraham@southcoast.com

Project Name: Plant Branch BCD Network

Phone: (404) 506-7239

Project # & CCR 4th Semi-Annual

Collected by (initial): Travis Martinez

Purchase Order #

Quota #

Turnaround Date Required

Collected By (signature):

Number

1 Start Day 1 Next Day

1 2 Day 1 3 Day 1 4 Day 1 5 Day

Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (PL), Solid (SD), Oil (OL), Waste (W), Air (AQ), Tissue (TS), Biosay (BI), Vial (V), Other (OT)

Customer Sample #:

Matrix \*

Comp / Grab

Collected for Composite

Composite End

Time

Date

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

BRGW-27I
BRGW-29I
BRGW-C-30I
DVE-1

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GW

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1306

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Metals Fe, K, Mg, Mn, Ni

Type of Use Used:

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Wet Dry None

Residuum sample(s) screened (<500 grains): Y N NA

SHORT HOURS PRESENT (<72 hours): Y N NA

LAB Sample Temperature (info):
Temp. Date Received: Y N NA

Acquired by/Company (Signature):

Date/Time: 3-4-21/0815

Received by/Company (Signature):

Date/Time: 3-4-21 815

MTN LAB USE ONLY

Temp. Date Received: Y N NA

Acquired by/Company (Signature):

Date/Time:

Received by/Company (Signature):

Date/Time:

MTN LAB USE ONLY

Temp. Date Received: Y N NA

ALL SHADED AREAS ARE FOR LAB USE ONLY

Container Retention Type: 1 2 1 1

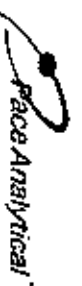
Retention Type: (1) silver pad, (2) sulfate pad, (3) hydrophobic pad, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium borohydride, (8) sodium thiosulfate, (9) hexamine, (10) sorbic acid, (11) ammonium sulfate, (12) ammonium hydroxide, (13) TSP, (14) unapproved, (15) Other

Analyses:

Metals 6010/6020/7470 - see comments
Total Alkalinity and Bicarbonate/Carbonate Alkalinity
Dissolved Organic Carbon
NOX 353 2
Total Hardness SM 2304B

Lab Project/Line:
Lab Sample Receipt/Checklist:
Company Seal Present/Weight: Y N NA
Operator Signature Present: Y N NA
Collector Signature Present: Y N NA
Bottle Label: Y N NA
Correct Bottle: Y N NA
Sufficient Volume: Y N NA
Vial - Residuals Acceptable: Y N NA
Vial - Residuals Not Acceptable: Y N NA
UDDA Registered Site: Y N NA
Samples in Holding Time: Y N NA
Residuals (Dilution Present): Y N NA
QI Sample:
Sample pH Acceptable: Y N NA
pH Sample:
Settle Present: Y N NA
Total Acidity Filter: Y N NA

LAB USE ONLY
Lab Sample #/Comment:



### CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY - After Workorder/Field Label Here or Use From Workorder Number or MTA Log-in Number Here

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339

Report To: Jeyu Abotiam  
 Email To: sscw@ce@fourtenna.com

Phone: (404) 508-7239  
 Email: jaysham@fourtenna.com  
 Project # CD5 4th Semi-Annual

Collector By: Jimmie Travis Matthews,  
 Andrea Lee Clure  
 Collected By: (Signature) *AC*

Billing Information:  
 State: Georgia City: Milledgeville Time Zone Collected: 1 PM 1:00 X 3:15 ET  
 Billing Information: [Blank]

Project Name: Plant Branch BOD Network  
 Project # CD5 4th Semi-Annual  
 Purchase Order # [Blank]  
 Quote # [Blank]  
 Turnaround Date Required: [Blank]

Site Collection info/Address: Plant Branch  
 State: Georgia City: Milledgeville Time Zone Collected: 1 PM 1:00 X 3:15 ET  
 Project Profile: [Blank]

PEC Project Manager:  
 Kenneth Herring@pacanaly.com  
 X Yes [ ] No [ ]  
 Field Filtered (if applicable):  
 X Yes [ ] No [ ]

Analysis: [Blank]

\* Matrix Codes (insert in Matrix code below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Spill/Solid (S), Oil (O), Wipe (WP), Air (AQ), Tracer (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample #	Matrix *	Comp / Grab	Collected for Composite		Composite End		pH	# of Cans
			Date	Time	Date	Time		
BRGWC-325	GW	G	3-4-21	1111			5.98	6
BRGWC-521	GW	G	3-4-21	1220			5.87	6
HB-2	W	G	3-4-21	1240				6
BRGWC-520	GW	G	3-4-21	1707			4.34	6
FB-1	W	G	3-5-21	0731				6

Lab Profile/Line: [Blank]

Lab Sample Receipt Checklist:  
 Secondary Seal Present/Intact: Y N NA  
 Canister SQ/Volume Present: Y N NA  
 Canister Signature Present: Y N NA  
 Boric Acid: Y N NA  
 Corrosion Inhibitor: Y N NA  
 Sample Volume: Y N NA  
 Samples Received on Day: Y N NA  
 VOA - Residuals Acceptable: Y N NA  
 VOA - Residuals Not Acceptable: Y N NA  
 Samples in Holding Time: Y N NA  
 Residual Oxidant Present: Y N NA  
 Q3 Status: [Blank]

Sample pH Acceptable: Y N NA  
 pH Sample: [Blank]  
 Sample Present: Y N NA  
 Vial Inhibitor Present: Y N NA

Lab Use Only:  
 Lab Sample # / Comments: [Blank]

Container Pre-screening Type: \*\*

1 0 2 1

(1) Residuals Paper, (1) name card, (2) surface seal, (1) high-purity acid, (2) medium hardness, (5) test acetone,  
 (6) omnibest, (7) sodium borohydride, (8) sodium thiosulfate, (9) hexane, (1) acetone w/d, (1) methanol/water,  
 (2) ammonium hydroxide, (1) 5% (1) Unpreserved, (10) Other

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 353.2  
 Total Hardness SM 2304B

Sample Tracking #:

SH-OH7 HOLDERS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via:  
 PECK UPS Client Courier

Counter Page Counter  
 MTL LAB USE ONLY

Table #:

Accumulator:  
 Temperature:  
 Precipitin:  
 PMA:  
 PR:

Retrieved by/Company (Signature): [Signature]  
 Date/Time: 3-5-21 1100

Retrieved by/Company (Signature): [Signature]  
 Date/Time: 3-5-21 1130

Retrieved by/Company (Signature): [Signature]  
 Date/Time: [Blank]

May 03, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 04, 2021 and March 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta

Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525669001	BRGWC-33S	Water	03/03/21 09:03	03/04/21 08:15
92525669002	BRGWC-34S	Water	03/03/21 10:05	03/04/21 08:15
92525669003	BRGWC-36S	Water	03/03/21 16:16	03/04/21 08:15
92525669004	BRGWC-37S	Water	03/03/21 17:18	03/04/21 08:15
92525669005	FB-1	Water	03/03/21 16:12	03/04/21 08:15
92525669006	BRGWC-35S	Water	03/04/21 14:17	03/05/21 11:30
92525669007	BRGWC-17S	Water	03/04/21 15:36	03/05/21 11:30
92525669008	BRGWC-38S	Water	03/04/21 17:14	03/05/21 11:30
92525669009	DUP-2	Water	03/04/21 00:00	03/05/21 11:30

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525669001	BRGWC-33S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669002	BRGWC-34S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669003	BRGWC-36S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669004	BRGWC-37S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669005	FB-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669006	BRGWC-35S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669007	BRGWC-17S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669008	BRGWC-38S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525669009	DUP-2	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA  
PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525669001</b>	<b>BRGWC-33S</b>					
	Performed by	CUSTOME			03/19/21 07:41	
		R				
	pH	4.83	Std. Units		03/19/21 07:41	
EPA 6010D	Manganese	1.0	mg/L	0.040	03/12/21 17:06	
EPA 6010D	Potassium	10.9	mg/L	0.20	03/12/21 17:06	
EPA 6010D	Sodium	13.5	mg/L	1.0	03/12/21 17:06	
EPA 6010D	Magnesium	4.1	mg/L	0.050	03/12/21 17:06	
EPA 6010D	Hardness, Total(SM 2340B)	111	mg/L	2.7	03/12/21 17:06	
<b>92525669002</b>	<b>BRGWC-34S</b>					
	Performed by	CUSTOME			03/19/21 07:41	
		R				
	pH	5.88	Std. Units		03/19/21 07:41	
EPA 6010D	Iron	0.017J	mg/L	0.040	03/12/21 18:27	
EPA 6010D	Manganese	3.7	mg/L	0.040	03/12/21 18:27	
EPA 6010D	Potassium	3.9	mg/L	0.20	03/12/21 18:27	
EPA 6010D	Sodium	23.8	mg/L	1.0	03/12/21 18:27	
EPA 6010D	Magnesium	18.2	mg/L	0.050	03/12/21 18:27	
EPA 6010D	Hardness, Total(SM 2340B)	296	mg/L	2.7	03/12/21 18:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	29.2	mg/L	5.0	03/16/21 23:01	
SM 2320B-2011	Alkalinity, Total as CaCO3	29.2	mg/L	5.0	03/16/21 23:01	
<b>92525669003</b>	<b>BRGWC-36S</b>					
	Performed by	CUSTOME			03/19/21 07:41	
		R				
	pH	5.86	Std. Units		03/19/21 07:41	
EPA 6010D	Manganese	0.0022J	mg/L	0.040	03/12/21 18:31	
EPA 6010D	Potassium	4.2	mg/L	0.20	03/12/21 18:31	
EPA 6010D	Sodium	40.9	mg/L	1.0	03/12/21 18:31	
EPA 6010D	Magnesium	22.4	mg/L	0.050	03/12/21 18:31	
EPA 6010D	Hardness, Total(SM 2340B)	224	mg/L	2.7	03/12/21 18:31	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	20.4	mg/L	5.0	03/16/21 23:18	
SM 2320B-2011	Alkalinity, Total as CaCO3	20.4	mg/L	5.0	03/16/21 23:18	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.062	mg/L	0.040	03/08/21 12:20	
SM 5310B	Dissolved Organic Carbon	0.55J	mg/L	1.0	03/12/21 20:54	
<b>92525669004</b>	<b>BRGWC-37S</b>					
	Performed by	CUSTOME			03/19/21 07:41	
		R				
	pH	5.87	Std. Units		03/19/21 07:41	
EPA 6010D	Potassium	2.0	mg/L	0.20	03/12/21 18:36	
EPA 6010D	Sodium	4.7	mg/L	1.0	03/12/21 18:36	
EPA 6010D	Magnesium	1.2	mg/L	0.050	03/12/21 18:36	
EPA 6010D	Hardness, Total(SM 2340B)	14.1	mg/L	2.7	03/12/21 18:36	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	22.1	mg/L	5.0	03/16/21 23:23	
SM 2320B-2011	Alkalinity, Total as CaCO3	22.1	mg/L	5.0	03/16/21 23:23	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.28	mg/L	0.040	03/08/21 12:21	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525669006</b>	<b>BRGWC-35S</b>					
	Performed by	CUSTOMER			03/19/21 07:41	
	pH	6.14	Std. Units		03/19/21 07:41	
EPA 6010D	Iron	0.019J	mg/L	0.040	03/12/21 18:46	
EPA 6010D	Manganese	0.013J	mg/L	0.040	03/12/21 18:46	
EPA 6010D	Potassium	4.5	mg/L	0.20	03/12/21 18:46	
EPA 6010D	Sodium	19.6	mg/L	1.0	03/12/21 18:46	
EPA 6010D	Magnesium	36.2	mg/L	0.050	03/12/21 18:46	
EPA 6010D	Hardness, Total(SM 2340B)	328	mg/L	2.7	03/12/21 18:46	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	57.3	mg/L	5.0	03/17/21 20:39	
SM 2320B-2011	Alkalinity, Total as CaCO3	57.3	mg/L	5.0	03/17/21 20:39	
<b>92525669007</b>	<b>BRGWC-17S</b>					
	Performed by	CUSTOMER			03/19/21 07:41	
	pH	6.45	Std. Units		03/19/21 07:41	
EPA 6010D	Potassium	1.1	mg/L	0.20	03/12/21 18:51	
EPA 6010D	Sodium	23.5	mg/L	1.0	03/12/21 18:51	
EPA 6010D	Magnesium	23.5	mg/L	0.050	03/12/21 18:51	
EPA 6010D	Hardness, Total(SM 2340B)	200	mg/L	2.7	03/12/21 18:51	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	89.1	mg/L	5.0	03/17/21 20:59	
SM 2320B-2011	Alkalinity, Total as CaCO3	89.1	mg/L	5.0	03/17/21 20:59	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.052	mg/L	0.040	03/08/21 13:03	
SM 5310B	Dissolved Organic Carbon	0.86J	mg/L	1.0	03/12/21 21:45	
<b>92525669008</b>	<b>BRGWC-38S</b>					
	Performed by	CUSTOMER			03/19/21 07:41	
	pH	4.19	Std. Units		03/19/21 07:41	
EPA 6010D	Iron	0.025J	mg/L	0.040	03/12/21 18:55	
EPA 6010D	Manganese	2.0	mg/L	0.040	03/12/21 18:55	
EPA 6010D	Potassium	7.3	mg/L	0.20	03/12/21 18:55	
EPA 6010D	Sodium	51.3	mg/L	1.0	03/12/21 18:55	
EPA 6010D	Magnesium	43.4	mg/L	0.050	03/12/21 18:55	
EPA 6010D	Hardness, Total(SM 2340B)	281	mg/L	2.7	03/12/21 18:55	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.078	mg/L	0.040	03/08/21 13:04	
<b>92525669009</b>	<b>DUP-2</b>					
EPA 6010D	Iron	0.027J	mg/L	0.040	03/12/21 19:10	
EPA 6010D	Manganese	0.012J	mg/L	0.040	03/12/21 19:10	
EPA 6010D	Potassium	4.4	mg/L	0.20	03/12/21 19:10	
EPA 6010D	Sodium	19.4	mg/L	1.0	03/12/21 19:10	
EPA 6010D	Magnesium	35.5	mg/L	0.050	03/12/21 19:10	
EPA 6010D	Hardness, Total(SM 2340B)	323	mg/L	2.7	03/12/21 19:10	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	58.2	mg/L	5.0	03/17/21 21:10	
SM 2320B-2011	Alkalinity, Total as CaCO3	58.2	mg/L	5.0	03/17/21 21:10	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Sample: <b>BRGWC-33S</b> Lab ID: <b>92525669001</b> Collected: 03/03/21 09:03      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>4.83</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 17:06	7439-89-6	
Manganese	<b>1.0</b>	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 17:06	7439-96-5	
Potassium	<b>10.9</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 17:06	7440-09-7	
Sodium	<b>13.5</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 17:06	7440-23-5	
Magnesium	<b>4.1</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 17:06	7439-95-4	
Hardness, Total(SM 2340B)	<b>111</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 17:06		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:39		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 22:39		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/16/21 22:39		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:18		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 20:23		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Sample: <b>BRGWC-34S</b> Lab ID: <b>92525669002</b> Collected: 03/03/21 10:05      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>5.88</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.017J</b>	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:27	7439-89-6	
Manganese	<b>3.7</b>	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:27	7439-96-5	
Potassium	<b>3.9</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:27	7440-09-7	
Sodium	<b>23.8</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:27	7440-23-5	
Magnesium	<b>18.2</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:27	7439-95-4	
Hardness, Total(SM 2340B)	<b>296</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:27		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>29.2</b>	mg/L	5.0	5.0	1		03/16/21 23:01		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/16/21 23:01		
Alkalinity, Total as CaCO3	<b>29.2</b>	mg/L	5.0	5.0	1		03/16/21 23:01		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:19		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 20:40		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Sample: <b>BRGWC-36S</b> Lab ID: <b>92525669003</b> Collected: 03/03/21 16:16      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>5.86</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:31	7439-89-6	
Manganese	<b>0.0022J</b>	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:31	7439-96-5	
Potassium	<b>4.2</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:31	7440-09-7	
Sodium	<b>40.9</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:31	7440-23-5	
Magnesium	<b>22.4</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:31	7439-95-4	
Hardness, Total(SM 2340B)	<b>224</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:31		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>20.4</b>	mg/L	5.0	5.0	1		03/16/21 23:18		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 23:18		
Alkalinity, Total as CaCO3	<b>20.4</b>	mg/L	5.0	5.0	1		03/16/21 23:18		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.062</b>	mg/L	0.040	0.017	1		03/08/21 12:20		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.55J</b>	mg/L	1.0	0.50	1		03/12/21 20:54		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Sample: <b>BRGWC-37S</b> Lab ID: <b>92525669004</b> Collected: 03/03/21 17:18      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>5.87</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:36	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:36	7439-96-5	
Potassium	<b>2.0</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:36	7440-09-7	
Sodium	<b>4.7</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:36	7440-23-5	
Magnesium	<b>1.2</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:36	7439-95-4	
Hardness, Total(SM 2340B)	<b>14.1</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:36		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>22.1</b>	mg/L	5.0	5.0	1		03/16/21 23:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 23:23		
Alkalinity, Total as CaCO3	<b>22.1</b>	mg/L	5.0	5.0	1		03/16/21 23:23		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.28</b>	mg/L	0.040	0.017	1		03/08/21 12:21		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 21:07		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Sample: FB-1		Lab ID: 92525669005		Collected: 03/03/21 16:12	Received: 03/04/21 08:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:41	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:41	7439-96-5	
Potassium	ND	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:41	7440-09-7	
Sodium	ND	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:41	7440-23-5	
Magnesium	ND	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:41	7439-95-4	
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:41		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 23:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/16/21 23:28		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/16/21 23:28		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 12:23		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 21:21		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Sample: <b>BRGWC-35S</b> Lab ID: <b>92525669006</b> Collected: 03/04/21 14:17      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>6.14</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.019J</b>	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:46	7439-89-6	
Manganese	<b>0.013J</b>	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:46	7439-96-5	
Potassium	<b>4.5</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:46	7440-09-7	
Sodium	<b>19.6</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:46	7440-23-5	
Magnesium	<b>36.2</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:46	7439-95-4	
Hardness, Total(SM 2340B)	<b>328</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:46		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>57.3</b>	mg/L	5.0	5.0	1		03/17/21 20:39		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 20:39		
Alkalinity, Total as CaCO3	<b>57.3</b>	mg/L	5.0	5.0	1		03/17/21 20:39		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 13:02		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 21:34		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Sample: <b>BRGWC-17S</b> Lab ID: <b>92525669007</b> Collected: 03/04/21 15:36      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>6.45</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:51	7439-89-6	
Manganese	ND	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:51	7439-96-5	
Potassium	<b>1.1</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:51	7440-09-7	
Sodium	<b>23.5</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:51	7440-23-5	
Magnesium	<b>23.5</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:51	7439-95-4	
Hardness, Total(SM 2340B)	<b>200</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:51		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>89.1</b>	mg/L	5.0	5.0	1		03/17/21 20:59		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 20:59		
Alkalinity, Total as CaCO3	<b>89.1</b>	mg/L	5.0	5.0	1		03/17/21 20:59		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.052</b>	mg/L	0.040	0.017	1		03/08/21 13:03		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.86J</b>	mg/L	1.0	0.50	1		03/12/21 21:45		

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## ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

Sample: <b>BRGWC-38S</b> Lab ID: <b>92525669008</b> Collected: 03/04/21 17:14      Received: 03/05/21 11:30      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/19/21 07:41		
pH	<b>4.19</b>	Std. Units			1		03/19/21 07:41		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.025J</b>	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 18:55	7439-89-6	
Manganese	<b>2.0</b>	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 18:55	7439-96-5	
Potassium	<b>7.3</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 18:55	7440-09-7	
Sodium	<b>51.3</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 18:55	7440-23-5	
Magnesium	<b>43.4</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 18:55	7439-95-4	
Hardness, Total(SM 2340B)	<b>281</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 18:55		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 21:08		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 21:08		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		03/17/21 21:08		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.078</b>	mg/L	0.040	0.017	1		03/08/21 13:04		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 23:13		

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### ANALYTICAL RESULTS

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Sample: DUP-2		Lab ID: 92525669009		Collected: 03/04/21 00:00	Received: 03/05/21 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	<b>0.027J</b>	mg/L	0.040	0.016	1	03/12/21 10:10	03/12/21 19:10	7439-89-6	
Manganese	<b>0.012J</b>	mg/L	0.040	0.0017	1	03/12/21 10:10	03/12/21 19:10	7439-96-5	
Potassium	<b>4.4</b>	mg/L	0.20	0.056	1	03/12/21 10:10	03/12/21 19:10	7440-09-7	
Sodium	<b>19.4</b>	mg/L	1.0	0.26	1	03/12/21 10:10	03/12/21 19:10	7440-23-5	
Magnesium	<b>35.5</b>	mg/L	0.050	0.0076	1	03/12/21 10:10	03/12/21 19:10	7439-95-4	
Hardness, Total(SM 2340B)	<b>323</b>	mg/L	2.7	0.21	1	03/12/21 10:10	03/12/21 19:10		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	<b>58.2</b>	mg/L	5.0	5.0	1		03/17/21 21:10		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		03/17/21 21:10		
Alkalinity, Total as CaCO3	<b>58.2</b>	mg/L	5.0	5.0	1		03/17/21 21:10		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		03/08/21 13:06		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		03/12/21 23:57		

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

QC Batch: 606044 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92525669001, 92525669002, 92525669003, 92525669004, 92525669005, 92525669006, 92525669007, 92525669008, 92525669009

METHOD BLANK: 3192983 Matrix: Water  
 Associated Lab Samples: 92525669001, 92525669002, 92525669003, 92525669004, 92525669005, 92525669006, 92525669007, 92525669008, 92525669009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/12/21 16:56	
Iron	mg/L	ND	0.040	0.016	03/12/21 16:56	
Magnesium	mg/L	ND	0.050	0.0076	03/12/21 16:56	
Manganese	mg/L	ND	0.040	0.0017	03/12/21 16:56	
Potassium	mg/L	ND	0.20	0.056	03/12/21 16:56	
Sodium	mg/L	ND	1.0	0.26	03/12/21 16:56	

LABORATORY CONTROL SAMPLE: 3192984

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	7.0	105	80-120	
Iron	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.1	105	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.1	110	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3192985 3192986

Parameter	Units	3192985		3192986		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Hardness, Total(SM 2340B)	mg/L	111	6.6	6.6	117	121	102	154	75-125	3	20
Iron	mg/L	ND	1	1	1.1	1.1	106	110	75-125	3	20
Magnesium	mg/L	4.1	1	1	5.2	5.4	108	121	75-125	3	20
Manganese	mg/L	1.0	1	1	2.0	2.1	103	107	75-125	2	20
Potassium	mg/L	10.9	1	1	11.9	12.3	103	141	75-125	3	20 M1
Sodium	mg/L	13.5	1	1	14.6	15.1	103	153	75-125	3	20 M1

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

QC Batch: 606874 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525669001

METHOD BLANK: 3197235 Matrix: Water  
Associated Lab Samples: 92525669001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 19:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 19:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 19:52	

LABORATORY CONTROL SAMPLE: 3197236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	50.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197237 3197238

Parameter	Units	92527199002		3197237		3197238		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	110	50	157	50	160	94	100	80-120	2	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197239 3197240

Parameter	Units	92527211001		3197239		3197240		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	28.5	50	78.5	50	79.4	100	102	80-120	1	25	

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

QC Batch: 606876 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525669002, 92525669003, 92525669004, 92525669005

METHOD BLANK: 3197245 Matrix: Water  
Associated Lab Samples: 92525669002, 92525669003, 92525669004, 92525669005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	

LABORATORY CONTROL SAMPLE: 3197246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197247 3197248

Parameter	Units	92525669002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	29.2	50	50	79.0	78.6	100	99	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197249 3197250

Parameter	Units	92525536003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	54.8	54.7	104	103	80-120	0	25	

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

QC Batch: 607154 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525669006, 92525669007, 92525669008, 92525669009

METHOD BLANK: 3198620 Matrix: Water  
Associated Lab Samples: 92525669006, 92525669007, 92525669008, 92525669009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/17/21 17:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/17/21 17:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/17/21 17:52	

LABORATORY CONTROL SAMPLE: 3198621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198624 3198625

Parameter	Units	92525669006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	57.3	50	50	110	109	106	104	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3200194 3200195

Parameter	Units	92525383011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	28.9	50	50	80.0	81.0	102	104	80-120	1	25	

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

QC Batch: 604832 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525669001, 92525669002, 92525669003, 92525669004, 92525669005

METHOD BLANK: 3186513

Matrix: Water

Associated Lab Samples: 92525669001, 92525669002, 92525669003, 92525669004, 92525669005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:03	

LABORATORY CONTROL SAMPLE: 3186514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186515 3186516

Parameter	Units	3186515		3186516		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.3	2.3	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186517 3186518

Parameter	Units	3186517		3186518		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.4	2.4	95	95	90-110	0	10	

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

QC Batch: 604834 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525669006, 92525669007, 92525669008, 92525669009

METHOD BLANK: 3186519 Matrix: Water  
Associated Lab Samples: 92525669006, 92525669007, 92525669008, 92525669009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:37	

LABORATORY CONTROL SAMPLE: 3186520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186521 3186522

Parameter	Units	92525798002		3186521		3186522		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.26	2.5	2.5	2.5	2.5	2.5	91	90	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186523 3186524

Parameter	Units	92525827002		3186523		3186524		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.092	2.5	2.5	2.5	1.7	1.7	63	64	90-110	1	10 M1	

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

QC Batch: 711998 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92525669001, 92525669002, 92525669003, 92525669004, 92525669005, 92525669006, 92525669007

METHOD BLANK: 3881059

Matrix: Water

Associated Lab Samples: 92525669001, 92525669002, 92525669003, 92525669004, 92525669005, 92525669006, 92525669007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 15:23	

LABORATORY CONTROL SAMPLE: 3881060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881061 3881062

Parameter	Units	92525383007		3881062		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	ND	20	20	18.7	18.7	93	93	80-120	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881063 3881064

Parameter	Units	92525677002		3881064		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	0.89J	20	20	19.8	19.7	95	94	80-120	0	20

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### QUALITY CONTROL DATA

Project: BRANCH E NETWORK MISC  
Pace Project No.: 92525669

QC Batch: 711999 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach  
Associated Lab Samples: 92525669008, 92525669009

METHOD BLANK: 3881067 Matrix: Water  
Associated Lab Samples: 92525669008, 92525669009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 22:46	

LABORATORY CONTROL SAMPLE: 3881068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.0	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881069 3881070

Parameter	Units	92525669008		3881070		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	ND	20	20	18.8	18.6	93	93	80-120	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881071 3881072

Parameter	Units	35617414003		3881072		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	20.4	20	20	39.3	38.8	94	92	80-120	1	20

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## QUALIFIERS

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH E NETWORK MISC

Pace Project No.: 92525669

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525669001	BRGWC-33S				
92525669002	BRGWC-34S				
92525669003	BRGWC-36S				
92525669004	BRGWC-37S				
92525669006	BRGWC-35S				
92525669007	BRGWC-17S				
92525669008	BRGWC-38S				
92525669001	BRGWC-33S	EPA 3010A	606044	EPA 6010D	606283
92525669002	BRGWC-34S	EPA 3010A	606044	EPA 6010D	606283
92525669003	BRGWC-36S	EPA 3010A	606044	EPA 6010D	606283
92525669004	BRGWC-37S	EPA 3010A	606044	EPA 6010D	606283
92525669005	FB-1	EPA 3010A	606044	EPA 6010D	606283
92525669006	BRGWC-35S	EPA 3010A	606044	EPA 6010D	606283
92525669007	BRGWC-17S	EPA 3010A	606044	EPA 6010D	606283
92525669008	BRGWC-38S	EPA 3010A	606044	EPA 6010D	606283
92525669009	DUP-2	EPA 3010A	606044	EPA 6010D	606283
92525669001	BRGWC-33S	SM 2320B-2011	606874		
92525669002	BRGWC-34S	SM 2320B-2011	606876		
92525669003	BRGWC-36S	SM 2320B-2011	606876		
92525669004	BRGWC-37S	SM 2320B-2011	606876		
92525669005	FB-1	SM 2320B-2011	606876		
92525669006	BRGWC-35S	SM 2320B-2011	607154		
92525669007	BRGWC-17S	SM 2320B-2011	607154		
92525669008	BRGWC-38S	SM 2320B-2011	607154		
92525669009	DUP-2	SM 2320B-2011	607154		
92525669001	BRGWC-33S	EPA 353.2 Rev 2.0 1993	604832		
92525669002	BRGWC-34S	EPA 353.2 Rev 2.0 1993	604832		
92525669003	BRGWC-36S	EPA 353.2 Rev 2.0 1993	604832		
92525669004	BRGWC-37S	EPA 353.2 Rev 2.0 1993	604832		
92525669005	FB-1	EPA 353.2 Rev 2.0 1993	604832		
92525669006	BRGWC-35S	EPA 353.2 Rev 2.0 1993	604834		
92525669007	BRGWC-17S	EPA 353.2 Rev 2.0 1993	604834		
92525669008	BRGWC-38S	EPA 353.2 Rev 2.0 1993	604834		
92525669009	DUP-2	EPA 353.2 Rev 2.0 1993	604834		
92525669001	BRGWC-33S	SM 5310B	711998		
92525669002	BRGWC-34S	SM 5310B	711998		
92525669003	BRGWC-36S	SM 5310B	711998		
92525669004	BRGWC-37S	SM 5310B	711998		
92525669005	FB-1	SM 5310B	711998		
92525669006	BRGWC-35S	SM 5310B	711998		
92525669007	BRGWC-17S	SM 5310B	711998		
92525669008	BRGWC-38S	SM 5310B	711999		
92525669009	DUP-2	SM 5310B	711999		

### REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: **92525669**

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



92525669

Date/Initials Person Examining Contents: 3/4/21

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 230 Type of Ice:  Wet  Blue  None

Cooler Temp: 1.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C  Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.6

USDA Regulated Soil (  N/A, water sample)

Old samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Old samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8.
Sample Labels Match OOC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
Includes Date/Time/ID/Analysis Matrix: <u>W</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Company Georgia Power - Coal Combustion Residues  
 Address: 2800 Mazer Road  
 Atlanta, GA 30339  
 Report To: John Abraham  
 Copy To: Golder  
 Phone: (404) 506-7225  
 Email: j.abraham@southern.com

Project Name: Plant Branch E Network  
 Project # COA 4th Sem Annual  
 Purchaser Order #  
 Analytical Procedure #  
 Date of Collection: 3-3-21

State: Georgia City: Marietta  
 Time Zone: Eastern  
 Project Manager: tom.harding@atlalabs.com  
 Field Filtered (if applicable):  
 Analysis:

Metals 6010/6020/7470 - see comments  
 Total Alkalinity and Bicarbonate/Carbonate Alkalinity  
 Dissolved Organic Carbon  
 NOX 559.2  
 Total Hardness SM 2304B

LAB USE ONLY:  
 Lab Sample # / Comments:  
 Lab Sample # / Comments:

Customer Sample ID	Matrix	Comp / Grab	Collected for Composite (Start)		Composite End		pH	% of Clms	Lab Project Manager:
			Date	Time	Date	Time			
BRGWC-335	GW	G	3-3-21	0903			4.83	6	X
BRGWC-345	GW	G	3-3-21	1005			5.88	6	X
BRGWC-365	GW	G	3-3-21	1616			5.86	6	X
BRGWC-375	GW	G	3-3-21	1718			5.81	6	X
FB-1	W	G	3-3-21	1612			-	6	X

Container Preparing Type	1	2	3	4	5	6	7	8	9	10
Preparative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrofluoric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium borohydride, (8) sodium hydroxide, (9) sodium hydroxide, (10) methanol, (11) sodium hydroxide, (12) nitric acid, (13) sodium hydroxide, (14) sodium hydroxide, (15) sodium hydroxide, (16) sodium hydroxide, (17) sodium hydroxide, (18) sodium hydroxide, (19) sodium hydroxide, (20) sodium hydroxide										
LAB Project Manager:										
LAB Project Manager:										
LAB Project Manager:										
LAB Project Manager:										

LAB USE ONLY:  
 Lab Sample # / Comments:  
 Lab Sample # / Comments:

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 Lab Sample # / Comments:  
 Lab Sample # / Comments:

ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - East Combustion Request  
 Address: 3480 Shaver Road  
 Atlanta, GA 30339  
 Report To: Jojo Abraham  
 Email: jabraham@southface.com  
 Phone: (404) 506-7239  
 Fax: (404) 506-7239  
 Project Name: Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Plant Branch E Network  
 Project # COR 4th Semi-Annual  
 Collected by: Travis Hernandez  
 Project Order #  
 Quota #  
 Turnaround Date Required:  
 Rush:  Same Day  Next Day  
 2 Day  3 Day  7 Day  15 Day  
 Expedite Charges Apply:  Yes  No  
 Analysis: \_\_\_\_\_

Container Preservation Type	1	2	3	4	5	6	7	8	9	10
Preservative Type: (1) none acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium fluoride, (8) sodium borohydride, (9) hydrogen, (10) sodium acetate, (11) ammonium sulfate, (12) none/uncertain										
Analysis										

Lab Project Number	Lab Project Name	Lab Project Date	Lab Project Location	Lab Project Operator	Lab Project Supervisor	Lab Project Analyst	Lab Project Reviewer	Lab Project Approver

Lab Project Number	Lab Project Name	Lab Project Date	Lab Project Location	Lab Project Operator	Lab Project Supervisor	Lab Project Analyst	Lab Project Reviewer	Lab Project Approver

Lab Project Number	Lab Project Name	Lab Project Date	Lab Project Location	Lab Project Operator	Lab Project Supervisor	Lab Project Analyst	Lab Project Reviewer	Lab Project Approver

Relinquished by/Company (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by/Company (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by/Company (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by/Company (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by/Company (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by/Company (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

May 03, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

Dear Joju Abraham:

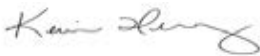
Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525680001	PZ-51S	Water	03/03/21 09:23	03/04/21 08:15
92525680002	PZ-51D	Water	03/03/21 10:55	03/04/21 08:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525680001	PZ-51S	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525680002	PZ-51D	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525680001</b>	<b>PZ-51S</b>					
	Performed by	CUSTOME			03/04/21 13:28	
		R				
	pH	5.41	Std. Units		03/04/21 13:28	
EPA 6010D	Iron	0.52	mg/L	0.040	03/09/21 20:24	
EPA 6010D	Manganese	1.9	mg/L	0.040	03/09/21 20:24	
EPA 6010D	Potassium	2.5	mg/L	0.20	03/09/21 20:24	
EPA 6010D	Sodium	11.5	mg/L	1.0	03/09/21 20:24	
EPA 6010D	Magnesium	8.4	mg/L	0.050	03/09/21 20:24	
EPA 6010D	Hardness, Total(SM 2340B)	54.2	mg/L	2.7	03/09/21 20:24	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	68.5	mg/L	5.0	03/17/21 02:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	68.5	mg/L	5.0	03/17/21 02:51	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	3.3	mg/L	0.040	03/08/21 12:30	
SM 5310B	Dissolved Organic Carbon	1.4	mg/L	1.0	03/12/21 19:53	
<b>92525680002</b>	<b>PZ-51D</b>					
	Performed by	CUSTOME			03/04/21 13:28	
		R				
	pH	7.10	Std. Units		03/04/21 13:28	
EPA 6010D	Iron	2.5	mg/L	0.040	03/09/21 20:29	
EPA 6010D	Manganese	1.2	mg/L	0.040	03/09/21 20:29	
EPA 6010D	Potassium	11.8	mg/L	0.20	03/09/21 20:29	
EPA 6010D	Sodium	40.2	mg/L	1.0	03/09/21 20:29	
EPA 6010D	Magnesium	28.7	mg/L	0.050	03/09/21 20:29	
EPA 6010D	Hardness, Total(SM 2340B)	414	mg/L	2.7	03/09/21 20:29	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	134	mg/L	5.0	03/17/21 03:02	
SM 2320B-2011	Alkalinity, Total as CaCO3	134	mg/L	5.0	03/17/21 03:02	
SM 5310B	Dissolved Organic Carbon	2.0	mg/L	1.0	03/12/21 20:07	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

Sample: PZ-51S		Lab ID: 92525680001		Collected: 03/03/21 09:23		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:28		
pH	<b>5.41</b>	Std. Units			1		03/04/21 13:28		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.52</b>	mg/L	0.040	0.016	1	03/09/21 11:12	03/09/21 20:24	7439-89-6	
Manganese	<b>1.9</b>	mg/L	0.040	0.0017	1	03/09/21 11:12	03/09/21 20:24	7439-96-5	
Potassium	<b>2.5</b>	mg/L	0.20	0.056	1	03/09/21 11:12	03/09/21 20:24	7440-09-7	
Sodium	<b>11.5</b>	mg/L	1.0	0.26	1	03/09/21 11:12	03/09/21 20:24	7440-23-5	
Magnesium	<b>8.4</b>	mg/L	0.050	0.0076	1	03/09/21 11:12	03/09/21 20:24	7439-95-4	
Hardness, Total(SM 2340B)	<b>54.2</b>	mg/L	2.7	0.21	1	03/09/21 11:12	03/09/21 20:24		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>68.5</b>	mg/L	5.0	5.0	1		03/17/21 02:51		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 02:51		
Alkalinity, Total as CaCO3	<b>68.5</b>	mg/L	5.0	5.0	1		03/17/21 02:51		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>3.3</b>	mg/L	0.040	0.017	1		03/08/21 12:30		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>1.4</b>	mg/L	1.0	0.50	1		03/12/21 19:53		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

Sample: PZ-51D		Lab ID: 92525680002		Collected: 03/03/21 10:55		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:28		
pH	<b>7.10</b>	Std. Units			1		03/04/21 13:28		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>2.5</b>	mg/L	0.040	0.016	1	03/09/21 11:12	03/09/21 20:29	7439-89-6	
Manganese	<b>1.2</b>	mg/L	0.040	0.0017	1	03/09/21 11:12	03/09/21 20:29	7439-96-5	
Potassium	<b>11.8</b>	mg/L	0.20	0.056	1	03/09/21 11:12	03/09/21 20:29	7440-09-7	
Sodium	<b>40.2</b>	mg/L	1.0	0.26	1	03/09/21 11:12	03/09/21 20:29	7440-23-5	
Magnesium	<b>28.7</b>	mg/L	0.050	0.0076	1	03/09/21 11:12	03/09/21 20:29	7439-95-4	
Hardness, Total(SM 2340B)	<b>414</b>	mg/L	2.7	0.21	1	03/09/21 11:12	03/09/21 20:29		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>134</b>	mg/L	5.0	5.0	1		03/17/21 03:02		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 03:02		
Alkalinity, Total as CaCO3	<b>134</b>	mg/L	5.0	5.0	1		03/17/21 03:02		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		03/08/21 12:32		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>2.0</b>	mg/L	1.0	0.50	1		03/12/21 20:07		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

QC Batch: 605190

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3188284

Matrix: Water

Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/09/21 19:35	
Iron	mg/L	ND	0.040	0.016	03/09/21 19:35	
Magnesium	mg/L	ND	0.050	0.0076	03/09/21 19:35	
Manganese	mg/L	ND	0.040	0.0017	03/09/21 19:35	
Potassium	mg/L	ND	0.20	0.056	03/09/21 19:35	
Sodium	mg/L	ND	1.0	0.26	03/09/21 19:35	

LABORATORY CONTROL SAMPLE: 3188285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.1	105	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	101	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188286 3188287

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526065007 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	969000 ug/L	6.6	6.6	957	977	-181	124	75-125	2	20
Iron	mg/L	ND	1	1	1.2	1.0	116	101	75-125	13	20
Magnesium	mg/L	ND	1	1	1.0	1.0	100	103	75-125	3	20
Manganese	mg/L	ND	1	1	0.95	0.97	95	97	75-125	2	20
Potassium	mg/L	1660 ug/L	1	1	2.6	2.7	98	102	75-125	2	20
Sodium	mg/L	14400 ug/L	1	1	15.2	15.5	78	110	75-125	2	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

QC Batch: 606876 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3197245 Matrix: Water  
Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	

LABORATORY CONTROL SAMPLE: 3197246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197247 3197248

Parameter	Units	92525669002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	29.2	50	50	79.0	78.6	100	99	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197249 3197250

Parameter	Units	92525536003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	54.8	54.7	104	103	80-120	0	25	

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

QC Batch: 604832 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3186513 Matrix: Water  
Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:03	

LABORATORY CONTROL SAMPLE: 3186514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186515 3186516

Parameter	Units	3186515		3186516		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.3	2.3	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186517 3186518

Parameter	Units	3186517		3186518		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.4	2.4	95	95	90-110	0	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

QC Batch: 711998 Analysis Method: SM 5310B  
QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92525680001, 92525680002

METHOD BLANK: 3881059 Matrix: Water

Associated Lab Samples: 92525680001, 92525680002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 15:23	

LABORATORY CONTROL SAMPLE: 3881060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881061 3881062

Parameter	Units	92525383007		3881062		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	ND	20	20	18.7	18.7	93	93	80-120	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881063 3881064

Parameter	Units	92525677002		3881064		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	0.89J	20	20	19.8	19.7	95	94	80-120	0	20

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH BCD DELINEATION MISC

Pace Project No.: 92525680

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: BRANCH BCD DELINEATION MISC  
Pace Project No.: 92525680

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525680001	PZ-51S				
92525680002	PZ-51D				
92525680001	PZ-51S	EPA 3010A	605190	EPA 6010D	605248
92525680002	PZ-51D	EPA 3010A	605190	EPA 6010D	605248
92525680001	PZ-51S	SM 2320B-2011	606876		
92525680002	PZ-51D	SM 2320B-2011	606876		
92525680001	PZ-51S	EPA 353.2 Rev 2.0 1993	604832		
92525680002	PZ-51D	EPA 353.2 Rev 2.0 1993	604832		
92525680001	PZ-51S	SM 5310B	711998		
92525680002	PZ-51D	SM 5310B	711998		

**REPORT OF LABORATORY ANALYSIS**

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Document Name:  
Sample Condition Upon Receipt (SCUR)  
Document No.:  
F-CAR-CS-093-Rev.07

Document Revised: October 28, 2020  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

G A Power

Project #:

WO#: **92525680**

Courier:  Commercial  Fed Ex  UPS  USPS  Client  Pace  Other: \_\_\_\_\_



92525680

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 7/4/21

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Yes  No  N/A

Thermometer:  Gun ID: 230 Type of Ice:  White  Blue  None

Cooler Temp: 1.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.6

USDA Regulated Soil?  N/A, water sample

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCUR Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_





April 26, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

Dear Joju Abraham:

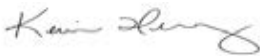
Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92532950001	PZ-61I	Water	04/12/21 10:20	04/13/21 16:55

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92532950001	PZ-61I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville  
PASI-C = Pace Analytical Services - Charlotte  
PASI-GA = Pace Analytical Services - Peachtree Corners, GA  
PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92532950001</b>	<b>PZ-61I</b>					
	Performed by	CUSTOME			04/14/21 08:18	
		R				
	pH	5.40	Std. Units		04/14/21 08:18	
EPA 6010D	Iron	7.3	mg/L	0.040	04/15/21 18:52	
EPA 6010D	Manganese	118	mg/L	0.40	04/16/21 16:54	
EPA 6010D	Potassium	9.2	mg/L	0.20	04/15/21 18:52	
EPA 6010D	Sodium	60.9	mg/L	1.0	04/15/21 18:52	
EPA 6010D	Magnesium	177	mg/L	0.050	04/15/21 18:52	
EPA 6010D	Hardness, Total(SM 2340B)	1300	mg/L	2.7	04/15/21 18:52	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	28.1	mg/L	5.0	04/22/21 20:24	
SM 2320B-2011	Alkalinity, Total as CaCO3	28.1	mg/L	5.0	04/22/21 20:24	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.20	mg/L	0.040	04/20/21 13:17	
SM 5310B	Dissolved Organic Carbon	0.91J	mg/L	1.0	04/21/21 08:36	

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## ANALYTICAL RESULTS

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

Sample: PZ-61I		Lab ID: 92532950001		Collected: 04/12/21 10:20		Received: 04/13/21 16:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/14/21 08:18		
pH	<b>5.40</b>	Std. Units			1		04/14/21 08:18		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>7.3</b>	mg/L	0.040	0.016	1	04/15/21 11:15	04/15/21 18:52	7439-89-6	
Manganese	<b>118</b>	mg/L	0.40	0.017	10	04/15/21 11:15	04/16/21 16:54	7439-96-5	
Potassium	<b>9.2</b>	mg/L	0.20	0.056	1	04/15/21 11:15	04/15/21 18:52	7440-09-7	
Sodium	<b>60.9</b>	mg/L	1.0	0.26	1	04/15/21 11:15	04/15/21 18:52	7440-23-5	
Magnesium	<b>177</b>	mg/L	0.050	0.0076	1	04/15/21 11:15	04/15/21 18:52	7439-95-4	
Hardness, Total(SM 2340B)	<b>1300</b>	mg/L	2.7	0.21	1	04/15/21 11:15	04/15/21 18:52		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>28.1</b>	mg/L	5.0	5.0	1		04/22/21 20:24		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		04/22/21 20:24		
Alkalinity, Total as CaCO3	<b>28.1</b>	mg/L	5.0	5.0	1		04/22/21 20:24		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.20</b>	mg/L	0.040	0.017	1		04/20/21 13:17		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.91J</b>	mg/L	1.0	0.50	1		04/21/21 08:36		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS  
Pace Project No.: 92532950

QC Batch: 613959 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92532950001

METHOD BLANK: 3231144 Matrix: Water  
Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	04/15/21 18:38	
Iron	mg/L	ND	0.040	0.016	04/15/21 18:38	
Magnesium	mg/L	ND	0.050	0.0076	04/15/21 18:38	
Manganese	mg/L	ND	0.040	0.0017	04/15/21 18:38	
Potassium	mg/L	ND	0.20	0.056	04/15/21 18:38	
Sodium	mg/L	ND	1.0	0.26	04/15/21 18:38	

LABORATORY CONTROL SAMPLE: 3231145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.1	108	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.1	113	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231146 3231147

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92532953001 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	1300	6.6	6.6	1300	1280	78	-217	75-125	2	20
Iron	mg/L	7.3	1	1	8.5	8.4	113	108	75-125	1	20
Magnesium	mg/L	177	1	1	179	176	151	-139	75-125	2	20 M1
Manganese	mg/L	79.2	1	1	80.1	79.5	92	36	75-125	1	20
Potassium	mg/L	9.2	1	1	10.2	10.1	100	90	75-125	1	20
Sodium	mg/L	60.9	1	1	61.2	60.7	31	-22	75-125	1	20 M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

QC Batch: 615461

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92532950001

METHOD BLANK: 3238715

Matrix: Water

Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	04/22/21 16:46	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/22/21 16:46	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/22/21 16:46	

LABORATORY CONTROL SAMPLE: 3238716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	53.0	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238717 3238718

Parameter	Units	92532666002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	436	50	50	471	471	68	70	80-120	0	25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3238719 3238720

Parameter	Units	92532492003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	60.7	59.8	114	112	80-120	1	25	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

QC Batch: 614819

Analysis Method: EPA 353.2 Rev 2.0 1993

QC Batch Method: EPA 353.2 Rev 2.0 1993

Analysis Description: 353.2 Nitrate + Nitrite, preserved

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92532950001

METHOD BLANK: 3235434

Matrix: Water

Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	04/20/21 13:02	

LABORATORY CONTROL SAMPLE: 3235435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235436 3235437

Parameter	Units	3235436		3235437		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	0.11	2.5	1.7	1.8	65	66	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235438 3235439

Parameter	Units	3235438		3235439		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Nitrogen, NO2 plus NO3	mg/L	5.4	2.5	7.9	7.9	102	101	90-110	0	10	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

QC Batch: 722429

Analysis Method: SM 5310B

QC Batch Method: SM 5310B

Analysis Description: 5310B Dissolved Organic Carbon

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92532950001

METHOD BLANK: 3937892

Matrix: Water

Associated Lab Samples: 92532950001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	04/21/21 07:55	

LABORATORY CONTROL SAMPLE: 3937893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3937894 3937895

Parameter	Units	3937894		3937895		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Dissolved Organic Carbon	mg/L	0.91J	20	20	20.5	20.4	98	98	80-120	0	20

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

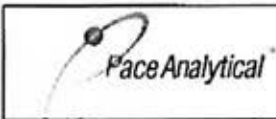
Project: BRANCH PZ-61I CATIONS/ANIONS

Pace Project No.: 92532950

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92532950001	PZ-61I				
92532950001	PZ-61I	EPA 3010A	613959	EPA 6010D	614020
92532950001	PZ-61I	SM 2320B-2011	615461		
92532950001	PZ-61I	EPA 353.2 Rev 2.0 1993	614819		
92532950001	PZ-61I	SM 5310B	722429		

### REPORT OF LABORATORY ANALYSIS

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Document Name: <b>Sample Condition Upon Receipt(SCUR)</b>	Document Revised: October 28, 2020 Page 1 of 2
Document No.: <b>F-CAR-CS-033-Rev.07</b>	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: G A Power

Project #: **WO# : 92532950**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/13/21  
COE

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 233 Type of Ice:  Wet  Blue  None

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) -0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.2

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
 Sample Condition Upon Receipt(SCUR)  
 Document No.:  
 F-CAR-CS-033-Rev.07

Document Revised: October 23, 2010  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\* Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

**WO# : 92532950**

PM: KLH1

Due Date: 04/27/21

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, UHg

\*\* Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unip (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-503T kit (N/A)	V/GK (3 vials per kit)-V/H/Gas kit (N/A)	SP5S-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)







April 27, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Company  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Arizona Certification# AZ0819

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92532951001	PZ-57I	Water	04/12/21 14:10	04/13/21 16:55
92532951002	PZ-58I	Water	04/12/21 14:55	04/13/21 16:55
92532951003	PZ-60I	Water	04/12/21 12:30	04/13/21 16:55
92532951004	EB-1	Water	04/12/21 14:45	04/13/21 16:55
92532951005	FB-1	Water	04/12/21 10:30	04/13/21 16:55
92532951006	DUP-1	Water	04/12/21 00:00	04/13/21 16:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92532951001	PZ-57I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951002	PZ-58I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951003	PZ-60I	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951004	EB-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951005	FB-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92532951006	DUP-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	NGP	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92532951001</b>	<b>PZ-57I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.35	Std. Units		04/26/21 08:30	
EPA 6010D	Iron	3.6	mg/L	0.040	04/15/21 19:37	
EPA 6010D	Manganese	12.4	mg/L	0.40	04/19/21 16:18	
EPA 6010D	Potassium	4.9	mg/L	0.20	04/15/21 19:37	
EPA 6010D	Sodium	17.5	mg/L	1.0	04/15/21 19:37	
EPA 6010D	Magnesium	32.6	mg/L	0.050	04/15/21 19:37	
EPA 6010D	Hardness, Total(SM 2340B)	264	mg/L	2.7	04/15/21 19:37	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	28.0	mg/L	5.0	04/26/21 16:29	
SM 2320B-2011	Alkalinity, Total as CaCO3	28.0	mg/L	5.0	04/26/21 16:29	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.038J	mg/L	0.040	04/20/21 13:19	
SM 5310B	Dissolved Organic Carbon	0.57J	mg/L	1.0	04/21/21 09:19	
<b>92532951002</b>	<b>PZ-58I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.15	Std. Units		04/26/21 08:30	
EPA 6010D	Iron	29.7	mg/L	0.040	04/15/21 19:56	
EPA 6010D	Manganese	17.9	mg/L	0.040	04/15/21 19:56	
EPA 6010D	Potassium	8.6	mg/L	0.20	04/15/21 19:56	
EPA 6010D	Sodium	26.2	mg/L	1.0	04/15/21 19:56	
EPA 6010D	Magnesium	50.9	mg/L	0.050	04/15/21 19:56	
EPA 6010D	Hardness, Total(SM 2340B)	446	mg/L	2.7	04/15/21 19:56	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.089	mg/L	0.040	04/20/21 13:20	
SM 5310B	Dissolved Organic Carbon	2.2	mg/L	1.0	04/21/21 09:35	
<b>92532951003</b>	<b>PZ-60I</b>					
	Performed by	CUSTOME			04/26/21 08:30	
		R				
	pH	5.05	Std. Units		04/26/21 08:30	
EPA 6010D	Iron	1.7	mg/L	0.040	04/15/21 20:01	
EPA 6010D	Manganese	148	mg/L	0.40	04/19/21 16:23	
EPA 6010D	Potassium	14.4	mg/L	0.20	04/15/21 20:01	
EPA 6010D	Sodium	57.9	mg/L	1.0	04/15/21 20:01	
EPA 6010D	Magnesium	164	mg/L	0.050	04/15/21 20:01	
EPA 6010D	Hardness, Total(SM 2340B)	1330	mg/L	2.7	04/15/21 20:01	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	8.1	mg/L	5.0	04/26/21 16:40	
SM 2320B-2011	Alkalinity, Total as CaCO3	8.1	mg/L	5.0	04/26/21 16:40	
SM 5310B	Dissolved Organic Carbon	0.59J	mg/L	1.0	04/21/21 09:51	
<b>92532951004</b>	<b>EB-1</b>					
EPA 6010D	Manganese	0.020J	mg/L	0.040	04/15/21 20:11	B
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.019J	mg/L	0.040	04/20/21 13:22	
<b>92532951005</b>	<b>FB-1</b>					
EPA 6010D	Iron	0.019J	mg/L	0.040	04/15/21 20:26	
<b>92532951006</b>	<b>DUP-1</b>					
EPA 6010D	Iron	1.9	mg/L	0.040	04/15/21 20:31	

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>92532951006</b>	<b>DUP-1</b>					
EPA 6010D	Manganese	149	mg/L	0.40	04/19/21 16:28	
EPA 6010D	Potassium	14.7	mg/L	0.20	04/15/21 20:31	
EPA 6010D	Sodium	59.4	mg/L	1.0	04/15/21 20:31	
EPA 6010D	Magnesium	165	mg/L	0.050	04/15/21 20:31	
EPA 6010D	Hardness, Total(SM 2340B)	1350	mg/L	2.7	04/15/21 20:31	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	8.9	mg/L	5.0	04/26/21 16:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	8.9	mg/L	5.0	04/26/21 16:51	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.024J	mg/L	0.040	04/20/21 13:26	
SM 5310B	Dissolved Organic Carbon	0.63J	mg/L	1.0	04/21/21 10:36	

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

**Sample: PZ-571**      **Lab ID: 92532951001**      Collected: 04/12/21 14:10      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.35</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>3.6</b>	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 19:37	7439-89-6	
Manganese	<b>12.4</b>	mg/L	0.40	0.017	10	04/15/21 13:03	04/19/21 16:18	7439-96-5	
Potassium	<b>4.9</b>	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 19:37	7440-09-7	
Sodium	<b>17.5</b>	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 19:37	7440-23-5	
Magnesium	<b>32.6</b>	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 19:37	7439-95-4	
Hardness, Total(SM 2340B)	<b>264</b>	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 19:37		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>28.0</b>	mg/L	5.0	5.0	1		04/26/21 16:29		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		04/26/21 16:29		
Alkalinity, Total as CaCO3	<b>28.0</b>	mg/L	5.0	5.0	1		04/26/21 16:29		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.038J</b>	mg/L	0.040	0.017	1		04/20/21 13:19		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.57J</b>	mg/L	1.0	0.50	1		04/21/21 09:19		

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

**Sample: PZ-581**      **Lab ID: 92532951002**      Collected: 04/12/21 14:55      Received: 04/13/21 16:55      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.15</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D    Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>29.7</b>	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 19:56	7439-89-6	
Manganese	<b>17.9</b>	mg/L	0.040	0.0017	1	04/15/21 13:03	04/15/21 19:56	7439-96-5	
Potassium	<b>8.6</b>	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 19:56	7440-09-7	
Sodium	<b>26.2</b>	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 19:56	7440-23-5	
Magnesium	<b>50.9</b>	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 19:56	7439-95-4	
Hardness, Total(SM 2340B)	<b>446</b>	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 19:56		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:37		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:37		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		04/26/21 16:37		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.089</b>	mg/L	0.040	0.017	1		04/20/21 13:20		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>2.2</b>	mg/L	1.0	0.50	1		04/21/21 09:35		

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: PZ-60I		Lab ID: 92532951003		Collected: 04/12/21 12:30		Received: 04/13/21 16:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		04/26/21 08:30		
pH	<b>5.05</b>	Std. Units			1		04/26/21 08:30		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>1.7</b>	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:01	7439-89-6	
Manganese	<b>148</b>	mg/L	0.40	0.017	10	04/15/21 13:03	04/19/21 16:23	7439-96-5	
Potassium	<b>14.4</b>	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:01	7440-09-7	
Sodium	<b>57.9</b>	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:01	7440-23-5	
Magnesium	<b>164</b>	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:01	7439-95-4	
Hardness, Total(SM 2340B)	<b>1330</b>	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:01		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>8.1</b>	mg/L	5.0	5.0	1		04/26/21 16:40		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		04/26/21 16:40		
Alkalinity, Total as CaCO3	<b>8.1</b>	mg/L	5.0	5.0	1		04/26/21 16:40		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>ND</b>	mg/L	0.040	0.017	1		04/20/21 13:21		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.59J</b>	mg/L	1.0	0.50	1		04/21/21 09:51		

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

Sample: EB-1		Lab ID: 92532951004		Collected: 04/12/21 14:45	Received: 04/13/21 16:55	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:11	7439-89-6		
Manganese	<b>0.020J</b>	mg/L	0.040	0.0017	1	04/15/21 13:03	04/15/21 20:11	7439-96-5	B	
Potassium	ND	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:11	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:11	7440-23-5		
Magnesium	ND	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:11	7439-95-4		
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:11			
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:46			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:46			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		04/26/21 16:46			
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville								
Nitrogen, NO2 plus NO3	<b>0.019J</b>	mg/L	0.040	0.017	1		04/20/21 13:22			
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach								
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		04/21/21 10:05			

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: FB-1		Lab ID: 92532951005		Collected: 04/12/21 10:30	Received: 04/13/21 16:55	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	0.019J	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:26	7439-89-6		
Manganese	ND	mg/L	0.040	0.0017	1	04/15/21 13:03	04/15/21 20:26	7439-96-5		
Potassium	ND	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:26	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:26	7440-23-5		
Magnesium	ND	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:26	7439-95-4		
Hardness, Total(SM 2340B)	ND	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:26			
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:48			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:48			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		04/26/21 16:48			
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville								
Nitrogen, NO2 plus NO3	ND	mg/L	0.040	0.017	1		04/20/21 13:23			
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach								
Dissolved Organic Carbon	ND	mg/L	1.0	0.50	1		04/21/21 10:20			

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## ANALYTICAL RESULTS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Sample: DUP-1		Lab ID: 92532951006		Collected: 04/12/21 00:00	Received: 04/13/21 16:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010D ATL ICP</b>		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	1.9	mg/L	0.040	0.016	1	04/15/21 13:03	04/15/21 20:31	7439-89-6	
Manganese	149	mg/L	0.40	0.017	10	04/15/21 13:03	04/19/21 16:28	7439-96-5	
Potassium	14.7	mg/L	0.20	0.056	1	04/15/21 13:03	04/15/21 20:31	7440-09-7	
Sodium	59.4	mg/L	1.0	0.26	1	04/15/21 13:03	04/15/21 20:31	7440-23-5	
Magnesium	165	mg/L	0.050	0.0076	1	04/15/21 13:03	04/15/21 20:31	7439-95-4	
Hardness, Total(SM 2340B)	1350	mg/L	2.7	0.21	1	04/15/21 13:03	04/15/21 20:31		
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	8.9	mg/L	5.0	5.0	1		04/26/21 16:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		04/26/21 16:51		
Alkalinity, Total as CaCO3	8.9	mg/L	5.0	5.0	1		04/26/21 16:51		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>		Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville							
Nitrogen, NO2 plus NO3	0.024J	mg/L	0.040	0.017	1		04/20/21 13:26		
<b>5310B Dissolved Organic Carbon</b>		Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach							
Dissolved Organic Carbon	0.63J	mg/L	1.0	0.50	1		04/21/21 10:36		

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### QUALITY CONTROL DATA

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

QC Batch: 613990 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
 Laboratory: Pace Analytical Services - Peachtree Corners, GA  
 Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3231497 Matrix: Water  
 Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	04/15/21 19:27	
Iron	mg/L	ND	0.040	0.016	04/15/21 19:27	
Magnesium	mg/L	ND	0.050	0.0076	04/15/21 19:27	
Manganese	mg/L	0.0065J	0.040	0.0017	04/15/21 19:27	
Potassium	mg/L	ND	0.20	0.056	04/15/21 19:27	
Sodium	mg/L	ND	1.0	0.26	04/15/21 19:27	

LABORATORY CONTROL SAMPLE: 3231498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.7	102	80-120	
Iron	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	0.99	99	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3231499 3231500

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result	% Rec	% Rec						
Hardness, Total(SM 2340B)	mg/L	6.6	264	6.6	265	262	22	-27	75-125	1	20		
Iron	mg/L	1	3.6	1	4.5	4.5	93	89	75-125	1	20		
Magnesium	mg/L	1	32.6	1	32.8	32.4	18	-23	75-125	1	20	M1	
Manganese	mg/L	1	12.2	1	12.8	12.7	66	50	75-125	1	20		
Potassium	mg/L	1	4.9	1	5.9	5.9	97	98	75-125	0	20		
Sodium	mg/L	1	17.5	1	18.4	18.2	93	71	75-125	1	20	M1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

QC Batch: 616118 Analysis Method: SM 2320B-2011  
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3242301 Matrix: Water  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	04/26/21 15:01	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/26/21 15:01	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	04/26/21 15:01	

LABORATORY CONTROL SAMPLE: 3242302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	52.6	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242303 3242304

Parameter	Units	92533456001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	799	50	50	827	824	57	50	80-120	0	25	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3242307 3242308

Parameter	Units	92533344004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	568	50	50	604	627	72	117	80-120	4	25	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH CATIONS/ANIONS  
Pace Project No.: 92532951

QC Batch: 614819 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3235434 Matrix: Water  
Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	04/20/21 13:02	

LABORATORY CONTROL SAMPLE: 3235435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235436 3235437

Parameter	Units	92532782001		3235437		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	0.11	2.5	1.7	2.5	65	66	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3235438 3235439

Parameter	Units	92532823002		3235439		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	5.4	2.5	7.9	2.5	102	101	90-110	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRANCH CATIONS/ANIONS  
 Pace Project No.: 92532951

QC Batch: 722429 Analysis Method: SM 5310B  
 QC Batch Method: SM 5310B Analysis Description: 5310B Dissolved Organic Carbon  
 Laboratory: Pace Analytical Services - Ormond Beach  
 Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

METHOD BLANK: 3937892 Matrix: Water  
 Associated Lab Samples: 92532951001, 92532951002, 92532951003, 92532951004, 92532951005, 92532951006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	04/21/21 07:55	

LABORATORY CONTROL SAMPLE: 3937893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	20.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3937894 3937895

Parameter	Units	92532950001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	0.91J	20	20	20.5	20.4	98	98	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH CATIONS/ANIONS

Pace Project No.: 92532951

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92532951001	PZ-57I				
92532951002	PZ-58I				
92532951003	PZ-60I				
92532951001	PZ-57I	EPA 3010A	613990	EPA 6010D	614064
92532951002	PZ-58I	EPA 3010A	613990	EPA 6010D	614064
92532951003	PZ-60I	EPA 3010A	613990	EPA 6010D	614064
92532951004	EB-1	EPA 3010A	613990	EPA 6010D	614064
92532951005	FB-1	EPA 3010A	613990	EPA 6010D	614064
92532951006	DUP-1	EPA 3010A	613990	EPA 6010D	614064
92532951001	PZ-57I	SM 2320B-2011	616118		
92532951002	PZ-58I	SM 2320B-2011	616118		
92532951003	PZ-60I	SM 2320B-2011	616118		
92532951004	EB-1	SM 2320B-2011	616118		
92532951005	FB-1	SM 2320B-2011	616118		
92532951006	DUP-1	SM 2320B-2011	616118		
92532951001	PZ-57I	EPA 353.2 Rev 2.0 1993	614819		
92532951002	PZ-58I	EPA 353.2 Rev 2.0 1993	614819		
92532951003	PZ-60I	EPA 353.2 Rev 2.0 1993	614819		
92532951004	EB-1	EPA 353.2 Rev 2.0 1993	614819		
92532951005	FB-1	EPA 353.2 Rev 2.0 1993	614819		
92532951006	DUP-1	EPA 353.2 Rev 2.0 1993	614819		
92532951001	PZ-57I	SM 5310B	722429		
92532951002	PZ-58I	SM 5310B	722429		
92532951003	PZ-60I	SM 5310B	722429		
92532951004	EB-1	SM 5310B	722429		
92532951005	FB-1	SM 5310B	722429		
92532951006	DUP-1	SM 5310B	722429		

### REPORT OF LABORATORY ANALYSIS

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**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

**Sample Condition Upon Receipt**

Client Name:

GA Power

Project #:

**WO# : 92532951**

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_



Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Date/Initials Person Examining Contents: 4/13/21  
CAJ

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?

Thermometer:  IR Gun ID: 233 Type of Ice:  Wet  Blue  None

Yes  No  N/A

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) -0.2

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.2

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  
 Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers: \_\_\_\_\_

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
 Sample Condition Upon Receipt(SCUR)  
 Document No.:  
 F-CAR-CS-033-Rev.07

Document Revised: October 23, 2010  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolina Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DPO/8015 (water) DOC, L&G

\*\*Bottom half of box is to list number of bottles

Project # **WO# : 92532951**

PM: KLH1

Due Date: 04/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (p>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Whole-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unip (N/A)	DG9P-40 mL VOA H1PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic NH2SO4 (9.3-9.7)	AG2U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/
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9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEH-NR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

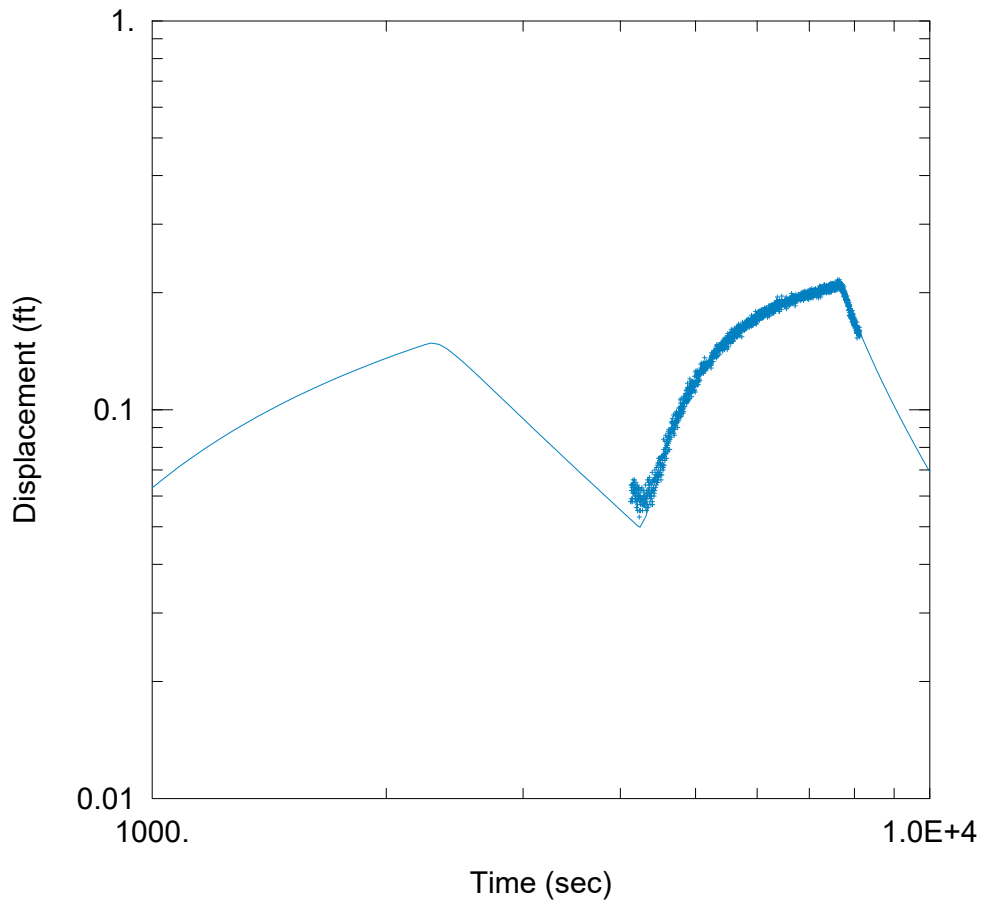
<b>Section A</b> Required Client Information:	<b>Section B</b> Required Project Information:	<b>Section C</b> Invoice Information:
Company: Georgia Power- Coal Combustion Residuals	Report To: Joju Abraham	Attention:
Address: 2480 Manner Road	Copy To: Brian Steele - Golder	Company Name:
Arlanta, GA 30339	Purchase Order #	Address:
Email To: jbrabam@southernco.com	Project Name: Branch-BCD	Face Quote:
Phone: (404) 506-7239 Fax:	Project Number: 19692421	Face Project Manager: Kevin Herring
Requested Due Date: Standard		Face Profile #: 10838
		Requested Analytes Filtered (Y/N)
		State / Location: GA
		Regulatory Agency:

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9/, -) Sample IDs must be unique	UN-PRES Droving Water Water Waste Water Pretreat Sewage Oil Wipe Air Other Tanks	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analyses Test	Y/N	Residual Chlorine (Y/N)
						DATE	TIME						
1	PZ-S71			WT G	G	4/12/2021	14:10	-	4				
2	PZ-S61			WT G	G	4/12/2021	14:55	-	4				
3	PZ-S60			WT G	G	4/12/2021	12:30	-	4				
4	EB-1			WT G	G	4/12/2021	14:45	-	4				
5	FB-1			WT G	G	4/12/2021	10:30	-	4				
6	TUP-1			WT G	G	4/12/2021	-	-	4				
7													
8													
9													
10													
11													
12													
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME	
		Chris Towell/Golder		4/12/21		10:55		Chris Towell/Golder		4/12/21		10:55	

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Chris Towell
SIGNATURE of SAMPLER:	
DATE Signed:	4-13-2021
TEMP in C	
Received on site (Y/N)	
Custody Sealed Cooler (Y/N)	
Samples intact (Y/N)	

**APPENDIX A**

**Aquifer Testing Results**



BRGWC-50 PUMP TEST

PROJECT INFORMATION

Company: Golder  
 Client: Southern Company  
 Project: 166625421  
 Location: Branch  
 Test Well: BRGWC-50  
 Test Date: 02/2021

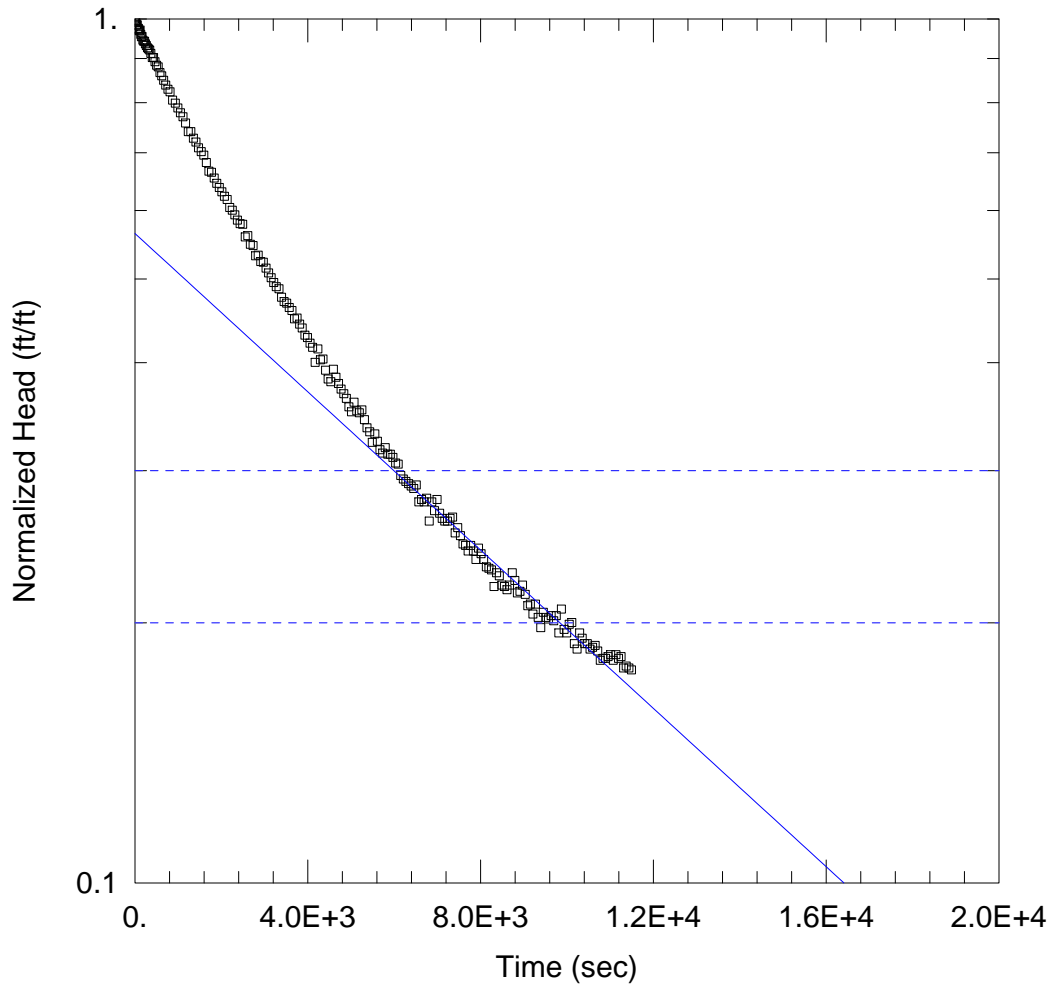
WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
BRGWC-50	0	0	PZ-511	66.4	37.8

SOLUTION

Aquifer Model: Leaky  
 $T = 3.331 \text{ cm}^2/\text{sec}$   
 $r/B = 0.4161$   
 $b = 31. \text{ ft}$

Solution Method: Hantush-Jacob  
 $S = 0.0008806$   
 $Kz/Kr = 0.2355$



PB-10D TEST 1 SLUG IN

Data Set: C:\...\PB-10D-1-Slug-IN.aqt  
 Date: 02/19/21

Time: 14:41:11

PROJECT INFORMATION

Company: Golder  
 Client: Southern Company  
 Project: 166625421  
 Location: Branch  
 Test Well: PB-10D  
 Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 100. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PB-10D)

Initial Displacement: 1.094 ft  
 Total Well Penetration Depth: 85. ft  
 Casing Radius: 0.081 ft

Static Water Column Height: 73.15 ft  
 Screen Length: 10. ft  
 Well Radius: 0.25 ft

SOLUTION

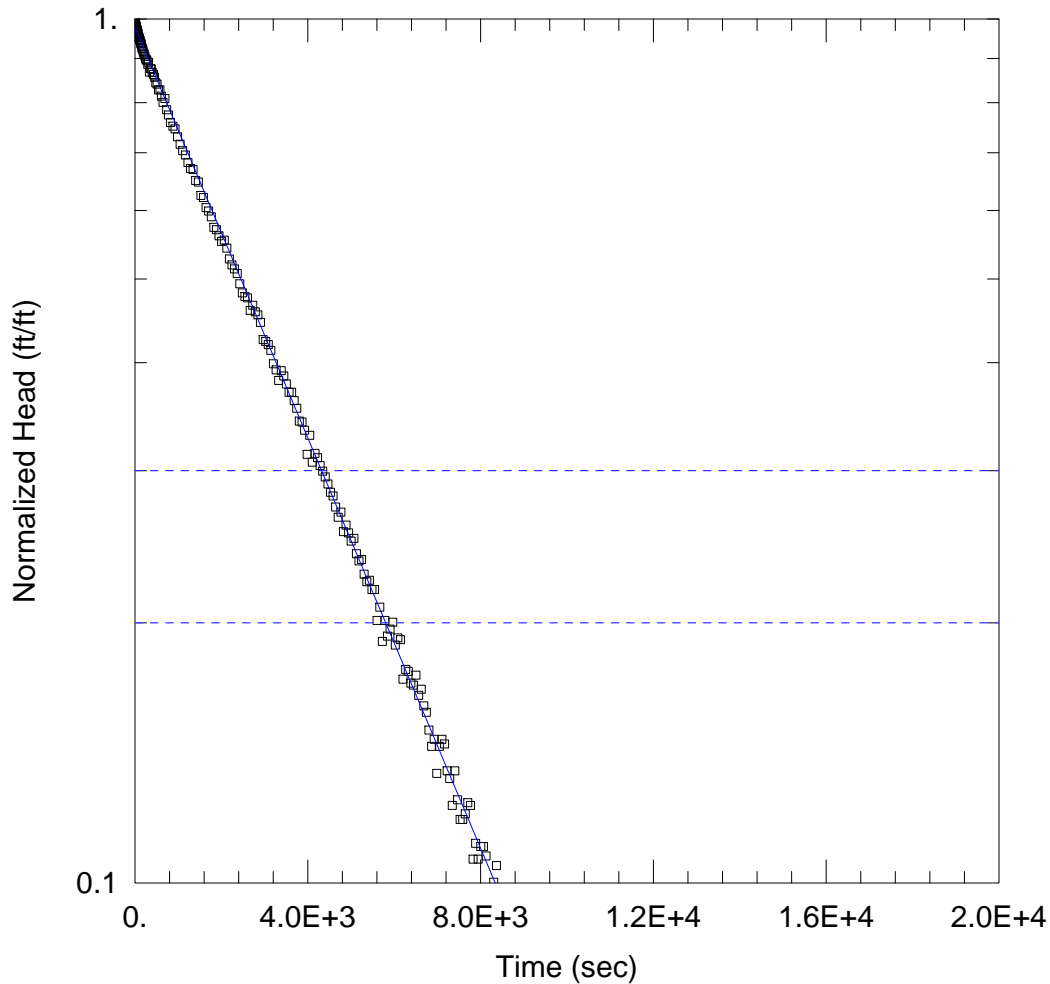
Aquifer Model: Unconfined

Solution Method: Bower-Rice

K = 3.474E-6 cm/sec

y0 = 0.6175 ft





PB-10D TEST 1 SLUG OUT

Data Set: C:\...\PB-10D-1-Slug-OUT.aqt

Date: 02/19/21

Time: 14:43:55

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Branch

Test Well: PB-10D

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 100. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PB-10D)

Initial Displacement: -1.098 ft

Static Water Column Height: 73.15 ft

Total Well Penetration Depth: 85. ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.25 ft

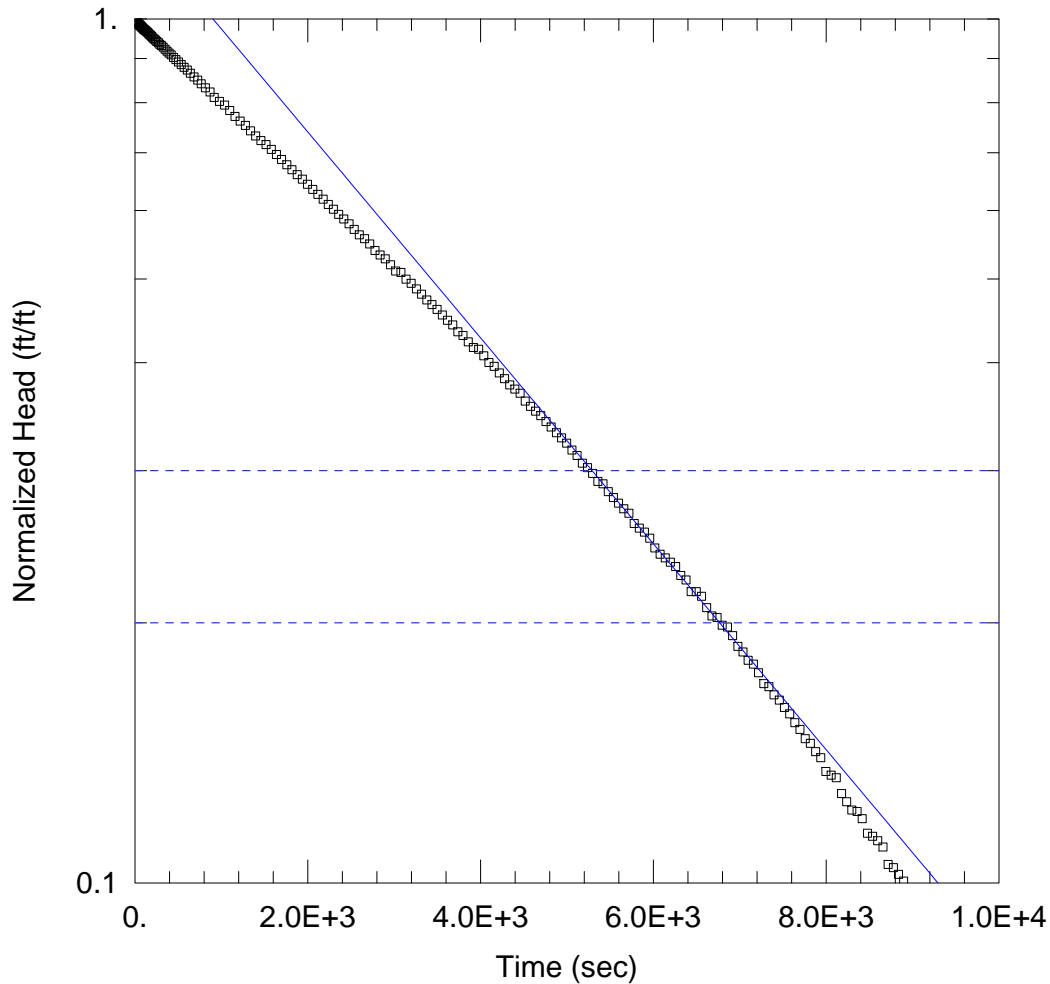
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

K = 9.006E-6 cm/sec

y0 = -1.073 ft



PZ-50D TEST 1 SLUG IN

Data Set: C:\...\PZ-50D-1-Slug-IN\_MT.aqt

Date: 04/26/21

Time: 08:31:18

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-50D

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 52.97 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-50D)

Initial Displacement: 2.199 ft

Static Water Column Height: 71.28 ft

Total Well Penetration Depth: 106. ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

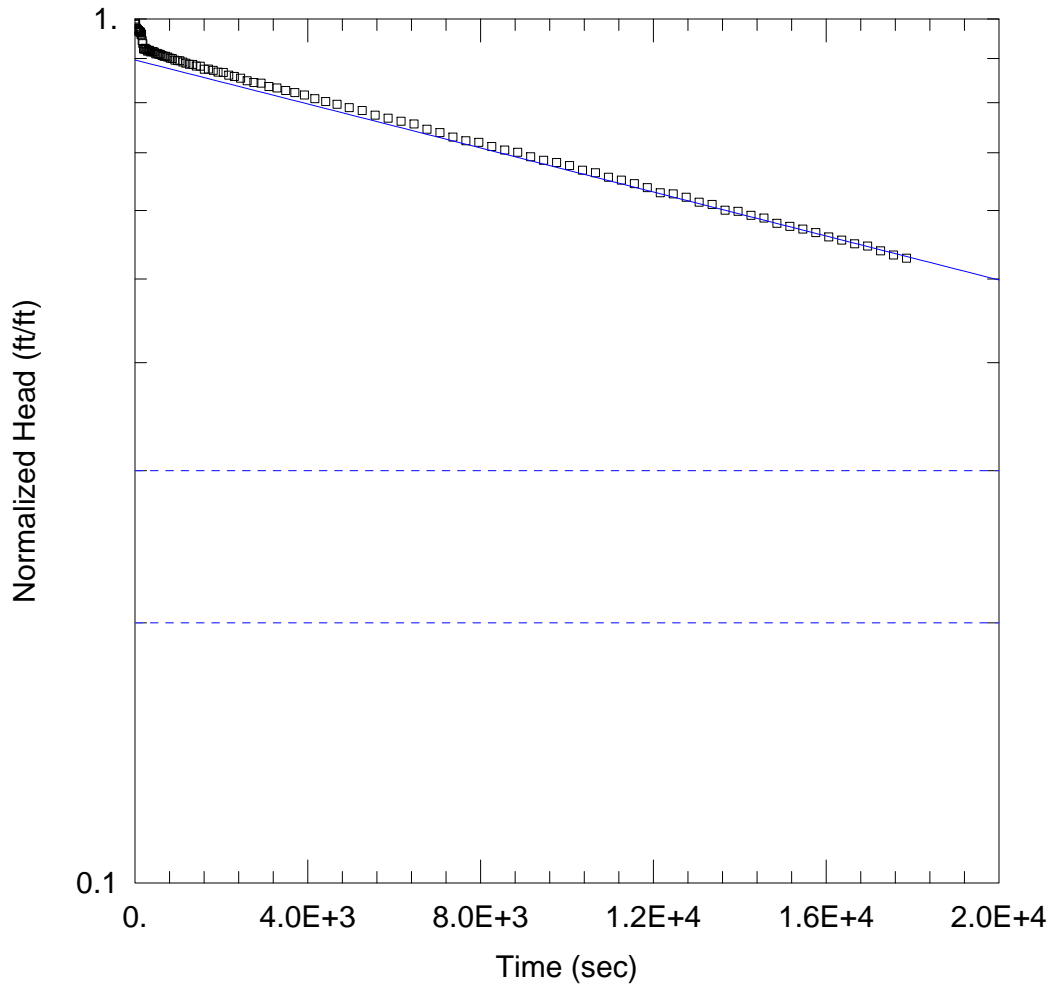
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

K = 1.22E-5 cm/sec

y0 = 2.817 ft



PZ-50D TEST 1 SLUG OUT

Data Set: C:\...\PZ-50D-1-Slug-OUT\_MT.aqt

Date: 04/26/21

Time: 08:32:39

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-50D

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 53.63 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-50D)

Initial Displacement: 2.176 ft

Static Water Column Height: 71.94 ft

Total Well Penetration Depth: 106. ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

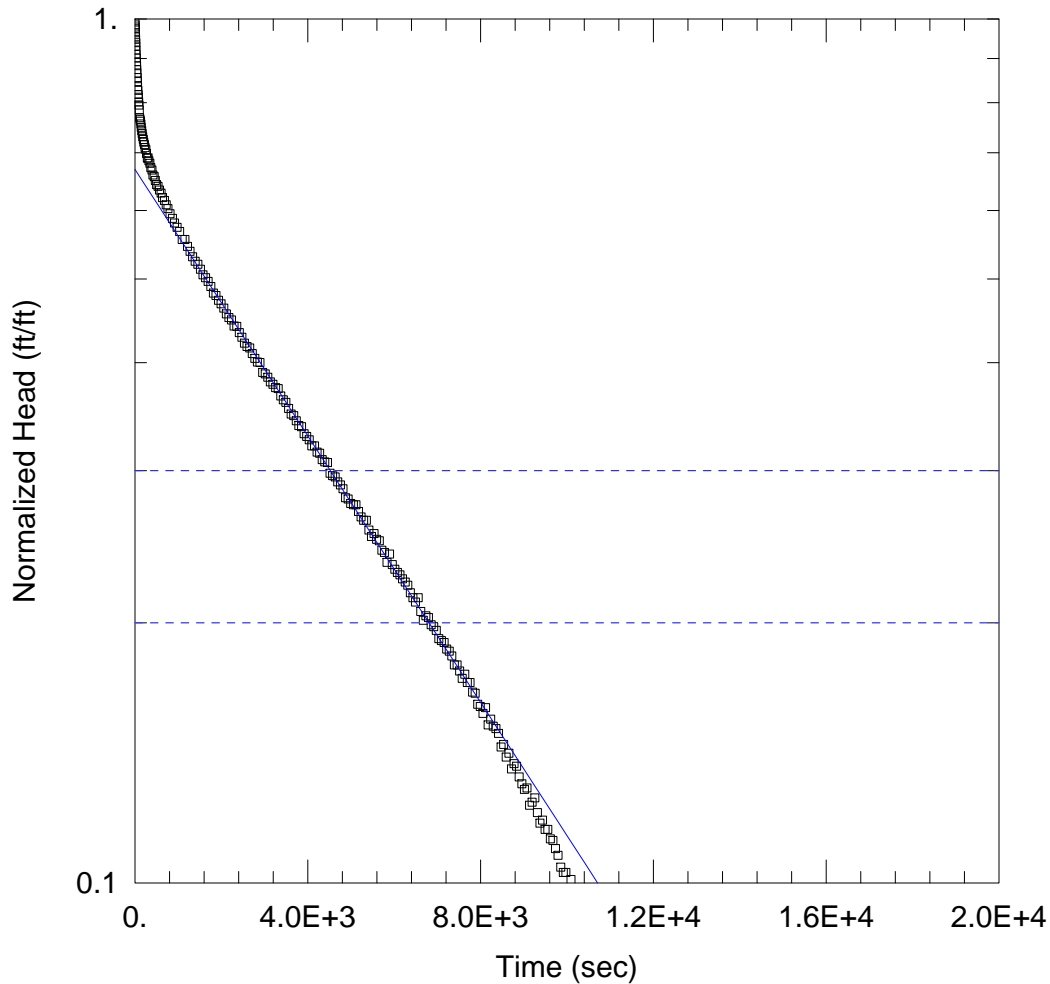
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 1.304E-6 cm/sec

y0 = 1.95 ft



PZ-51D TEST 1 SLUG IN

Data Set: C:\...\PZ-51D-1-Slug-IN\_MT.aqt

Date: 04/26/21

Time: 08:33:50

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51D

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 64.24 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51D)

Initial Displacement: -2.081 ft

Static Water Column Height: 72.69 ft

Total Well Penetration Depth: 106. ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

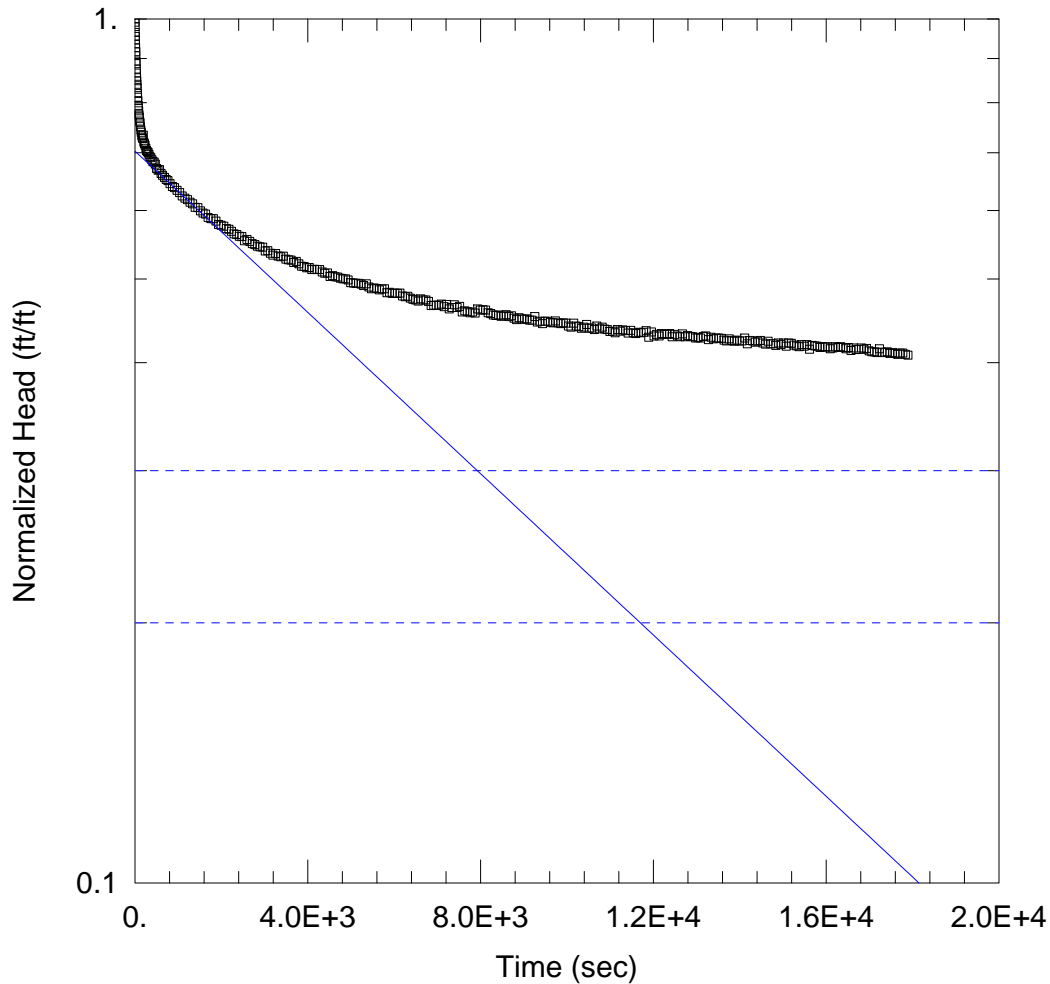
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 7.893E-6 cm/sec

y0 = -1.393 ft



PZ-51D TEST 1 SLUG OUT

Data Set: C:\...\PZ-51D-1-Slug-OUT\_MT.aqt

Date: 04/28/21

Time: 10:55:20

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51D

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 64.24 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51D)

Initial Displacement: -2.151 ft

Static Water Column Height: 68.79 ft

Total Well Penetration Depth: 106. ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

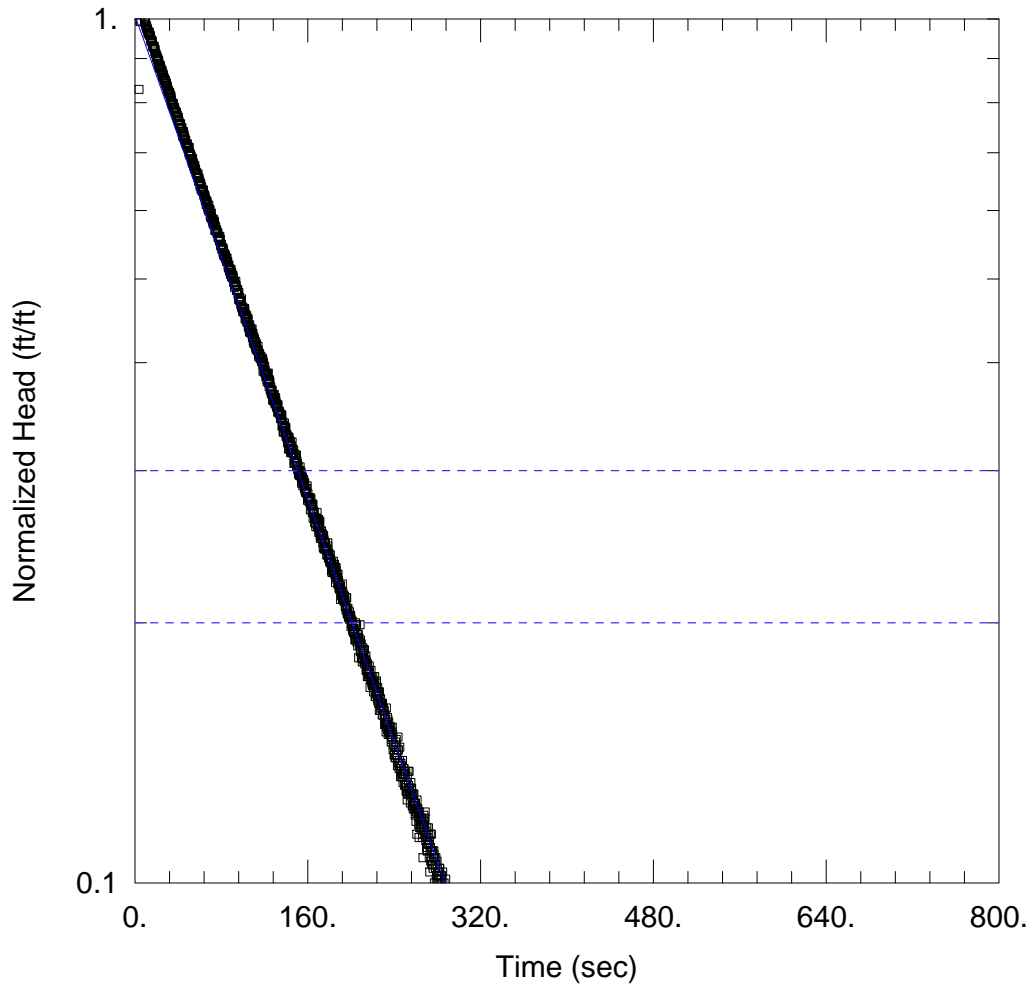
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bower-Rice

K = 4.778E-6 cm/sec

y0 = -1.512 ft



PZ-51I TEST 1 SLUG IN

Data Set: C:\...\PZ-51i-1-Slug-IN\_MT.aqt

Date: 04/26/21

Time: 08:34:50

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51i

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 48.15 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51i)

Initial Displacement: -1.01 ft

Static Water Column Height: 30.43 ft

Total Well Penetration Depth: 64.9 ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

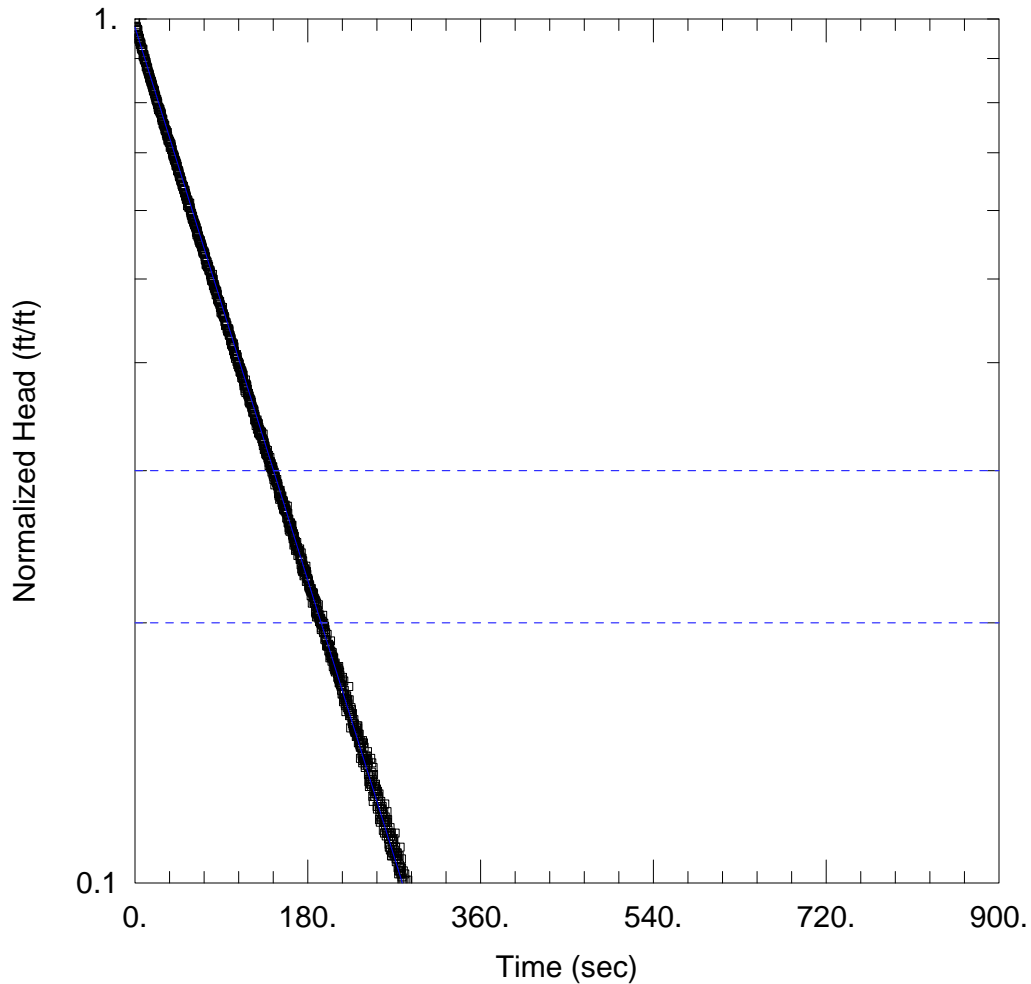
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0003387 cm/sec

y0 = -1.019 ft



PZ-51I TEST 1 SLUG OUT

Data Set: C:\...\PZ-51i-1-Slug-OUT\_MT.aqt

Date: 04/26/21

Time: 08:36:12

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51i

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 48.11 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51i)

Initial Displacement: 1.191 ft

Static Water Column Height: 30.39 ft

Total Well Penetration Depth: 64.9 ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

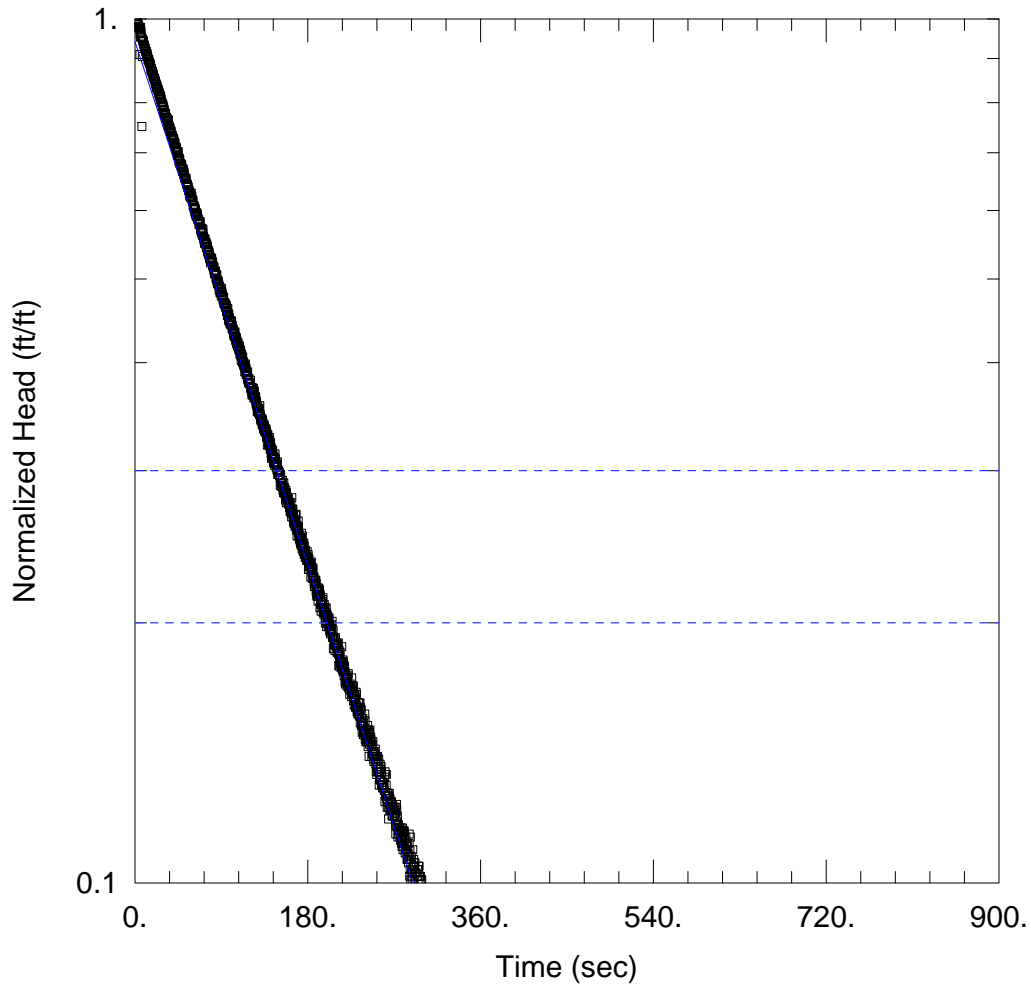
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0003441 cm/sec

y0 = 1.165 ft



PZ-51I TEST 2 SLUG IN

Data Set: C:\...\PZ-51i-2-Slug-IN\_MT.aqt  
 Date: 04/26/21

Time: 08:37:33

PROJECT INFORMATION

Company: Golder  
 Client: Southern Company  
 Project: 166625421  
 Location: Plant Branch  
 Test Well: PZ-51i  
 Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 50.68 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51i)

Initial Displacement: -1.071 ft  
 Total Well Penetration Depth: 64.9 ft  
 Casing Radius: 0.081 ft

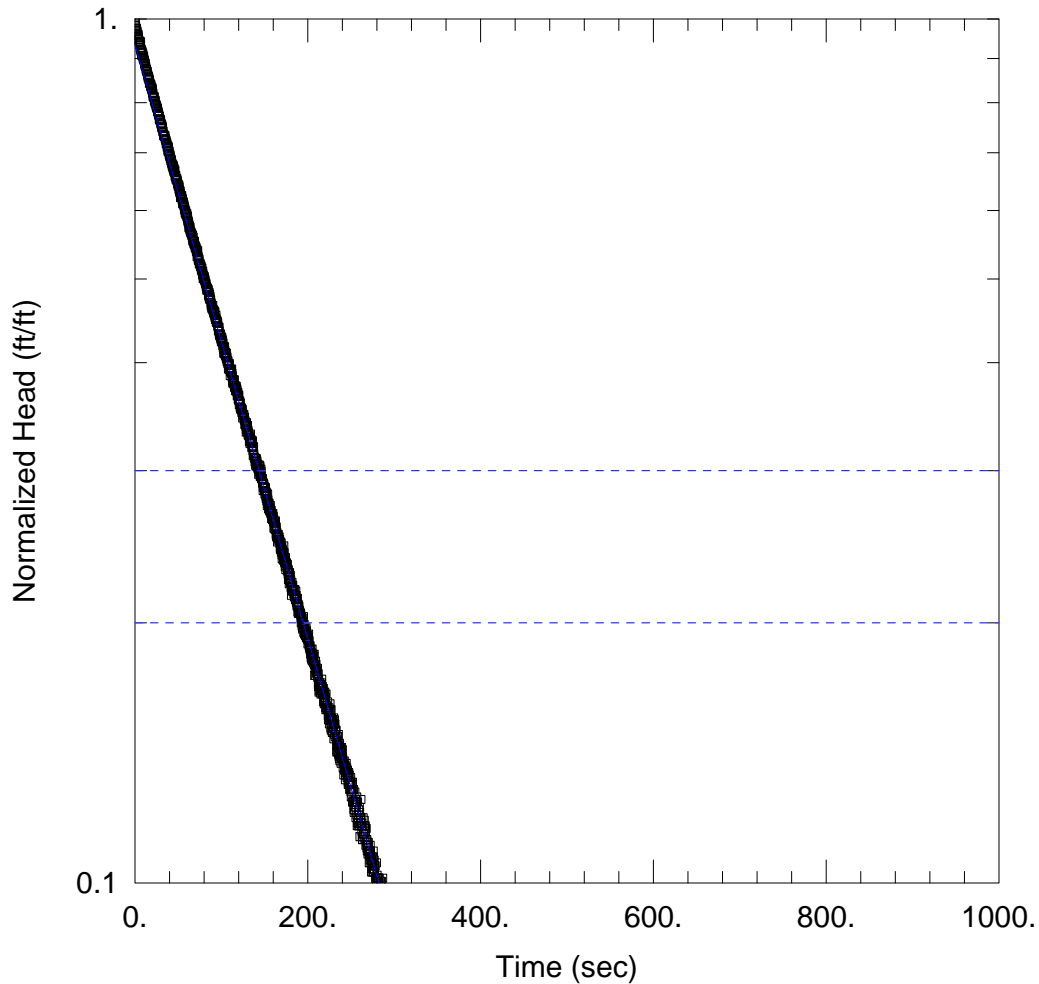
Static Water Column Height: 27.68 ft  
 Screen Length: 10. ft  
 Well Radius: 0.081 ft

SOLUTION

Aquifer Model: Unconfined  
 K = 0.0003255 cm/sec

Solution Method: Bouwer-Rice  
 y0 = -1.008 ft





PZ-51I TEST 2 SLUG OUT

Data Set: C:\...\PZ-51i-2-Slug-OUT\_MT.aqt

Date: 04/26/21

Time: 08:38:27

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51i

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 48.17 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51i)

Initial Displacement: 1.185 ft

Static Water Column Height: 30.45 ft

Total Well Penetration Depth: 64.9 ft

Screen Length: 10. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

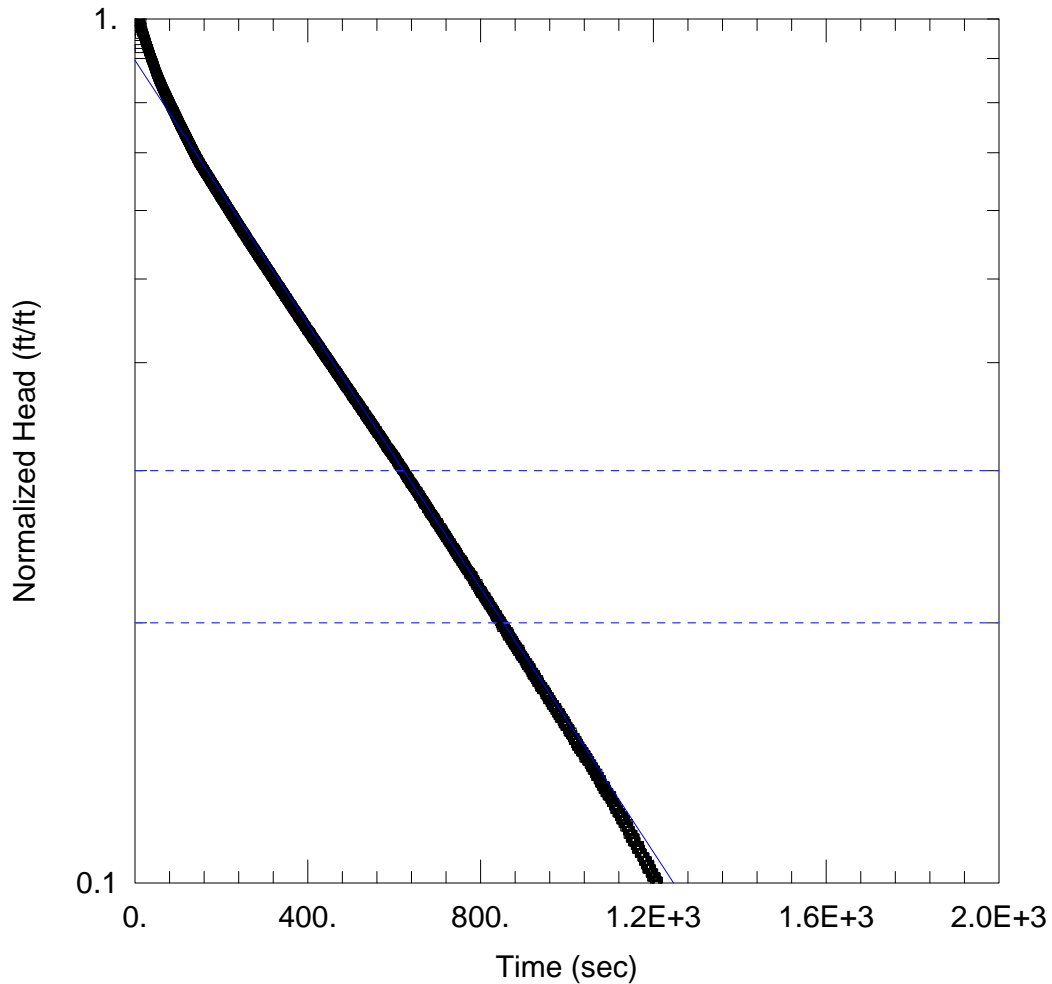
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.0003327 cm/sec

y0 = 1.106 ft



PZ-51S TEST 1 SLUG IN

Data Set: C:\...\PZ-51S-1-Slug-IN\_MT.aqt  
 Date: 04/26/21

Time: 08:41:21

PROJECT INFORMATION

Company: Golder  
 Client: Southern Company  
 Project: 166625421  
 Location: Plant Branch  
 Test Well: PZ-51S  
 Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 47.7 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51S)

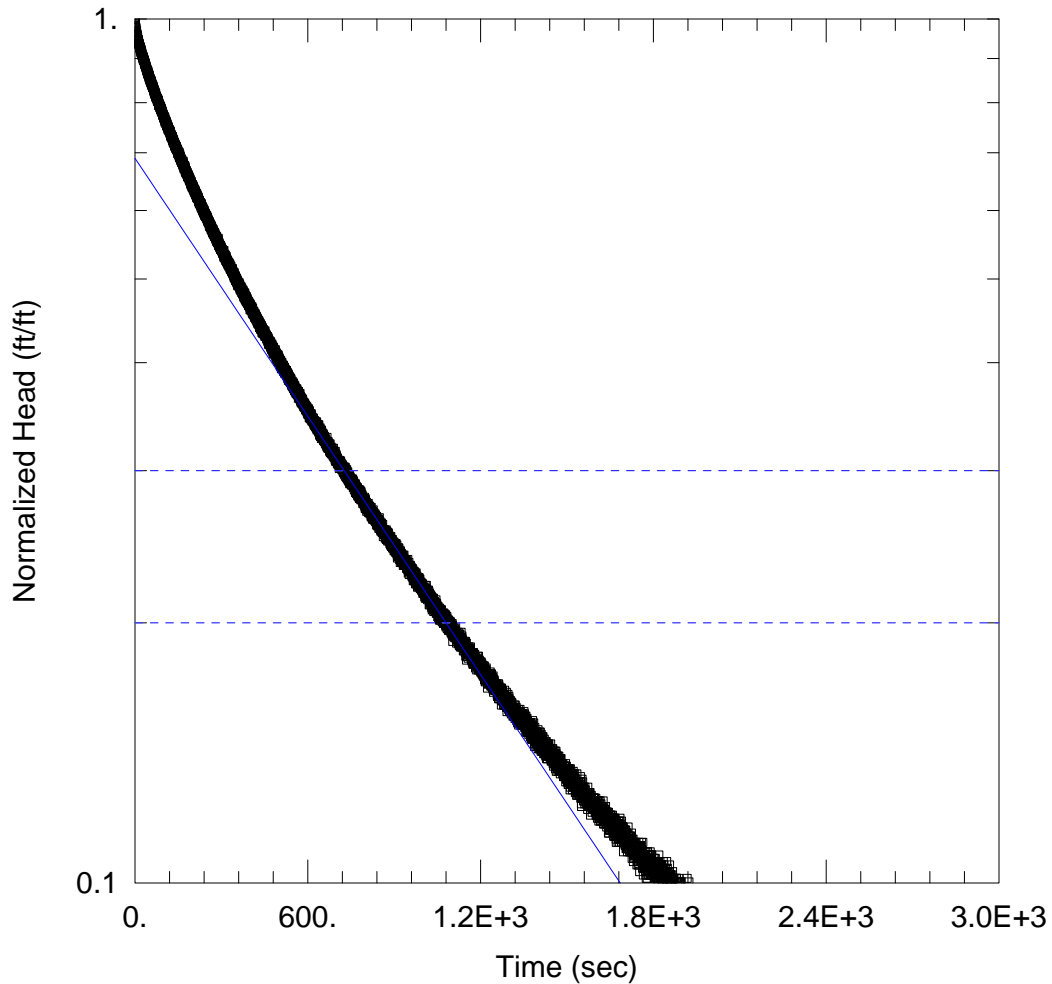
Initial Displacement: -0.896 ft  
 Total Well Penetration Depth: 45. ft  
 Casing Radius: 0.081 ft

Static Water Column Height: 9.82 ft  
 Screen Length: 5. ft  
 Well Radius: 0.081 ft

SOLUTION

Aquifer Model: Unconfined  
 K = 0.0001164 cm/sec

Solution Method: Bouwer-Rice  
 y0 = -0.8024 ft



PZ-51S TEST 1 SLUG OUT

Data Set: C:\...\PZ-51S-1-Slug-OUT\_MT.aqt

Date: 04/26/21

Time: 08:43:06

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51S

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 47.72 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51S)

Initial Displacement: 1.077 ft

Static Water Column Height: 9.84 ft

Total Well Penetration Depth: 45. ft

Screen Length: 5. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

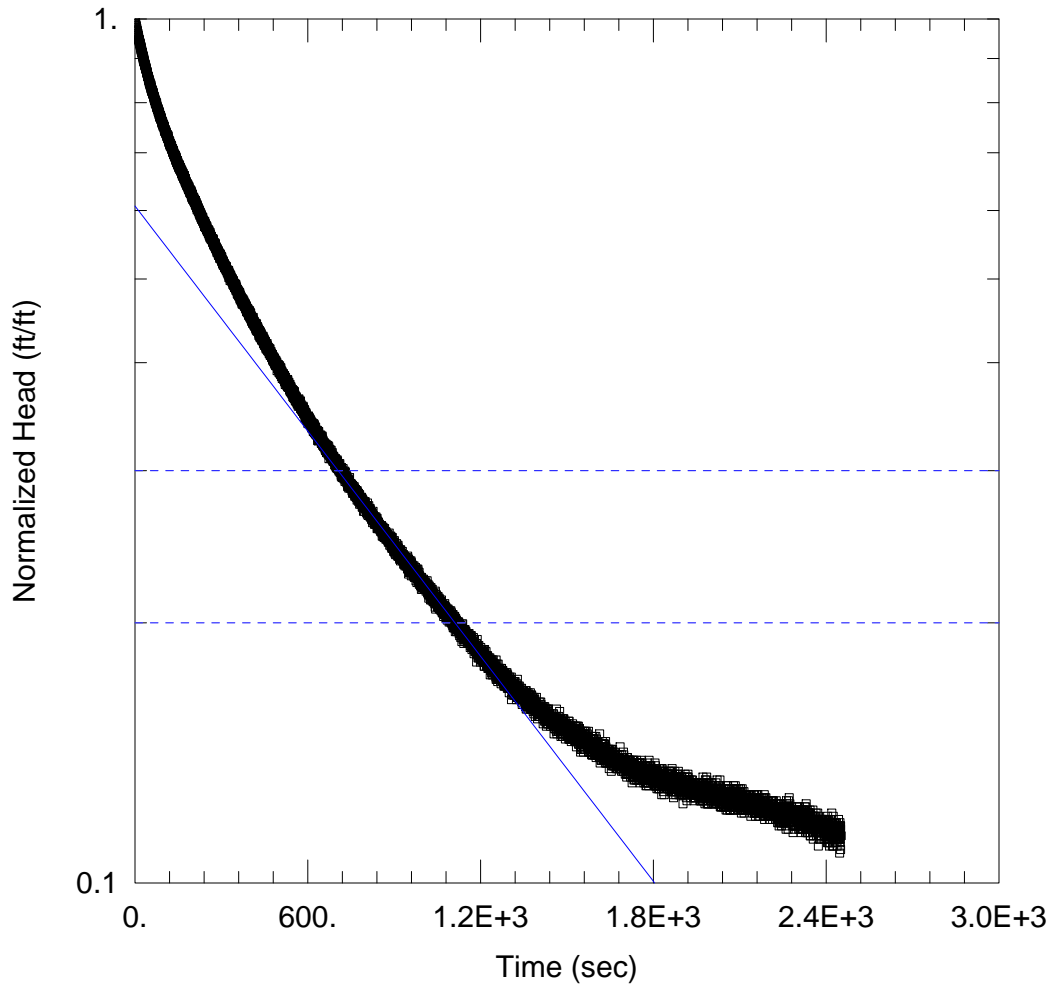
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 7.587E-5 cm/sec

y0 = 0.7428 ft



PZ-51S TEST 2 SLUG IN

Data Set: C:\...\PZ-51S-2-Slug-IN\_MT.aqt  
 Date: 04/26/21

Time: 08:44:27

PROJECT INFORMATION

Company: Golder  
 Client: Southern Company  
 Project: 166625421  
 Location: Plant Branch  
 Test Well: PZ-51S  
 Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 47.67 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51S)

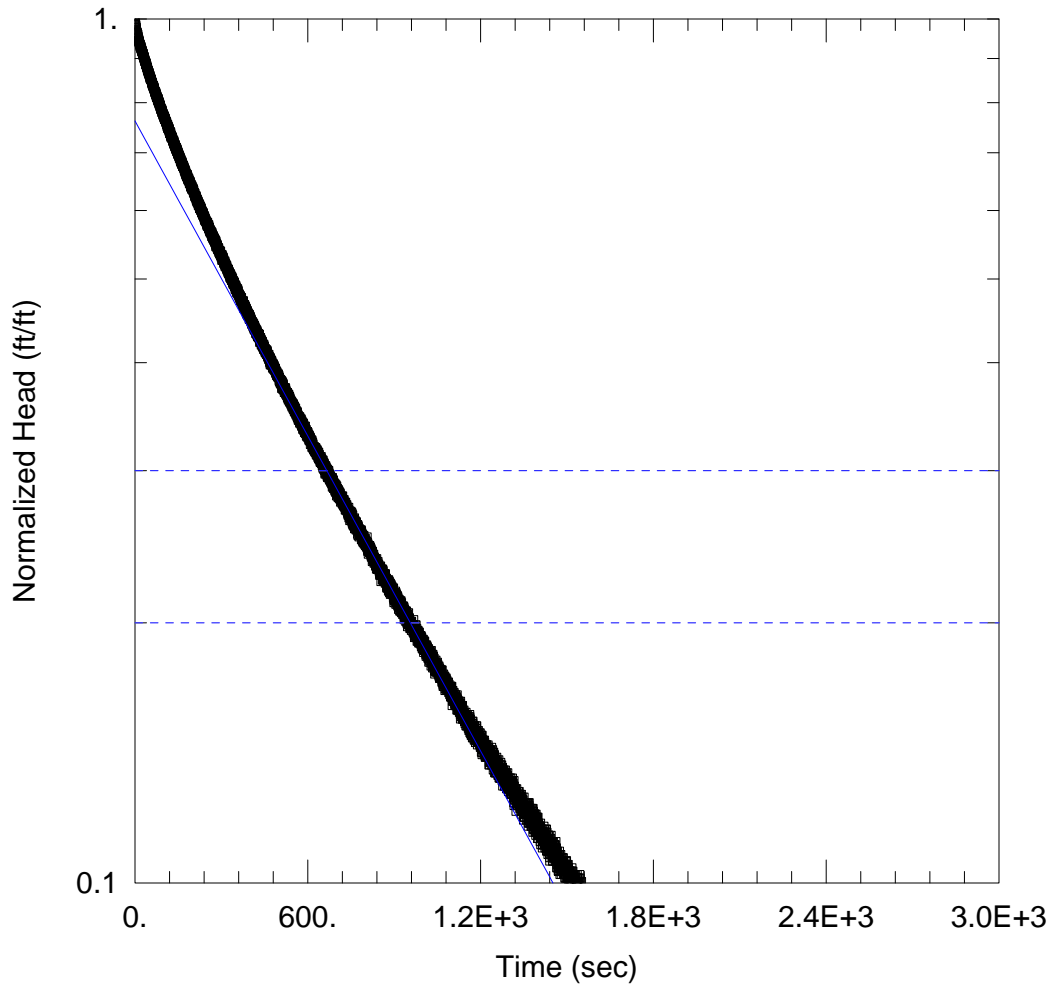
Initial Displacement: -0.988 ft  
 Total Well Penetration Depth: 45. ft  
 Casing Radius: 0.081 ft

Static Water Column Height: 9.79 ft  
 Screen Length: 5. ft  
 Well Radius: 0.081 ft

SOLUTION

Aquifer Model: Unconfined  
 K = 6.621E-5 cm/sec

Solution Method: Bouwer-Rice  
 y0 = -0.6 ft



PZ-51S TEST 2 SLUG OUT

Data Set: C:\...\PZ-51S-2-Slug-OUT\_MT.aqt

Date: 04/26/21

Time: 08:46:44

PROJECT INFORMATION

Company: Golder

Client: Southern Company

Project: 166625421

Location: Plant Branch

Test Well: PZ-51S

Test Date: 02/2021

AQUIFER DATA

Saturated Thickness: 47.8 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PZ-51S)

Initial Displacement: 1.066 ft

Static Water Column Height: 9.92 ft

Total Well Penetration Depth: 45. ft

Screen Length: 5. ft

Casing Radius: 0.081 ft

Well Radius: 0.081 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 9.25E-5 cm/sec

y0 = 0.8121 ft

**APPENDIX A**

Porewater Laboratory

Analytical Results

March 19, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH B POREWATER  
Pace Project No.: 92525662

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH B POREWATER

Pace Project No.: 92525662

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### **Pace Analytical Services Charlotte**

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH B POREWATER

Pace Project No.: 92525662

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525662001	IW-B-1	Water	03/03/21 13:35	03/04/21 08:15
92525662002	IW-B-2	Water	03/03/21 14:58	03/04/21 08:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH B POREWATER

Pace Project No.: 92525662

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
92525662001	IW-B-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92525662002	IW-B-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	3
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3

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PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH B POREWATER

Pace Project No.: 92525662

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525662001</b>	<b>IW-B-1</b>					
	Performed by	CUSTOME			03/04/21 13:01	
		R				
	pH	6.86	Std. Units		03/04/21 13:01	
EPA 6010D	Calcium	135	mg/L	1.0	03/09/21 20:15	
EPA 6020B	Boron	1.1	mg/L	0.040	03/11/21 14:39	
EPA 6020B	Cadmium	0.00021J	mg/L	0.00050	03/11/21 14:39	
EPA 6020B	Cobalt	0.0030J	mg/L	0.0050	03/11/21 14:39	
SM 2450C-2011	Total Dissolved Solids	488	mg/L	10.0	03/06/21 09:44	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	03/13/21 20:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.081J	mg/L	0.10	03/13/21 20:31	
EPA 300.0 Rev 2.1 1993	Sulfate	104	mg/L	2.0	03/14/21 13:13	
<b>92525662002</b>	<b>IW-B-2</b>					
	Performed by	CUSTOME			03/04/21 13:02	
		R				
	pH	7.15	Std. Units		03/04/21 13:02	
EPA 6010D	Calcium	196	mg/L	1.0	03/09/21 20:19	
EPA 6020B	Boron	2.0	mg/L	0.040	03/11/21 15:02	
SM 2450C-2011	Total Dissolved Solids	1050	mg/L	20.0	03/06/21 09:45	
EPA 300.0 Rev 2.1 1993	Chloride	5.7	mg/L	1.0	03/13/21 20:46	
EPA 300.0 Rev 2.1 1993	Fluoride	1.2	mg/L	0.10	03/13/21 20:46	
EPA 300.0 Rev 2.1 1993	Sulfate	612	mg/L	13.0	03/14/21 13:27	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH B POREWATER  
Pace Project No.: 92525662

Sample: IW-B-1		Lab ID: 92525662001		Collected: 03/03/21 13:35		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:01		
pH	<b>6.86</b>	Std. Units			1		03/04/21 13:01		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>135</b>	mg/L	1.0	0.070	1	03/09/21 11:12	03/09/21 20:15	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>1.1</b>	mg/L	0.040	0.0052	1	03/09/21 12:48	03/11/21 14:39	7440-42-8	
Cadmium	<b>0.00021J</b>	mg/L	0.00050	0.00012	1	03/09/21 12:48	03/11/21 14:39	7440-43-9	
Cobalt	<b>0.0030J</b>	mg/L	0.0050	0.00038	1	03/09/21 12:48	03/11/21 14:39	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>488</b>	mg/L	10.0	10.0	1		03/06/21 09:44		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>3.5</b>	mg/L	1.0	0.60	1		03/13/21 20:31	16887-00-6	
Fluoride	<b>0.081J</b>	mg/L	0.10	0.050	1		03/13/21 20:31	16984-48-8	
Sulfate	<b>104</b>	mg/L	2.0	1.0	2		03/14/21 13:13	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH B POREWATER

Pace Project No.: 92525662

Sample: IW-B-2		Lab ID: 92525662002		Collected: 03/03/21 14:58		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:02		
pH	<b>7.15</b>	Std. Units			1		03/04/21 13:02		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	<b>196</b>	mg/L	1.0	0.070	1	03/09/21 11:12	03/09/21 20:19	7440-70-2	
<b>6020 MET ICPMS</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	<b>2.0</b>	mg/L	0.040	0.0052	1	03/09/21 12:48	03/11/21 15:02	7440-42-8	
Cadmium	<b>ND</b>	mg/L	0.00050	0.00012	1	03/09/21 12:48	03/11/21 15:02	7440-43-9	
Cobalt	<b>ND</b>	mg/L	0.0050	0.00038	1	03/09/21 12:48	03/11/21 15:02	7440-48-4	
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	<b>1050</b>	mg/L	20.0	20.0	1		03/06/21 09:45		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	<b>5.7</b>	mg/L	1.0	0.60	1		03/13/21 20:46	16887-00-6	
Fluoride	<b>1.2</b>	mg/L	0.10	0.050	1		03/13/21 20:46	16984-48-8	
Sulfate	<b>612</b>	mg/L	13.0	6.5	13		03/14/21 13:27	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER

Pace Project No.: 92525662

QC Batch: 605190	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D ATL
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525662001, 92525662002

METHOD BLANK: 3188284 Matrix: Water

Associated Lab Samples: 92525662001, 92525662002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/09/21 19:35	

LABORATORY CONTROL SAMPLE: 3188285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188286 3188287

Parameter	Units	3188286		3188287		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92526065007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Calcium	mg/L	395000 ug/L	1	1	382	390	-643	159	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER  
Pace Project No.: 92525662

QC Batch: 605211 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3005A Analysis Description: 6020 MET  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525662001, 92525662002

METHOD BLANK: 3188368 Matrix: Water  
Associated Lab Samples: 92525662001, 92525662002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	0.0052	03/11/21 14:28	
Cadmium	mg/L	ND	0.00050	0.00012	03/11/21 14:28	
Cobalt	mg/L	ND	0.0050	0.00038	03/11/21 14:28	

LABORATORY CONTROL SAMPLE: 3188369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188370 3188371

Parameter	Units	92525662001		3188370		3188371		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Boron	mg/L	1.1	1.1	1	1	1.9	1.9	79	85	75-125	3	20	
Cadmium	mg/L	0.00021J	0.00021J	0.1	0.1	0.093	0.094	93	94	75-125	1	20	
Cobalt	mg/L	0.0030J	0.0030J	0.1	0.1	0.092	0.094	89	91	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER

Pace Project No.: 92525662

QC Batch: 604754

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92525662001, 92525662002

METHOD BLANK: 3186276

Matrix: Water

Associated Lab Samples: 92525662001, 92525662002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/06/21 09:43	

LABORATORY CONTROL SAMPLE: 3186277

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	90-111	

SAMPLE DUPLICATE: 3186278

Parameter	Units	92525375007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	288	277	4	10	

SAMPLE DUPLICATE: 3186279

Parameter	Units	92525662002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1050	1010	4	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER  
Pace Project No.: 92525662

QC Batch: 606453 Analysis Method: EPA 300.0 Rev 2.1 1993  
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525662001, 92525662002

METHOD BLANK: 3195124 Matrix: Water  
Associated Lab Samples: 92525662001, 92525662002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/13/21 18:50	
Fluoride	mg/L	ND	0.10	0.050	03/13/21 18:50	
Sulfate	mg/L	ND	1.0	0.50	03/13/21 18:50	

LABORATORY CONTROL SAMPLE: 3195125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	54.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195126 3195127

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92525657005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50	53.3	53.5	106	107	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.8	2.8	112	113	90-110	0	10 M1	
Sulfate	mg/L	ND	50	50	50	55.5	55.9	111	112	90-110	1	10 M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195128 3195129

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527275001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	6.2	50	50	50	59.3	60.2	106	108	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	3.6	3.6	141	143	90-110	1	10 M1	
Sulfate	mg/L	ND	50	50	50	55.7	56.6	111	113	90-110	1	10 M1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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## QUALIFIERS

Project: BRANCH B POREWATER

Pace Project No.: 92525662

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH B POREWATER

Pace Project No.: 92525662

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525662001	IW-B-1				
92525662002	IW-B-2				
92525662001	IW-B-1	EPA 3010A	605190	EPA 6010D	605248
92525662002	IW-B-2	EPA 3010A	605190	EPA 6010D	605248
92525662001	IW-B-1	EPA 3005A	605211	EPA 6020B	605315
92525662002	IW-B-2	EPA 3005A	605211	EPA 6020B	605315
92525662001	IW-B-1	SM 2450C-2011	604754		
92525662002	IW-B-2	SM 2450C-2011	604754		
92525662001	IW-B-1	EPA 300.0 Rev 2.1 1993	606453		
92525662002	IW-B-2	EPA 300.0 Rev 2.1 1993	606453		

### REPORT OF LABORATORY ANALYSIS

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Document Name:  
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020  
Page 1 of 2

Document No.:  
F-CAR-CS-033-Rev.07

Issuing Authority:  
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition  
Upon Receipt

Client Name:

*GA Power*

Project

WO#: 92525662



Date/Initials Person Examining Contents: *1/4/21*

Courier:  Commercial  Fed Ex  Pace  UPS  USPS  Other:  Client

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer:  IR Gun ID: *230* Type of Ice:  Wet  Blue  None

Biological Tissue Frozen?  Yes  No  N/A

Cooler Temp: *1.6* Correction Factor: Add/Subtract (°C) *0.0*

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *1.6*

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>W</i>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

\*\*Bottom half of box is to list number of bottles

Project #

**WO# : 92525662**

PM: KLH1

Due Date: 03/18/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																	3									
2		2	1																	3									
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

**pH Adjustment Log for Preserved Samples**

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

MTL Log-in number here

**ALL SHADED AREAS are for LAB USE ONLY**

Company: Georgia Power - Coa Combustion Residuals  
 Address: 2480 Marner Road  
 Atlanta, GA 30339  
 Report To: Joju Abraham  
 Email To: sscsvoces@southernco.com

Phone: (404) 506-7239  
 Email: jbrabam@southernco.com  
 Project Name: Plant Branch 8 Porewater  
 Project # CCR 4th Semi Annual

State: Georgia City: Milledgeville Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Collecting By: Travis Martinez  
 Purchase Order #  
 Quote #

Collecting By (Signature):  
 Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day  
 Expedite Charges Apply: [ ] Yes [ ] No

Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (O), Waste (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		pH	# of Chrs
			Date	Time	Date	Time		
IW-B-1	GW	G	3-3-21	1335			6.86	3
IW-B-2	GW	G	3-3-21	1458			7.15	3

(Matrix): B, Ca, Cd, Co  
 Type of Ice Used: Wet Blue Dry None  
 Packing Material Used:

Relinquished by/Company: (Signature)  
 Date/Time: 3-4-21/0815  
 Received by/Company: (Signature)

Relinquished by/Company: (Signature)  
 Date/Time:  
 Received by/Company: (Signature)

Relinquished by/Company: (Signature)  
 Date/Time:  
 Received by/Company: (Signature)

Relinquished by/Company: (Signature)  
 Date/Time:  
 Received by/Company: (Signature)

Container Preservative Type \*\*  
 Analytes  
 Lab Profile/Line:  
 Lab Sample Receipt Check list:  
 Custody Seals Present/Intact Y N NA  
 Collector Signatures Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USA Regulated Solids Y N NA  
 Samples in Hold ng Time Y N NA  
 Residual Chlorine Present Y N NA  
 C Strips: Y N NA  
 Sample pH Acceptable Y N NA  
 pH Strips: Y N NA  
 Sulfide Present Y N NA  
 Lead Acetate Strips: Y N NA

Metals 6010/6020/7470 - see comments  
 TDS  
 Chloride/Fluoride/Sulfate

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:   
 Samples received via: FEDX UPS Client Courier Pace Courier  
 Date/Time:   
 Date/Time:   
 Date/Time:   
 Table #:   
 Accnum:   
 Template:   
 Prelogin:   
 PM:   
 PB:   
 Lab Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID:   
 Cooler 1 Temp Upon Receipt: \_\_\_ °C  
 Cooler 1 Therm Corr. Factor: \_\_\_ °C  
 Cooler 1 Corrected Temp: \_\_\_ °C  
 Comments:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s): YES / NO  
 Page 1 of 1

March 19, 2021

Joju Abraham  
Georgia Power-CCR  
2480 Maner Road  
Atlanta, GA 30339

RE: Project: BRANCH B POREWATER MISC  
Pace Project No.: 92525677

Dear Joju Abraham:

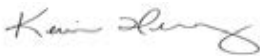
Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Daniela Herrera, Golder  
Ben Hodges, Georgia Power  
Jimmy Jones, Golder Associates Inc.  
Kristen Jurinko  
Julie Lehrman, Golder Associates Inc.  
Ms. Lauren Petty, Southern Co. Services  
Carolyn Powrozek, Golder  
Dawn Prell, Golder Associates Inc.  
Tim Richards, Golder Associates - Atlanta  
Brian Steele, Golder



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRANCH B POREWATER MISC  
Pace Project No.: 92525677

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Arizona Certification# AZ0819  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Charlotte**

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

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### **Pace Analytical Services Asheville**

2225 Riverside Drive, Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
Virginia/VELAP Certification #: 460222

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### **Pace Analytical Services Peachtree Corners**

110 Technology Pkwy, Peachtree Corners, GA 30092  
Florida DOH Certification #: E87315  
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381  
South Carolina Certification #: 98011001

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
92525677001	IW-B-1	Water	03/03/21 13:35	03/04/21 08:15
92525677002	IW-B-2	Water	03/03/21 14:58	03/04/21 08:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92525677001	IW-B-1	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O
92525677002	IW-B-2	EPA 6010D	DRB	6	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 353.2 Rev 2.0 1993	KDF1	1	PASI-A
		SM 5310B	AGS	1	PASI-O

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>92525677001</b>	<b>IW-B-1</b>					
	Performed by	CUSTOME			03/04/21 13:22	
		R				
	pH	6.86	Std. Units		03/04/21 13:22	
EPA 6010D	Iron	0.36	mg/L	0.040	03/09/21 20:15	
EPA 6010D	Manganese	0.082	mg/L	0.040	03/09/21 20:15	
EPA 6010D	Potassium	11.1	mg/L	0.20	03/09/21 20:15	
EPA 6010D	Sodium	12.3	mg/L	1.0	03/09/21 20:15	
EPA 6010D	Magnesium	13.0	mg/L	0.050	03/09/21 20:15	
EPA 6010D	Hardness, Total(SM 2340B)	391	mg/L	2.7	03/09/21 20:15	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	366	mg/L	5.0	03/17/21 14:27	
SM 2320B-2011	Alkalinity, Total as CaCO3	366	mg/L	5.0	03/17/21 14:27	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.26	mg/L	0.040	03/08/21 12:24	
<b>92525677002</b>	<b>IW-B-2</b>					
	Performed by	CUSTOME			03/04/21 13:22	
		R				
	pH	7.15	Std. Units		03/04/21 13:22	
EPA 6010D	Iron	31.7	mg/L	0.040	03/09/21 20:19	
EPA 6010D	Manganese	3.4	mg/L	0.040	03/09/21 20:19	
EPA 6010D	Potassium	17.3	mg/L	0.20	03/09/21 20:19	
EPA 6010D	Sodium	18.9	mg/L	1.0	03/09/21 20:19	
EPA 6010D	Magnesium	66.5	mg/L	0.050	03/09/21 20:19	
EPA 6010D	Hardness, Total(SM 2340B)	764	mg/L	2.7	03/09/21 20:19	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	208	mg/L	5.0	03/17/21 02:37	
SM 2320B-2011	Alkalinity, Total as CaCO3	208	mg/L	5.0	03/17/21 02:37	
EPA 353.2 Rev 2.0 1993	Nitrogen, NO2 plus NO3	0.021J	mg/L	0.040	03/08/21 12:28	
SM 5310B	Dissolved Organic Carbon	0.89J	mg/L	1.0	03/12/21 19:13	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

Sample: IW-B-1		Lab ID: 92525677001		Collected: 03/03/21 13:35		Received: 03/04/21 08:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:22		
pH	<b>6.86</b>	Std. Units			1		03/04/21 13:22		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>0.36</b>	mg/L	0.040	0.016	1	03/09/21 11:12	03/09/21 20:15	7439-89-6	
Manganese	<b>0.082</b>	mg/L	0.040	0.0017	1	03/09/21 11:12	03/09/21 20:15	7439-96-5	
Potassium	<b>11.1</b>	mg/L	0.20	0.056	1	03/09/21 11:12	03/09/21 20:15	7440-09-7	
Sodium	<b>12.3</b>	mg/L	1.0	0.26	1	03/09/21 11:12	03/09/21 20:15	7440-23-5	
Magnesium	<b>13.0</b>	mg/L	0.050	0.0076	1	03/09/21 11:12	03/09/21 20:15	7439-95-4	
Hardness, Total(SM 2340B)	<b>391</b>	mg/L	2.7	0.21	1	03/09/21 11:12	03/09/21 20:15		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>366</b>	mg/L	5.0	5.0	1		03/17/21 14:27		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 14:27		
Alkalinity, Total as CaCO3	<b>366</b>	mg/L	5.0	5.0	1		03/17/21 14:27		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993									
Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.26</b>	mg/L	0.040	0.017	1		03/08/21 12:24		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B									
Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>ND</b>	mg/L	1.0	0.50	1		03/12/21 18:22		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRANCH B POREWATER MISC  
Pace Project No.: 92525677

Sample: IW-B-2      Lab ID: 92525677002      Collected: 03/03/21 14:58      Received: 03/04/21 08:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Field Data</b>									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	<b>CUSTOMER</b>				1		03/04/21 13:22		
pH	<b>7.15</b>	Std. Units			1		03/04/21 13:22		
<b>6010D ATL ICP</b>									
Analytical Method: EPA 6010D      Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	<b>31.7</b>	mg/L	0.040	0.016	1	03/09/21 11:12	03/09/21 20:19	7439-89-6	
Manganese	<b>3.4</b>	mg/L	0.040	0.0017	1	03/09/21 11:12	03/09/21 20:19	7439-96-5	
Potassium	<b>17.3</b>	mg/L	0.20	0.056	1	03/09/21 11:12	03/09/21 20:19	7440-09-7	
Sodium	<b>18.9</b>	mg/L	1.0	0.26	1	03/09/21 11:12	03/09/21 20:19	7440-23-5	
Magnesium	<b>66.5</b>	mg/L	0.050	0.0076	1	03/09/21 11:12	03/09/21 20:19	7439-95-4	
Hardness, Total(SM 2340B)	<b>764</b>	mg/L	2.7	0.21	1	03/09/21 11:12	03/09/21 20:19		
<b>2320B Alkalinity</b>									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	<b>208</b>	mg/L	5.0	5.0	1		03/17/21 02:37		
Alkalinity,Carbonate (CaCO3)	<b>ND</b>	mg/L	5.0	5.0	1		03/17/21 02:37		
Alkalinity, Total as CaCO3	<b>208</b>	mg/L	5.0	5.0	1		03/17/21 02:37		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Rev 2.0 1993 Pace Analytical Services - Asheville									
Nitrogen, NO2 plus NO3	<b>0.021J</b>	mg/L	0.040	0.017	1		03/08/21 12:28		
<b>5310B Dissolved Organic Carbon</b>									
Analytical Method: SM 5310B Pace Analytical Services - Ormond Beach									
Dissolved Organic Carbon	<b>0.89J</b>	mg/L	1.0	0.50	1		03/12/21 19:13		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER MISC  
Pace Project No.: 92525677

QC Batch: 605190 Analysis Method: EPA 6010D  
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL  
Laboratory: Pace Analytical Services - Peachtree Corners, GA  
Associated Lab Samples: 92525677001, 92525677002

METHOD BLANK: 3188284 Matrix: Water  
Associated Lab Samples: 92525677001, 92525677002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hardness, Total(SM 2340B)	mg/L	ND	2.7	0.21	03/09/21 19:35	
Iron	mg/L	ND	0.040	0.016	03/09/21 19:35	
Magnesium	mg/L	ND	0.050	0.0076	03/09/21 19:35	
Manganese	mg/L	ND	0.040	0.0017	03/09/21 19:35	
Potassium	mg/L	ND	0.20	0.056	03/09/21 19:35	
Sodium	mg/L	ND	1.0	0.26	03/09/21 19:35	

LABORATORY CONTROL SAMPLE: 3188285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hardness, Total(SM 2340B)	mg/L	6.6	6.9	104	80-120	
Iron	mg/L	1	1.1	105	80-120	
Magnesium	mg/L	1	1.0	105	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	101	80-120	
Sodium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3188286 3188287

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526065007 Result	Spike Conc.	Spike Conc.	Result						
Hardness, Total(SM 2340B)	mg/L	969000 ug/L	6.6	6.6	957	977	-181	124	75-125	2	20
Iron	mg/L	ND	1	1	1.2	1.0	116	101	75-125	13	20
Magnesium	mg/L	ND	1	1	1.0	1.0	100	103	75-125	3	20
Manganese	mg/L	ND	1	1	0.95	0.97	95	97	75-125	2	20
Potassium	mg/L	1660 ug/L	1	1	2.6	2.7	98	102	75-125	2	20
Sodium	mg/L	14400 ug/L	1	1	15.2	15.5	78	110	75-125	2	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

QC Batch: 606876

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92525677001, 92525677002

METHOD BLANK: 3197245

Matrix: Water

Associated Lab Samples: 92525677001, 92525677002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Bicarbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	
Alkalinity,Carbonate (CaCO <sub>3</sub> )	mg/L	ND	5.0	5.0	03/16/21 22:52	

LABORATORY CONTROL SAMPLE: 3197246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197247 3197248

Parameter	Units	92525669002		3197248		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	29.2	50	50	79.0	78.6	100	99	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3197249 3197250

Parameter	Units	92525536003		3197250		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	50	50	54.8	54.7	104	103	80-120	0	25

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER MISC  
Pace Project No.: 92525677

QC Batch: 604832 Analysis Method: EPA 353.2 Rev 2.0 1993  
QC Batch Method: EPA 353.2 Rev 2.0 1993 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Asheville  
Associated Lab Samples: 92525677001, 92525677002

METHOD BLANK: 3186513 Matrix: Water  
Associated Lab Samples: 92525677001, 92525677002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	ND	0.040	0.017	03/08/21 12:03	

LABORATORY CONTROL SAMPLE: 3186514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186515 3186516

Parameter	Units	3186515		3186516		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Result	MSD Result							
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.3	2.3	94	94	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186517 3186518

Parameter	Units	3186517		3186518		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Result	MSD Result							
Nitrogen, NO2 plus NO3	mg/L	ND	2.5	2.5	2.4	2.4	95	95	90-110	0	10	

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### QUALITY CONTROL DATA

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

QC Batch: 711998

Analysis Method: SM 5310B

QC Batch Method: SM 5310B

Analysis Description: 5310B Dissolved Organic Carbon

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 92525677001, 92525677002

METHOD BLANK: 3881059

Matrix: Water

Associated Lab Samples: 92525677001, 92525677002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.50	03/12/21 15:23	

LABORATORY CONTROL SAMPLE: 3881060

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	20	19.3	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881061 3881062

Parameter	Units	92525383007		3881061		3881062		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.				
Dissolved Organic Carbon	mg/L	ND	20	20	18.7	18.7	93	93	80-120	0	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3881063 3881064

Parameter	Units	92525677002		3881063		3881064		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.				
Dissolved Organic Carbon	mg/L	0.89J	20	20	19.8	19.7	95	94	80-120	0	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRANCH B POREWATER MISC

Pace Project No.: 92525677

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRANCH B POREWATER MISC  
Pace Project No.: 92525677

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92525677001	IW-B-1				
92525677002	IW-B-2				
92525677001	IW-B-1	EPA 3010A	605190	EPA 6010D	605248
92525677002	IW-B-2	EPA 3010A	605190	EPA 6010D	605248
92525677001	IW-B-1	SM 2320B-2011	606876		
92525677002	IW-B-2	SM 2320B-2011	606876		
92525677001	IW-B-1	EPA 353.2 Rev 2.0 1993	604832		
92525677002	IW-B-2	EPA 353.2 Rev 2.0 1993	604832		
92525677001	IW-B-1	SM 5310B	711998		
92525677002	IW-B-2	SM 5310B	711998		

### REPORT OF LABORATORY ANALYSIS

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**Laboratory receiving samples:**

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville  Atlanta  Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

**WO# : 92525677**



Date/Initials Person Examining Contents: 3/4/21

Courier:  Commercial  Fed Ex  Pace  UPS  USPS  Other:  Client

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  Yes  No  N/A

Thermometer:  IR Gun ID: 230 Type of Ice:  wet  Blue  None

Cooler Temp: 1.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C  
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.6

USDA Regulated Soil (  N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: \_\_\_\_\_

Date: \_\_\_\_\_

Project Manager SRF Review: \_\_\_\_\_

Date: \_\_\_\_\_



Document Name:  
**Sample Condition Upon Receipt(SCUR)**  
 Document No.:  
**F-CAR-CS-033-Rev.07**

Document Revised: October 28, 2020  
 Page 2 of 2  
 Issuing Authority:  
 Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

\*\*Bottom half of box is to list number of bottles

Project #

**WO# : 92525677**

PM: KLH1

Due Date: 03/18/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V56U-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	2	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/	/
2	/	2	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	3	/	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



ALL SHADED AREAS are for LAB USE ONLY

Company: Georgia Power - Coal Combustion Residuals  
 Address: 2480 Warner Road  
 Atlanta, GA 30339  
 Report To: Joy Abraham  
 Email To: scmnotice@southernco.com

Phone: (404) 506-7239  
 Email: jabraham@southernco.com  
 Project Name: Plant Branch B Potwater  
 Project # CCR 4th Semi Annual

State: Georgia City: Mill edgeville Time Zone: Eastern  
 Site Collect on Info/Address: Plant Branch

Pace Project Manager: Kevin Herring@paceabs.com  
 Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No  
 Rush: [ ] Same Day [ ] Next Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Analysis:  
 Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Water (WT), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	pH	# of Cms
IW-B-1	GW	G	3-3-21	1335			6.86	6
IW-B-2	GW	G	3-3-21	1458			7.15	6

Container Preservative Type **	1	2	3	4
Metals 6010/6020/7470 - see comments				
Total Alkalinity and Bicarbonate/Carbonate Alkalinity				
Dissolved Organic Carbon				
NOX 353.2				
Total Hardness SM 2304B				

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hearse, (A) ascorbic acid, (B) ammonium sulfite, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Profile/Use:  
 Lab Sample Receipt Checklist:  
 Custody Seal Present/Intact Y N NA  
 Custody Signature Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Soils Y N NA  
 Samples in Holding Time Y N NA  
 Residual Charities Present Y N NA  
 CI Strips:  
 Sample pH Acceptable Y N NA  
 pH Strips:  
 Sulfide Present Y N NA  
 Lead Acetate Strips:  
 Lab USE ONLY  
 Lab Sample # / Comments:

Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time
<i>[Signature]</i>	3-4-21/0815	<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>	

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_\_ °C  
 Cooler 1 Therm Corr. Factor: \_\_\_\_ °C  
 Cooler 1 Corrected Temp: \_\_\_\_ °C  
 Comments:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non-Conformance(s): Page 1 of 1



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